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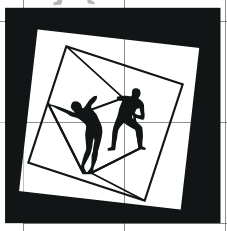

EM24

EURAU - EUROPEAN RESEARCH ON ARCHITECTURE AND URBANISM INTERNATIONAL CONFERENCE

IN-PRESENCE / THE BODY AND THE SPACE

The role of corporeity in the era of virtualization

Edited by: Marco Bovati, Anna Moro, Daniele Villa

ISBN: 978 · 88 · 99586 · 40 · 9

PVBLICA

Marco Bovati, Anna Moro, Daniele Villa
IN-PRESENCE / THE BODY AND THE SPACE.
The role of corporeity in the era of virtualization

ISBN: 9788899586409
Pubblicazione luglio 2024

Tutti i testi di PUBLICA sono sottoposti a double peer review.

PUBLICA
Dipartimento di Architettura, Urbanistica e Design
Università degli Studi di Sassari
WWW.PUBLICAPRESS.IT

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11th INTERNATIONAL CONFERENCE

EUROPEAN RESEARCH ON ARCHITECTURE
AND URBANISM INTERNATIONAL CONFERENCE

IN-PRESENCE / THE BODY AND THE SPACE

The role of corporeity in the era of virtualization

For those who deal with the city and the territory, space refers to the body
(C. Bianchetti)

The EURAU Milan 2024 Conference aims to unpack the significance of corporeality in contemporary times and its relevance for the upcoming years. Specifically, the focus is on the relation between body and space and how this relates to architecture, the city and the environment, interpreted as physical facts and processes. Within the background of a technological turn, the focus is now on what has changed or will further change in this relationship and what, on the opposite, remains unalterable, inherently bound to the material and impervious to the virtual.

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Spaces, Bodies, Design
A Multidisciplinary Perspective

MARCO BOVATI, ANNA MORO, DANIELE VILLA

In an era in which many aspects of our society, lives, and disciplines are shifting - sometimes too lightly, others forcibly - from the physical to the immaterial, from the corporeal to the virtual, EURAU Milan 2024 Conference reflects on the current and future role of corporeality, examining what has changed and is changing, what is effectively irreducible from the material to the virtual intangible dimension and what, in terms of values and experiences, is gained or lost in this shift.

EURAU Milan 2024 solicits researchers and professionals in the spheres of spatial studies, from architecture to urban and environmental design, planning and policies, artistic disciplines and experimentations, etcetera, to reflect on the conditions/practices/tools that require the presence of a body or several bodies in a space, whether small or large, indoor or outdoor, in order to be lived, experienced and realised authentically, and if so, how this is different and why this is crucial compared to technologically mediated, non-corporal, non-material, even non-human, experiences.
Considering diverse points of view and arguments, the perspective of corporeality appears intimately linked to architecture and urbanism in multiple ways and through the many approaches over time.

This vital link can be seen, for instance, if we consider the many perspectives from which space can be conceived: from the uses and the interpretations of space through 'practices', through a culturally-mediated perception of space, to the role of space itself as a source of sensory and environmental stimuli, to the production of space through design, or even to the social usability of space as a container of practices and events.
Following this perspective, the spaces of architecture, the city and the environment can be inhabited thanks to, by and through the body and its physical extension. The body is the transit of the relationship between design and space, practices and society. Placing bodies at the core of our disciplinary discourses means interfering with their material, organic and affective narrative, embracing their uncertainties and stumbles and dealing with the consequences. Bodies are traces of a creative multiplicity, interlaced with the possibility of an open and continuous dialogue with the world.

This multifaceted relationship occurs in two principal ways: one as 'acting bodies', bodies that touch, bodies that act, bodies as actors of practices and

actions, and as a tool for transformative reflection on space; and one as 'acted bodies', bodies as filters, bodies affected by the physical-spatial and environmental conditions of space. This dialectic between the body as an active medium and the body as passive exposure derives from Gilles Deleuze's reading of Spinoza and carries with it the idea that 'the body is the world, is made of the world, is at one with the world.'

Starting from the intention of investigating the space-body relationship, its modifications and resistances, the basic questions EURAU Milan 24 intends to ask are:
/ Is this condition still actual? How much has it changed, and will it change in the coming years?
/ What cannot change as it is effectively irreducible from the material to the virtual?
/ How has the body-space relationship changed with the advent of new technologies?
/ What still can a body do, and what can only be done by a body?
/ What is the added value of a body-centred approach to our disciplines?

The issue can be approached by questioning boldly a series of recent or well-known assumptions, which refer to different disciplinary fields but share a core theme: the co-presence and relationship of bodies in space.
Furthermore, in the current global conditions – full of innovation but with multiple crises that must be overcome through collaboration and research aiming towards a different future – researchers and professionals are driven to question even the fundamental traits of our disciplines profoundly. What the recent crisis, starting from Covid-19, has reiterated is indeed the centrality of the individual bodies and of bodies interacting in space.
Among the many emerging issues recently developed at the international level – for instance, the European Agenda or the international SDGs (Sustainable Development Goals), which points to sustainability, justice, equality, freedom, hospitality, health, a new and fairer economy, care for the most fragile people and territories, memory, beauty and socio-spatial transition – EURAU Milan 24 aims to underline and integrate the aspect of 'togetherness' that can be defined as being together, sharing practices and values through bodies and multiple, even non-physical bonds that occur within space.

The format of the conference is the result of a shared reflection that started with a research seminar on the current state of scientific events, held in March 2023 at Politecnico di Milano. As our network is based on a deep-sharing approach to research and design, we have identified a flexible format that includes both online and in-presence moments. The integration of modes has allowed us to promote a long-term format going from the summer of 2023 to the summer of 2024, called The Road to EURAU, which has engaged participants in bringing their contribution to the table and shaping the conference themes and contents.

We have proposed five preparatory thematic meetings organised by EURAU network partners to discuss this topic in advance. Each meeting introduced a different thematic approach to the conference topic. The outcomes of the meetings helped refine the thematic sessions of EURAU Milan 24 and the preparation of the open call. The aim was to activate an ongoing and wide-ranging discussion, fed by other forms of communication (a forum, an Instagram profile, a website), leading up to June 2024 as the final moment in which - IN-PRESENCE - we have met to draw conclusions.

The EURAU Milan 24 Conference addressed issues that delve into the tapestry of the relationship between body and space, framed and articulated within five thematic areas:

/CONCEIVED, /INTER-ACTIVE, /AFFECTED, /VULNERABLE and /AUGMENTED.
These five themes, as adjectives of the body as well as of the space, are intended as facets of a unique narration that is brought into focus through the exploration of each area. Cross-reading these themes provides a comprehensive lens through which to investigate the dynamic interplay and the multiple layers underlying the body-space relationship.

Specifically, **/CONCEIVED** anchors the exploration in the realm of reflective and theoretical-experiential elaboration and its foundations. Going beyond the notion of body-space relations grounded in proportions, measurements and geometry, there is an opening towards new forms of action, inter-action and reflection.

In the second session, contributions are asked to delve into the adjective **/INTER-ACTIVE**, which refers to the dynamics of active interaction in the body-space relationship, highlighting how movement, gestures, and sensory engagement contribute to craft a tapestry weaving together the materiality of space and the embodied experience.

The third theme, **/AFFECTED**, refers to the possible relationships and actions of the environment on the body, where the environment is understood as the artificial urban territory but also the natural and the natural and climatic domains. This thematic area underscores the profound impact of external factors on bodily experience.

/VULNERABLE bodily experience as well as climatic and natural consequences on space, points at the potential role of a design approach that investigates the relationship between fragile bodies and space. The session is dedicated to the manifold layers of vulnerabilities of bodies in space, and their role as a critical contribution to refocusing our disciplines.

The last thematic area, **/AUGMENTED** disciplines towards the design and reflection of inclusivity, is dedicated to modified and enhanced bodies and the interaction between the physical body and virtual space or artificial intelligence. It explores the evolving landscape of technologically mediated interactions, as well as contemporary art interventions.

/ CONCEIVED

On the relationship between body and space mediated by reflection and theoretical-experient ial elaboration

/ INTER-ACTIVE

On the dynamics of active interactions in the relationship between body and space, and bodies in space, highlighting the role of bodily experience

/ AFFECTED

On the possible relationships between the environment and the body and the potential effects of the environment on the body

/ VULNERABLE

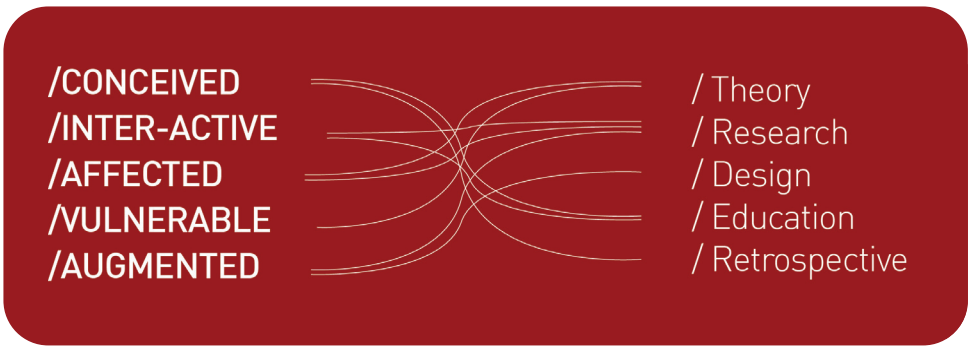
On the potential role of a design approach that investigates the relationship between vulnerable bodies and space

/ AUGMENTED

On modified and enhanced bodies, on the interaction between the physical body and virtual space or artificial intelligence

The thematic areas are intersected transversally by five operational perspectives: **Theory, Research, Design, Education and Retrospective**.

These propose five possible approaches that can also be combined within the same contribution.
The five approaches are based on the idea that the theme of the body-space relationship can be investigated according to different and interrelated modalities and perspectives, allowing for the various theoretical and practical experiences that characterise the activity of architects and urban planners, whether they operate as historians, theorists, designers, educators or professionals.
The thematic areas and transversal perspectives form a matrix where contributions can be freely placed.



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Pamfil Francoise, "Ion Mincu" University of Architecture and Urban Planning

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Póvoas Rui, FAUP Faculdade de Arquitectura da Universidade do Porto

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Rachel Sara, Birmingham School of Architecture and Design

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/ KEYNOTE SPEAKERS

/GABRIELE PASQUI, graduated in Socio-Economic Disciplines and in Philosophy and PhD in Urban policies, is full Professor of Urban Planning at Politecnico di Milano, Department of Architecture and Urban Studies. He is President of the Scientific Committee of Urban@it, National Centre for the Study of Urban Policies, former coordinator of the Research Project "Excellence Department – Territorial Fragilities" funded by the Italian Ministry of University and Research and former Director of the Department of Architecture and Urban Studies (2013-2019). His key scientific interests are: interpretations of contemporary cities dynamics, urban populations and policies, strategic planning, urban governance, urban regeneration tools.

"Bodies, encounters, scenes. City assemblages and design strategies"

/RENATO BOCCHI, professor of Theories and Design of Architecture at IUAV University of Venice till 2019 and Director of Architectural Design Dpt. from 2006 to 2009. He coordinated the research program Re-cycle Italy, involving 11 Italian Universities (2013-16). He held lectures in Spain, Portugal, Argentina, Scotland, Ireland, Greece, and Slovenia. From 2015 to 2020 he promoted cultural initiatives among Iuav University, Ca' Pesaro Museum of Modern Art, and Querini-Stampalia Foundation. From 2019 onwards he is collaborating with the Doctorate Schools at Iuav Venice and Sapienza University of Rome. The dominant topics of his research and publications are the relationship between arts, architecture, city, and landscape. His most recent book: "Spazio arte architettura. Un percorso teorico", Carocci, Rome, 2022.

"Art And Architecture. Between Space And Body"

/CRISTINA BIANCHETTI, architect, PhD in Urban Planning, is full professor of Urban Planning at the Interuniversity Department of Regional and Urban Studies and Planning, in Politecnico di Torino, where she has also served as Deputy Dean. Her work focuses on themes related to living spaces and the critique of contemporary urban planning projects. Her presence in the cultural sphere is evidenced by her participation in and coordination of numerous research projects and by her many writings. Her latest books, "Corpi tra spazio e progetto" (Mimesis 2020 – English edition Jovis, 2021) and "Le Mura di Troia: lo spazio ricompone i corpi" (Donzelli 2023), explore urban planning projects and their practices from a perspective centered on the body, revealing unexpected scenarios that emerge when the viewpoint shifts away from the actor, decision-maker, technician, or a legal or statistical entity, to that of a body that cannot be reduced to its abstractions.

"Insights for a theory of embodiment in urbanism"

/FRANCO FENOGLIO, a nuclear engineer at the Polytechnic University of Turin, he joined Thales Alenia Space (then Aeritalia) in February 1990, dealing with thermal and environmental control of spacecraft. In the late 1990s, he became Chief Engineer of the Nodes in ISS, leading "Nodo 3" until the integration and launch campaign in 2010. Subsequently, he started the Orion European Vehicle Service Module and managed exploration studies and advances. Today, he is Director of Human and Robotics Planetary Exploration, including Thales Alenia Space programs running for Artemis (lunar orbit and surface) and robotics to Mars. As part of his career, he has interacted with major Space Agencies (NASA, ESA, ASI) and major international companies.

"Beyond Earth. Thinking and designing solutions for humans in the (deep) Space"

Edited by the 'Conceived' Scientific Committee and the Milanese Organising Committee, see p. 21

1 / CONCEIVED

/ On the Body-Space relationship mediated by reflection and theoretical-experiential elaboration.
In recent years, architecture has shifted its paradigm regarding the relationship between body and space. This transition towards a new understanding of actions, movement, and experience has flanked – and partially replaced – the traditional emphasis on proportion, measurement, and geometry.
This evolution prompts a fundamental re-evaluation of how architecture, urbanism, and spatial practices conceptualise, theorise and practice the body-space relationship. To grasp the depth of this transformation, it is critical to delve into the historical modification of this relationship and the simultaneous, interacting, and at times conflicting, positions of contemporaneity. These perspectives encapsulate the past's legacy and lay the groundwork for future explorations.
The conceptual framework that underlies our understanding of the space-body relationship and its paradigms of reference, profoundly influences the design thought and process; it also informs our way of bodily inhabiting space through human and social practices. Therefore, thoroughly exploring this relationship's conceptual and creative dimensions and foundational principles is crucial.
Moreover, investigating the fundamental role of the space-body relationship also means recognising the multidisciplinary contributions that the world of culture and the arts have made to our subject area, where art, dance, cinema, theatre, and literature have played a fundamental role in reshaping our perception of this relationship in redefining its paradigms.

This session welcomes contributions which include but are not limited to:
/ The body as a system of proportion, measurement, and geometry;
/ The proxemics;
/ The space as actions, movement, and experience of bodies;
/ The mind and the perception of the space;
/ The body and the memory of the space;
/ Bodily project practice and technological innovation;
/ Architecture as a space device;
/ 'Spatial Design': the space, the body and the synthesis of the arts;
/ Contemporary Art: interventions on space and human perception.

Nadia Amoroso
The University of Guelph, School of Environmental Design and Rural Development
nadia.amoroso@uoguelph.ca

Visualizing climate action in urban design and landscape architecture.
Strategies and impacts

Key Words
Visual communication, Climate action design, Landscape architecture, Representing landscape

This presentation provides a comprehensive review on the representation of climate action design within urban design and landscape architectural practices and education. Derived from a forthcoming publication titled, "Representing Landscapes: Visualizing Climate Action," the paper reflects on the current state of visual representation in the profession, centering on climate action and resilience. The investigation focuses on the visual communication styles and tactics employed by five internationally acclaimed urban design and landscape architecture firms, each with ties to academia. The research offers a global scan of visualizations of climate adaptation and resilience, developed by award-winning landscape architects and academics from Canada, the United States, the United Kingdom, The Netherlands, Denmark, Germany, Italy, France, Finland, South Africa, Singapore, and China. The research extrapolates visual cues and techniques created by these key designers as a means to educate the public in action design projects. Their drawings offer imaginative ways in which climate action and climate resilient concepts are visually presented, communicated, and perceived. The design concepts span from creative planting strategies to advanced landscape modeling and Artificial Intelligence (AI) visualizations. The research captures drawings from 16 professionals and 14 academics including SCAPE Studio, Michael Van Vankenburgh Associates (MVVA), STOSS, FELIXX, and Sasaki, exploring their distinctive visual communication strategies in climate action design. Each firm employs unique methods to convey design concepts to diverse audiences, emphasizing the importance of visual communication in advocating for resilient urban landscapes, and will be highlighted in this presentation.

SCAPE Studio is an innovative landscape architecture design studio focusing on ecological

design, coastal resilience, and climate action projects. Kate Orff and Gena Wirth, are two of the design principals and are also adjunct professors at Columbia University. In a discussion with Wirth [Wirth 2023], she discusses the importance of how their firm makes dynamic landscape systems legible to the average viewer. This includes adding habitat in their visualizations, presenting images that convey the fabric and feel of their specific community and having equitable and accessible communication. SCAPE Studio integrates non-human species into their renderings, emphasizing biodiversity (Fig. 1). The inclusion of oversized wildlife in their design proposals aims to underline the significance of wildlife conservation, though reactions from audiences vary. For example, their design proposed channel modifications to support the migratory passage of salmonid species in Alameda Creek project, and designed bayside landscape features to support seals and roosting habitat for terns and other shorebirds. Some clients found the images educational, bringing attention to wildlife importance in the design, while other found it distracting [Wirth 2023]. SCAPE also emphasizes the importance of presenting visuals from a people-centric perspective, incorporating eye-level perspectives to enhance community engagement. Another important aspect that SCAPE highlights and other firm also adopt is making visual communication equitable and accessible.

Visual communication also needs to be accessible to people of all backgrounds and abilities. SCAPE has invested in and developed tools to make sure that our materials will be legible for people living with various visual impairments. For mapping and diagrams, they test various colour-blind simulations to make sure that the colours and gradients that they use will be legible for a wide variety of conditions. They consider font sizes and contrast when labelling images or creating public materials.

MVVA, an award-winning urban design and landscape architecture firm based in New York, Denver and Boston area, utilizes birds-eye views and section perspectives to communicate resilient design work effectively. Large-scale models are employed to engage the public physically, providing a tangible connection to design opportunities. Birds-eye views and section perspectives are two useful drawing tools that they use to communicate resilient design work, as these drawing types allow for multiple readings within one image with 'call-out' notes. They allow for an immersive 'look and feel' that the average person can understand. Section-perspectives are useful tools to show both the technical aspect of the design (topography/ underground systems, etc) and above ground 'look and feel' of the design.

STOSS, an environmental design firm based in Boston, adopts 'sectional variation' to visualize dynamic environmental changes, allowing the public to perceive and react to design impacts easily. This approach is used to convey sea-level rise resilient designs. They set up multiple elevations in the landscape that can show 'flooding' at different stages of water rise and fall. This is a visual strategy to show the impact of the design. The public can easily perceive and experience these landscapes, and can quickly react to these images. Depicting various biodiversity with different plant communities distributed to multiple locations helps the public understand their importance for water protection from a major storm.

FELIXX, based in the Netherlands, employs a distinctive graphic style, utilizing playful and bright visualizations to convey positive opportunities for change. The firm focuses on avoiding dystopian images and encourages a positive and educational approach to understanding natural processes in urban settings. The images resemble cartoon-like quality, making them engaging to audiences at all ages. Using simple diagrams and light-hearted visualizations, they display the intricate dynamics of natural processes that are crucial to comprehend for the collective project of respecting the role of nature, especially in the urban context.

Sasaki, based in New York, Boston, Denver and Shanghai, emphasizes the importance of visual clarity in communicating complex landscapes. Sasaki shows much of their 'below-ground engineering component' which is important to understand, but may be complex to the public. Therefore, in order to understand the details of a site and to explain them in a way decision-makers and the public can understand, Sasaki 'unpacks' the systems of the landscape through graphic clarity. One tactic for depicting complex landscapes that Sasaki uses is 'small axonometric sections', which they also refer to as landscape "chunks" [Mendelhall 2023]. These three-dimensional vignettes are used to sharpen the viewer's above- and below-ground understanding of site systems and design options. Uniform in shape and size, and often arrayed in a series for easy comparison, chunks are effective to show a sweep of landscape conditions and design options. This 'kit-of-parts' approach is effective in examining a single component within the landscape's systems. Sasaki also uses 'comic strips' to explain

intricate environmental systems as a way to engage the public and describe some climate action approaches in their designs. Effective communication requires strong visual to break down the complexity, to extract quantitative information, to imagine the possibilities, to form conclusions, and to translate for different audiences [Mendenhall 2023].

This paper also highlights academic perspectives on innovative visualizations, such as Professor Roberto Rovira's, from Florida International University, exploration of AI in landscape architecture and the examination of AI image platforms by Zhang and Zhang from the City College New York. Additionally, Cannon Ivers from University College London emphasizes the depiction of landscapes over time and the need for creative markers to visualize gradual changes caused by climate change.

In conclusion, this paper illustrates how leading firms and academics leverage innovative visual communication strategies to address climate action challenges and shape a more resilient and sustainable world. These visualization strategies will be summarized as set of guidelines for others to implement. The emphasis is on positive, engaging imagery to mobilize change without resorting to anxiety-inducing visuals. Through the power of innovative drawings, powerful illustrations, and compelling storytelling, they engage our collective consciousness, urging us to become champions of climate action.

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FIGURES

Fig. 1 - Public Sediment, Unlocking Alameda Creek: Floodplain Terrace Trail along the Creek with oversized butterfly in the foreground. (by SCAPE Studio) This section-perspective highlights the importance of habitant and nature. A large bird is placed in the foreground sky of the image; the creek looks as though it is 'illuminated', depicting its relevance for the site's revitalization.


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Josep Muntañola[1], Margaret Krawecka[2], Magdalena Saura[3]
[1,2,3] UPC Universitat Politècnica de Catalunya
[1] jose.muntanola@upc.edu

Architecture and corporeity.
Towards a new concept of place-making

Key Words
Architector, Knowledge, Corporeity

The link between architecture and corporeity is becoming a renewed focus of interest. Our paper will analyze the reasons and consequences of this, from both practical as well as theoretical, architectural and urban design points of view.
The reasons for this new interest have different roots. The first reason is the impact of the biological and environmental dimensions of our human life on architecture and planning, beginning with the pioneer insights of Lewis Mumford, to hundreds of current studies in genetic architecture, to environmental system eco-theories.
Another reason is the impact of the psychosocial conditions of human spatial life, from Lewis Mumford to Richard Sennett [Sennett 2019], which are finally impacting professional practice [Muntañola 2022, 2023, 2024], after years of oblivion and usually too late for healthy environmental and social qualities.
The third and last reason is the recent development of new philosophical frameworks affecting corporeity.
Starting with the third reason defined above, this is clear in the works of P. Ricoeur [2000, 1986], L. Umbelino [2016], J. Muntañola [1980, 2022, 2023, 2024], and B. Smith [2001], among others. Basic philosophical references also include seminal philosophical works by Edmund Husserl [Husserl, 1962], H-G. Gadamer, Mikhail Bakhtin, Maurice Halbwachs, Walter Benjamin, Jacques Derrida, and Edward Casey. We have not quoted Heidegger, a fundamental reference of all these philosophers, since it is precisely Heidegger, whose ideas are used in almost all the theories of architecture over the last hundred years, who bears responsibility for the late development of the meaning of corporeity that we are looking for.
Corporeity deals with human bodies, and human bodies are not machines; they have feelings, intentions, dreams, children, parents. This complexity of the bodies of the users in architecture

and planning has been neglected for years. The bridge between architectural design and social history was ruptured through an erroneous interpretation of modernity, and the relationships between the three roots of this new corporeity disappeared with the use of Heidegger's phenomenology.
According to Paul Ricoeur and Luis Umbelino, the hermeneutic limitation of the phenomenology of Heidegger starts with differences between serious knowledge and the "vulgar" knowledge of common people, and follows with the philosophical insistence by Heidegger on "going phenomenologically towards death", without writing about life and human living memories, starting from birth. In spite of these limitations, one cannot ignore, of course, the outstanding philosophical innovations of Heidegger. However, these limitations have had a negative impact on architectural and urban design practice and theories. The insistence that only Architects understand how buildings and cities work, and that their users have a "vulgar" level of architectural knowledge, have produced profound misunderstandings within architectural and urban design theories.
Consequently, the response of P. Eisenman to Derrida's negative evaluation of the architect´s concept of "empty places" without people, as a way to increase the modern innovative quality of places [Lillyman et al. 1994], was misguided. Eisenman argued that Derrida can understand neither his architecture nor the concept of architecture as such, because he is not an architect. This was an incorrect answer generated by such phenomenological Heideggerian limitations, and one not accepted today, for its clear antisocial and antidemocratic, elitist content, although some years ago it was accepted with almost no second thought, ignoring its negative practical and theoretical consequences. It is relevant at this point to consider that Freud was completely ignored in Heidegger´s positions, and instead had a strong impact on Walter Benjamin and Paul Ricoeur´s philosophical ideas, as well as Lewis Mumford's critical writings on abstract art in The New Yorker, twenty years before the Second World War.
In summary, the new characteristics of the concept of place, which support corporeity in users are the following:
- Firstly, the healthy living human body is able to adapt through experimentation to environmental social or climatic changes, that is, the living human body has enormous power of resilience, mental recovering and memory regeneration, which is often underestimated.
- Secondly, the concept of place can be generated from different temporal and spatial phenomenological points of view, that is, at the intersection of diverse historical narratives and cultural identities. These different points of view follow M. Halbwachs' [1950] theoretical intersubjective frameworks of personal and collective memories, which recognize the need for social interaction for individual memories to exist. Moreover, the main condition required in considering this social and dialogical corporeity, is authenticity. If there is false cultural identity, the sharing of these different points of view gives rise to permanent conflicts.
- And thirdly, this new concept of place gives corporeity a new sense of social coexistence, where to be at home takes on a deep sense of cultural pertinence, both personal and collective.
Consequently, from Paul Ricoeur´s philosophical perspective, architects design ontologically spatial scenarios at the same ontological level that writers in literature represent linguistic calendar scenarios. Both are social and physical scenarios, one based on calendar time, where space is metaphorical, and the other based on architectural space, where time is metaphorical. Several study cases related to this new concept of corporeity and placeness will be presented in our full paper, including works by Peter Zumthor, Enric Miralles, Barozzi Veiga, and the Garcia Marquez Library in Barcelona by SUMA Architects.
At this point, we will recapitulate in order to redefine the new educative and pedagogical scenarios according to this new corporeity. We will start with the text "The Ethics of Nichomachus" by Aristotle, on the architectonic wisdom needed by architects, which is closely related to the new concept of place just defined [Smith 2001].
We will then analyze new conditions in architectural and urban design education in children´s schools. The new corporeity needs to start with physical and spatial conditions within the schools themselves. Also, and this is happening now, it implies a total reconsideration of bullying within education. The new corporeity implies authenticity, and bullying destroys corporeity by building upon a false body awareness.
In all the precedent environmental architectural studies already realized in children´s schools, the fundamental activities required to build a new corporeity are: theatre (and cinema), with students as both actors and authors of the script; personal and collective artistic performances in music; architectural construction of models of cities; social organizations of celebrations; parties; and collective natural environmental excursions or trips to different places.
Consequently, spatial physical conditions should be taken into account across all pedagogical activities, since they involve interactions between bodies and physical environments, and not only within virtual environments.

Artificial intelligence does not need to be an inconvenience while building this new corporeity and these new place-making activities in education and politics. However, and this is crucial, all digital performances in science and the arts require a thorough study of the social interactions between the authors and people´s participation [Muntañola 2022, 2024].
In conclusion, the main and fundamental concept is that human cognitive development in general needs to synchronically connect mental representation with the empirical knowledge of the facts represented. We know that a representation can never be the same as the content represented. If it were, human brains would be equal to machines, yet they are different; therefore, human critical cognitive power can survive. Human knowledge is never a "vulgar" knowledge; on the contrary, it bears an essential architectonic wisdom shared by all human beings regardless of their social conditions and convictions.

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FIGURES

Fig. 1 - The Garcia Marquez Public Library in Barcelona built in 2023, by SUMA ARQUITECTOS (Photo by Josep Muntañola).

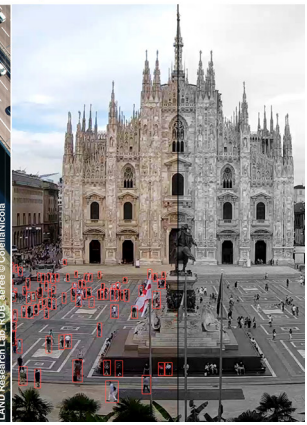
ildings / Skin

ParkPlus_LuxotticaDigitalFactory

PP Parks / Lungs

LAND Research Lab_RUR Architecture © CipelliNicola

LRL Squares / Heart



Lamia Abdelfattah[3], Matteo Arietti[1], Andrea Balestrini[2], Christiane Burklein[2], Giulia Castellazzi[2], Diego Deponte[3], Andrea Gorrini[3], Virgilio Díaz Guzmán[2], Zayneb Kadiri[3], Giulio Marzullo[1], Federico Messa[3]

[1] Park Plus

[2] LAND Research Lab®

[3] Fondazione Transform Transport ETS

l.abdelfattah@transformtransport.org

The anatomy of public space.
A multidisciplinary perspective

Key Words

Public Space, Anatomy, Architecture, Landscape, Mobility

The research project "Anatomy of Public Space: A Multidisciplinary Perspective" is a collaboration between Park Plus, the research unit of Park Associati, LAND Research Lab®, the research and innovation think tank of LAND Group, and Fondazione Transform Transport ETS, the non-profit research foundation launched by Systematica Srl. It is based on the self-published work produced in 2023 between the three research partners and which forms the basis of a larger ongoing research project on the nature of public space [Park Plus et al. 2023]. The project aims to study public space from the different perspectives of the three components of the working group (i.e., architecture, landscape, mobility) in order to present a multidimensional narrative of the role of public space in contemporary cities. The connection between the different components of public space and the human body is meant to define new perspectives with which to view public space through a multi-sectoral lens.

The aim of the work is to dissect the anatomy of public space from three different perspectives: that of the architect, that of the landscape designer and that of the mobility planner. Each expert approaches the same set of preselected public space typologies with a unique lens, with the aim of combining and contrasting these views to present a multi-dimensional narrative of the role of public space in contemporary cities. The research work utilizes the communication style known as polyvocality, native to pedagogical disciplines [Sparkes 1991]. In contrast to univocality, the use of multiple voices is sometimes used as a narrative mode in order to encourage diverse readings/perspectives of an issue or thematic topic, deviating from the rigidity of the singular view and opening up new avenues for interpretation and discussion. Each individual voice is retained separately to allow for cross-examination of expert views [ibid.].

As such, the work is organized into six chapters, each reflecting the role or structure of an element of public space in that of an organ of the human body following the polyvocal

multidisciplinary approach. Following a combinational approach inspired by multiple works dealing with the categorical typefication of the urban body [Koolhaas 2018; Lynch 1964; Quinzii and Terna 2021], the chapters of the work are organized as follows: 01 Streets / Brain, 02 Parks / Lungs, 03 Squares / Heart, 04 Buildings / Skin, 05 Voids / Uterus, and 06 Liminals / Appendix. Each chapter focuses on conceptual interpretations arriving from the three discrete disciplines with the aim to shed light on the differences and similarities that emerge when public space is placed under the microscope and viewed through different lenses.

The metaphor of public space as a human body has multiple objectives: (a) Conceptual: to reflect on the notion of the public space system as a living organism with layered complexities, conceived as a connected system of interdependent relationships as opposed to discrete entities and 'spaces'; (b) Provocative: to push the envelope of the perception of public space as an intelligent, capable and, adaptive system of spaces, borrowing insights and symbolisms from the realm of human anatomy to generate a new language with which to observe the urban environment; and (c) Practical: to offer a starting point to extract lessons from advanced knowledge systems and apply them to the growing field of urban planning as a tool to inspire innovative approaches to contemporary urban challenges. The approach stems from the use of analogy as a cognitive mechanism and mode for creative scientific thought as impetus for new theoretical ideas [Holyoak & Thagard 1995].

The connections between the components of public space and systems of the human body were deliberately produced and served the primary function of opening up new perspectives to observe the public space by prompting the revelation of new identities, relationships and features of public space from a multisectoral lens. This multi-sectoral lens is highly open to new perspectives: our joint research Anatomy of Public Space had the opportunity to face citizens and professionals during a workshop at the Future4Cities festival in Milan in October 2023, organized by FROM – Moltiplichiamo valore pubblico [LAND Research Lab et al. 2023]. The goal of the workshop "Anatomy of Public Space: Do You Know Your Urban Body?" was to explore how users perceive the public space, how architects and urban designers should address its challenges, and how we should envision it for the future of our cities.

This first set of considerations is the basis for the extension of the research work by a fourth perspective–that of the user. This additional point of view could be combined with the previous ones and provide further insights on the main themes that emerged from the workshop [ibid.]. Five macro-issues emerged from the discussion, namely: the different needs of different types of users (local/tourists, and various age groups), security and maintenance, the benefits that well-designed public spaces can bring to the environment, the theme of preserving what is there but at the same time introducing elements of innovation, and finally the theme of functions and temporary and non-temporary uses. These "user perspective" considerations could be further developed and integrated into the publication, guiding the three research partners in designing or re-thinking community spaces.

Ultimately, the work does not attempt to offer a universal anatomy of public space but is rather designed intentionally as a subjective interpretation of three distinct disciplines with shared goals and views of the city. It offers a unique perspective grounded in specific contexts (the three teams are based in Milan, Italy) - even if not directly influenced by it. In addition to this, the scope of the work is meant as an introductory, high-level contemplation of the subject matter; it does not propose solutions or strategies for enhancing the urban landscape. The research invites designers and urban planners to think about the organic, ephemeral and interdependent qualities of public space, offering lessons for practice that could be developed into design principles in subsequent phases of the project.

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FIGURES

Fig. 1 - The Anatomy of Public Space, 2023. Copyrights: Park Plus, LAND ©Nicola Colella, Transform Transport.

Jorge Ramos-Jular[1], Fernando Zaparaín-Hernández[2]
[1] Valladolid University (Spain), Research Group ESPACIar
[2] Department of Architectural Theory and Architectural Design
[1] jerjular@gmail.com, [2] zaparain@gmail.com

Body-space relations in Bill Viola's audiovisual scenographies

Key Words
Space, Scenography, Video, Digital, Bill Viola

Digital resources are, in many technical and plastic aspects, radically different from the way in which spatial art disciplines have articulated the relationship between the spectator (body) and the scenic box on which he or she interacts (space).
However, despite the 'real' separation that the virtuality of these new media implies between the two elements (body-space), digital space still pursues the primitive dream of creating an illusory space for stories and rituals, already implicit in the tradition of the shadows of the fire over the cave. In fact, these digital scenographies share interests with the 'analogue' spatial arts, to which we include architecture, by proposing a new spatiality resulting from the interaction between the container, the object and the observer, in order to introduce a diegesis or to generate sound and visual atmospheres.
From a historiographical point of view, these 'digital scenographies' still have a short history. Conceptually, their origins can be traced back to three major renovations in the 20th century. Firstly, the development of post-dramaturgical theatre, in which the relationship (action) between the actor and the stage takes precedence over the text (theme). In fact, it was mainly dramaturgical critics who began to theorise about the characteristics of the digital stage in publications in the early 2000s, such as La escena moderna [Sánchez 1999], La máquina escénica: drama, espacio, tecnología (de Diego y Vázquez ed., 2000), Cultura Visual Digital [Darley 2002], Dramaturgias de la imagen [Sánchez, 2002] or Escenografía aumentada [Suárez 2010].
Secondly, video games have played a key role in transforming the artistic world by introducing new concepts of spatial perception in the way the player (body), the character (avatar) and the virtual scenario (game) relate to each other, such as interactivity, immersion, simultaneity, and so on. These categories have been considered since the eighties of the last century, but it is only

as software has become more powerful, since the beginning of the 21st century, that all the imagined possibilities have become feasible. This is why practical reflections on virtual space in video games and mobile devices currently dominate in recent bibliography, such as Una genealogía de la pantalla [Márquez 2015], or in doctoral theses in the field of architecture, such as El ambiente ludo-narrativo en el videojuego. Entre la arquitectura de interiores construidos y la neuroarquitectura de escenarios audiovisuales [Barrero 2022].

Finally, the third renewal focuses on the revision that the post-avant-garde, with a clear epicentre in New York, undertook in the 1960s around the concept of the 'art object', which was characterised by highlighting its specific environmental conditions, apart from 'allusions and illusions', and by extension its relationship with the spectator and the space in which it is located [Lippard 2004]. The work of art began to have the purpose of interpellating the viewer through relations of scale and sought to extend its influence into the surrounding space. This meant an extension of the object's radius of action and a progressive semantic contamination between architecture, sculpture and scenography, which Rosalind Krauss summed up in the famous term 'expanded field'.

The interest in the relationship of the piece (object) to the subject (body) and the space (room) inevitably led to that greater 'theatricality' of which Fried accused Donal Judd and Robert Morris in the article Art and Objecthood '1967' [Fried 1967] and which, paradoxically, was one of his main findings. In this context, the object opens up to spatio-temporal and subjective categories that were naturally present in architecture or the audiovisual and have since been intensified in many artistic fields. From these characteristics of hybridisation and theatricality, the postmodern definition of the work of art, which is relational, multiple and audiovisual in nature, has gradually moved on to the current hypermodernity with its various manifestations. In these early sixties, this dematerialisation of the object [Marchán, 1972] brought with it the appearance of new artistic currents, often hybridised between them, such as conceptual art, action art, project art, light art, etc. In most of them, video becomes not only the instrument of documentation par excellence of actions or performances, but also its elevation to a means of artistic expression.

In this way, we can say that the last third of the 20th century saw the culmination of the abandonment of disciplinary autonomy. The object loses its protagonism in order to become part of a more complex, scenic and virtual system, in which the message and connectivity begin to be important, characteristics of the currently consolidated communication society, and in which audiovisual media are increasingly imposed on physical media.

Following this line of reasoning, in this article we would like to highlight the figure of the American video artist Bill Viola (New York, 1951). In his audiovisual works, Viola imposes a new way of understanding video as a mixed format, documentary and plastic, with a strong scenographic character, in which the body, often his own, becomes the element chosen to experiment with new modes of artistic expression.

These ideas have evolved from his first spatial installations, in which he managed to create a fluid experience between the spectator and the work through the use of different screens, mirrored water surfaces and televisions [Walsh 2004], to his most recent and famous montages, in which he plays with the 'temporal space' of filming and the 'spatial time of perception' through the extreme slowing down of scenes with a high degree of spatial product.

In this way, Viola's audiovisual scenographies, beyond their sensationalism, have a spatial potency of great interest for architecture, since they can help the latter to overcome its self-referentiality and learn to generate space from other nearby spheres. Their virtuality, which has been enhanced in recent years by the possibilities offered by the digital image, allows them to be understood as quick essays, which differ from architecture only in their more fictional character, with a lesser reason for use, characteristic of the built. They show how space is configured, not only with its geometric definition, but also with phenomenological elements: light, image, graphics, atmosphere or sound.

Moreover, they are more experimental and flexible than architecture when it comes to proposing new three-dimensional categories, which in Viola's case we could distinguish in three states (or scenes) of relationship between the represented body and the space of representation. Firstly, there is a tendency towards scenes with a markedly pictorial character, influenced by his studies of Renaissance art, such as The Greeting, 1995 or The Passions, 1998.

On the other hand, we can distinguish more cinematographic or theatrical pieces in which one or more stories are developed through a character with a very direct relationship with the 'projected' stage, as in Catherine's Room, 2001; Emergence, 2002; or Going Fourth By Day, 2002.

Finally, we also find interactive relationships linked to the field of dramaturgy, such as the collaboration as audiovisual set designer with the orchestra director Marc Piollet and the theatre director Peter Sellars in the staging of the opera Tristan and Isolde (2004-2005); or in

the field of video games, in which Bill Viola has also experimented by participating as director of the game The Night Journey [1].
To sum up, the aim of this article is not only to contextualise the new relationship between the body and space that has been created since the end of the twentieth century in various installations (artistic, cultural, scenic or audiovisual) that are typical of the multimedia scene [2]; but also to describe the spatial categories that can be found in the analysis of various audiovisual works by Bill Viola and that, in short, can serve as a new field of reflection on the possibilities of understanding space in our contemporaneity.

ENDNOTES

[1] https://www.thenightjourney.com/
[2] Main objective of the R&D Research Project funded by the State Research Agency of the Ministry of Science and Innovation of the Spanish Government entitled ´ Digitalstage. Spatial analysis of digital scenographic installations of the 21st century. Ref. PID2021-123974NB-I00, of which the authors are Principal Investigators. Info: https://www.espaciar.net/digitalstage-2225

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FIGURES

Fig. 1 - Bill Viola, *Catherine's Room*, 2001, Políptico de video en color sobre cinco pantallas planas LCD montadas sobre pared. 38,1 x 246,4x5,7. Edición de seis.

Zhengwen Zhu
Politecnico di Milano, DAStU - Department of Architecture and Urban Studies
zhengwen.zhu@polimi.it

Approaching the playground. Spatial practices for the body

Key Words
Playground, Body-space relationship, Spatial practices

An interactive exhibition *Bodyspacemotionthings* was staged at the Tate Gallery in 2009 which is a representation of the extraordinary one curated by Robert Morris in 1971. He set up various structural elements to interact with visitors who will experience the space by walking, running, crawling, climbing, skipping, and sliding, spontaneously becoming part of the playground scenario. According to Robert Morris, "It's an opportunity for people to involve themselves with the work, become aware of their own bodies, gravity, effort, fatigue, their bodies under different conditions" [Morris 1971]. This playground experiment rediscovered conceptions about spatiality and corporality, calling people to refocus on how behavior could be shaped by spatial practice.

If we trace back the nature of play in Morris' body-space experiment, we will be reminded of Huizinga's assertation, "all primordial human occupations are already impregnated with play" [Huizinga 1971]. Roger Caillois coined the more precise terms, Paideia for "play" which is spontaneous and rests upon the shared assumption of the illusory without established rules; and Ludus for "game" which appeals to a priori agreements and rests upon legal constructs [Caillois 2001]. Such further classification seems to indicate two provisional dialectic attitudes towards the body at play, as what Deleuze talked about smooth and striated space [Deleuze & Guattari 1987], whether the space and the content allow for more contingency and uncertain.

Whether play has a strict formal structure or not on the body determines the conversion between the playground and the game field. "Modern architects held extraordinary expectations, however, about coaxing Paideia into prescribed grounds" [De Arce 2018]. Therefore, compared with the isolated recreation in the plan with the idea of functional separation proposed by CIAM, in Aldo Van Eyck's numerous playground projects, the interactive characteristics of the body and space shown in playgrounds have been truly discovered and thought about by the

architectural community. Aldo van Eyck's abstract and simple forms of architectural elements permanently open up to the body, constantly stimulating its imagination. His playground is committed to integrating with the city and serves as a porous and interstitial strategy regarding urban voids and leftover spaces, encouraging the possibility rather than occupation, calling interaction rather than segregation. "Aldo van Eyck's designs don't aim to show what they are and how they should be used, they rather suggest what they could be" [Lingen & Kollarova 2016].

Then how can the design approach the playground? It's important that the secret of the playground is composed of the daily interaction in the body-space relationship, The empowerment of space for creative behavior, and the strategic configuration of cognitive sensory space. Faced with the degradation of daily perception and the alienation of lifestyle brought about by modernity, approaching the playground means transforming a monotonous, boring, indifferent field into a collective space full of daily fun, a re-examination of the relationship among individuals, living spaces, and agency, wandering in informality by regaining the body. When the project becomes the playground, the openness, everydayness, flexibility, and corporality of the space have become the themes of the project, and behavior is no longer the inevitable result of functionalist space or the autonomy of architecture. "The object has not become less important. It has become less self-important" [Morris 1966, pp. 20-23].

That means approaching the playground is supposed to demonstrate a situationist attitude towards the body. The Fun Palace by Cedric Price shows an environment that is constantly interacting and responding to people. Constant's New Babylon explores a city of movable, nomadic, megastructures, a vast arena of play [Bonnett 1999, pp. 25-32]. The playground here is the vision that realizes an open space structure through the free combination of elements and flexible spaces so that people can interact with each other and meet the needs of body liberation and a playful urbanity. Its situationist stance embodies a fleeting character, an ephemeral radical experience, the gesture in between the indeterminate and the predetermined that makes it a sensitive and dynamic behavior investigation to draw the architect's attention from the solid form shaping back to the body-space relationship.

The contemporary Paideia playground-style spatial practice shows how people locate themself in the social space based on their bodies. In the urban public space, tools like tactical urbanism provide a critique of urban governance and propose to gain more production of public space for citizens. Barcelona's Superblocks encourage slow traffic and introduce the playground and green to reshape civic space and give streets back to residents. In Brussels, Filter Café Filtré Atelier explores the interactive play of citizens' collective actions and how instant public activities become body spatial practices. For architecture space, the playground principle would also bring the body the potential to generate movement and interact with surroundings. The School of Arts and Popular Traditions designed by Urban-Think establishes an open and playful framework that could be constantly modified and reprogrammed by users and it becomes a playground that inspires various study, communication, and movement for carnival. By the flexible and non-hierarchical assembly of anonymous architectural traditions, the merge of architectural components, furniture, and objects, and the generous use of materials, a series of housings designed by Point Supreme demonstrates a strong playground quality to create a world that triggers human perception and action instantly. The Projects with the playground quality could rediscover and redevelop various negative spaces and their interventions are highly open, adaptable, and reversible. The everyday activities and informal events create new forms of public space which are transformed into sites of potentiality, difference, and delightful encounters [Watson 2009, pp. 1577-1591].

The research methodology of approaching the playground is about valuing the contingency and the informality of the interaction between body and space, a requirement that seems to coincide with contemporary architectural ethnography. By exploring subtle changes in daily life and urban realities through participatory ethnographic observation, architects are able to grasp everydayness behaviorally. Atelier Bow-Wow's drawings focus on the relationship between the spatial and temporal characteristics of the individual's perceptual world and the built environment. Yoshiharu Tsukamoto and Momoyo Kaijima reflect the relationship between events and objects through the overlap and narration in the drawings, thus revealing the play between the body and the space. "These 'assemblage ethnographies' followed the principles of 'no hierarchy,' attention to the details, and symmetry: attention to what happens between humans and nonhumans; and undivided attention to the words and the gestural and non-verbal language of the designers themselves" [Yaneva 2018].

"Play is an important but largely neglected aspect of people's experience of urban society, and embraces a wide variety of activities which are spontaneous, irrational or risky, and which are often unanticipated by designers, managers, and other users" [Stevens 2007]. To study the complex body-space relationship characterized by the playground, it is necessary to combine

architectural interpretations with those of urbanism to achieve an overview of spatial practices for the body. This study defines the playground as the typical spatial practice typology for the body-space relationship, then reviews the concept of "play" and gives a conceptualization of approaching the playground from specific historical and theoretical cases that constitute general discourse. It then further characterizes the playground approach and states that approaching the playground consists of daily interaction, the empowerment of space, and the strategic elements configuration. Its typical attitude is situational, and the research methodology seems to share a common vision with contemporary architectural ethnography. This argumentation will be further elaborated through contemporary urban and architectural case studies, and will lead to the conclusion that approaching the playground as the space type and strategy could strengthen the body-space relationship, improve the interaction with diverse space needs and changing environment, and trigger the creative behavior and contingent events.

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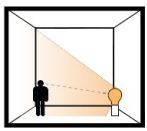
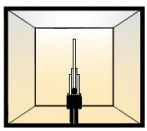
FIGURES

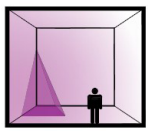
Fig. 1 - Zhengwen Zhu, A playground in Milano, 2024, Photo, Milano. Zhengwen Zhu.

Products





monument' for V. Tatlin',
Dan Flavin, 1966–9

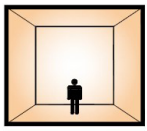


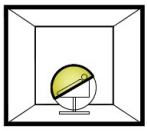
Alta Pink Corner
James Turrell, 1968

Solid light works
McCall, 1971

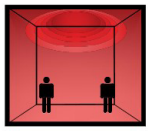
Unsupervised
Refik Anadol, 2022

Atmospheres





Alien Project
James Turrell, 1989

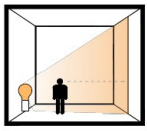


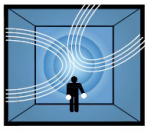
Aten reign
James Turrell, 2016

The Weather Project
Olafur Eliasson, 2003

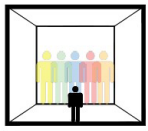
Van Gogh experience
2021

Interactions

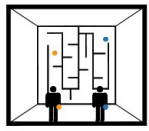




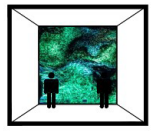
György Kepes Memorial
Seth Riskin, 2002



Your uncertain shadow
Olafur Eliasson, 2010



Enjambre Celular
Mónica Rikić, 2018



The Star Sydney
Ramus, 2019

María Redondo Pérez
DPA-ETSAM-UPM
maria.redondop@alumnos.upm.es

Products, atmospheres and interactions. Relations between the body and Light Art

Key Words
Light Art, Phenomenology, Behaviour, Performance

Due to its physical qualities, artificial light is a material that allows the union between physical and virtual architectures, enabling the creation of the virtual within physical space. Light Art emerged during the development of the second artistic avant-garde in the 1960's. In recent decades, we have witnessed the exponential growth of the use of artificial lighting for the conception of installations aimed at reshaping the viewer's perception. Light Art creations are fundamental in generating intangible realities, representing an extreme illustration of perceptual modification. These installations build virtual and immaterial realms, transporting viewers to dreamlike worlds that either re-enchant the space or evoke an uncanny sensation in places already known by the viewers [Jane Bennett 2001, p.5]. Since its inception, museums have incorporated these installations as an indispensable part of their program, making them an increasingly frequent resource, larger and with an ever-increasing depth and emotional charge.
The works of Light Art fall within the realm of phenomenological experience, "environments that confuse the actual with the virtual, or feelings that are hardly our own yet interpellate us nonetheless" [Foster 2013, pp. xi-xii]. These installations seek to transform the observer into the artwork since it is through their interpretation that the work acquires meaning in the subconscious. It is about the experience of "the sublime" defined by Kant [Kant, 1876], as an aesthetic experience characterized by greatness, power or immensity that surpasses our capacity for comprehension or apprehension. Therefore, these works must be processed in two times: a first one in which the subject feels overwhelmed by the scene, even in emotional terms; and a second moment when the subject recoups from those emotions and enjoys a great rush of personal power [Foster 2013, p.211].
Therefore, the work of art needs the bodies that interact with it to exist, because it exists

through its interpretation. After this interpretation, the work also becomes a reality for the observing subject. According to authors such as Merleau Ponty, the world is what we perceive and live [Merleau Ponty 2002, p.xviii], so, in phenomenological terms, these virtual experiences are just as real as the experiences of the material. The success of these installations lies in their ability to understand separately the physical body and the phenomenological body. According to Murray, these installations seek "to destabilize the experiential boundaries of a person's body, thus partially freeing the phenomenal body from the experiential constraints of a person's physical presence in the real world" [Murray 1999, p.319].
Moreover, the separation between the physical body and the phenomenological body serves to alter the behaviour of bodies in space. Bruno Latour grouped under the term "script" the 'built-in' prescriptions of technologies over the human [Latour, 1992]. The concept of the "script" explains that the non-human prescribes a behaviour in the human as if it carries implicit instructions on how we should relate to them or in its presence. This concept of relationship is inherent to this type of artistic installation and also to our behaviour in museum spaces. Under this precept, the non-human, in this case, the light, prescribes a behaviour in the body that finds it. Contemplating, approaching, sitting, moving, relaxing or touching are acts that are part of the "script". We just do it because is what we have to do in its presence, even if nobody tells us what we have to do. Therefore, there will be installations that invite the generation of more direct performances and others that are subtler, even when the users themselves are not aware that they are performing [Duncan 1995, pp.1-2].
Lighting designers and artists must foresee the behaviours and emotions that their works will generate. To do so, they require a bank of common images that allow the resemblance with the memory of previous experiences. There are lighting designs that invite contemplation, togetherness, or introspection, and with this invitation resulting from a mediated image they alter the behaviour of visitors who confront the artworks. In this research, a series of artificial lighting installations are analysed in terms of their relationship with the viewer. To this end, the installations are divided into three categories: projects, atmospheres, and interactions.
In the first place, the projects are those installations where the relationship between the body and the work of art is that of two separate entities. The body is passive before the work and is separated from it. A great example of this type of work would be Dan Flavin's fluorescent sculptures, which he considered to be "modern technological fetishes". The artist related his sculptures to the iconography of Russian religious art, and by relating them to fetishes he highlighted the separate condition between the observing body and the observed object. Other cases highlight the ability of light "to significantly alter our perception allows us to visualize apparently solid objects when in actuality, the only object that exists is the mental object created by the medium" [Katzberg 2009, p.29]. This is represented in Turrell's early works, the artist created optical effects of light figures that appeared to be solid and planes of light. Also, in his Solid Light Films (1971), McCall played with the paradox of the generation through the use of light on seemingly solid objects that were easily pierced by the physical body. Conversely, light can also serve to create the opposite effect, modifying the objects that exist in the physical body. The case of the installation Living Architecture (2023) by Refik Anadol was based on completely dematerializing the facade of the Batló house using the videomapping technique.
Secondly, the atmospheres occur when the body is immersed in the work and becomes part of it. While the products were situated as elements foreign to the body that observes them, the atmospheres seek to envelop that body as part of the work itself. Although James Turrell's early works generated sculptures with light, the artist is famous for his atmospheres. In Alien Project (1989) the artist generates a simulator where the body can lie under a light that makes it look as if it has been abducted. Also, in his sky observatories, visitors sit and contemplate the light of the work for introspection. In 2003, Olafur Eliasson installed the Weather Project in the Turbine Hall of London's Tate Modern. The installation consisted of an apocalyptic sun that lit the entire hall and invited visitors to stand beneath it. In recent years, immersive experiences have begun to be developed within paintings by classic artists such as Van Gogh or Klimt. These experiences boast a pedagogical and informative character through the immersion in the projections of the paintings, which are accompanied by narratives in full colour.
The last example is interactions. Interactions are works that require the performance of the physical body for their existence. In them, the installation is transformed through the body and is therefore dependent on it. A good example of this type of installation is Olafur Eliasson's Your uncertain shadow (2010). In a white room, visitors enter by passing in front of 5 spotlights that project light onto the façade in front of them. As visitors enter, their projected shadow appears on the wall as an array of five differently coloured silhouettes. Each silhouette is crafted by obstructing light of different colours from slightly varied angles. As visitors move about the space, passing closer to and farther away from the lights, the silhouettes shift in colour intensity and scale. In this installation, art is produced through play, experimentation,

and the curiosity of the visitors, who decide what the work on display looks like, and what can be done with it.
The Light Artworks installed in museums can be seen as small-scale experiments in a controlled environment, which will later become part of the urban scale. It is important to analyse people's relationship with these installations in order to understand the city as the phenomenological laboratory that has been transformed into. The increase in the amount of lighting in cities has increased the urban phenomenological experience. In addition, since the 1980s, there has been an increase in the number and frequency of artificial lighting festivals, which use the urban space as a backdrop. Understanding the relationship of the body in phenomenological spaces can help to develop and understand new techniques and tools for the construction of contemporary cities responsible to their inhabitants.

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FIGURES

Fig. 1 - "Diagrams of the relationship of the body with the different installations of Light Art". own authorship.

Diana Salahieh [1], Layla Zibar [2], Irena Fialova [3]
[1, 3] Czech Technical University in Prague, Department of Urban Design
[2] KU Leuven, Department of Architecture
[1] diana.salahieh@fa.cvut.cz

Exploring narrative research methods for an embodied reading of Prague's walkability

Key Words
Walkability, Embodied experience, Prague, Narrative methods

In a poetic yet disquieting notion, Michel de Certeau's analogy in *The Practice of Everyday Life* [1984], draws a similarity between walking in the city and speaking a language. He boldly argues that when a city diminishes its capacity for walking, it risks losing its voice and becoming a dormant language, where its humor and expressions fade away despite the preservation of its formal structure.
In recent decades, urban planners, architects, human geographers, and artists have raised awareness on the paralysis and rupture of our urban environments' walkability due to ill planning and negligence of the pedestrian [Gehl 2010; Jacobs 1992; Middleton 2021; Solnit 2014]. Nevertheless, the understanding of 'walkability' as a concept has been evolving in response to shifting perceptions of mobility, primarily driven by meeting sustainability, climate goals, and economic development of urban areas [Shields et al. 2021].
Walking metrics have developed to quantify and score 'walkable' qualities of urban environments that predominantly revolve around criteria such as density and diversity of urban morphology [Dovey & Pafka 2020], or delve into the characteristics of the built environment, such as road network connectivity, land use, pavement continuity, etc [Mezoued et al. 2020]. However, these metrics have progressed by assumptions that the materiality of pedestrian infrastructure exists independently of people who use it [Middleton 2021]. Consequently, such metrics perform as neutral maps "simplifying reality by slicing and cutting what naturally belongs together" [Gantois 2022 p.516].
Walking is a fundamental bodily movement, and a social practice with innate psychosomatic benefits, grounding us within the places we dwell in. The polysemic nature of walkability requires a reading that interlaces both tangible and intangible dimensions of the built environment, integrating a deeper recognition of sensory and symbolic aspects [Mezoued et al.

2020] that contribute to "the differentiated nature of our spatio-temporal, embodied, and social experiences on foot" [Middleton 2021, p.17].
Furthermore, with mass waves of global displacement due to war and conflict that have uprooted individuals and communities from their homes, it becomes increasingly important to recognize how walkability of urban spaces are experienced and embodied by new dwellers as they carve their own sense of belonging within a foreign environment. Yet most walkability studies neglect the dynamic diversity and nuanced walking experiences and imaginaries that surpass a homogenized walking body [Lo 2009; Middleton 2021].
Hence, this work explores a non-reductionist understanding of walkability, proposing a body centered approach that begins to unpack temporal, spatial, and symbolic dimensions that manifest the sensory walking experience in the city.
Recognizing that urban spaces pertain specific atmospheres that guide the emotional resonance and everyday decisions for city dwellers [Perez-Gomez 2016], this work kicks off with a general inquiry: how can we use the body to document and deconstruct the sensory walking experience of a built-environment and describe its sense of walkability?
The research approach is put together by investigating theories and practices that have utilized walking as a research method [Bannon 2011; Bassett 2004; Burckhardt et al. 2015; Careri 2017; Shortell & Brown 2014; Twemlow & Cardoso 2023]. In addition, valuing the linguistic power of evocative description to unveil experiential and lived qualities of urban spaces [Havik 2014], narrative methods [Moura & Bernal Milià n 2023] withhold potential as a creative device to describing walkability.
Drawing on Richard Shusterman's discipline of somaesthetics [Shusterman 2009], that centers the body (soma) as a site of sensory appreciation (aesthesis), this work begins with critical embodied observations on the built environment to describe its dynamic walkability. This sensory exploration reflects on the presence and interactions of bodies in space, with experiential qualities registered through the perception of space, sound, smell, and other bodily sensations. Walks are re-traced and dissected as 'perception in motion' and sequential narratives [De Wit 2023], illuminating the choreographic spatial gestures and elements that manipulate the position of body and contribute to a multi-sensorial (walking) experience.
Furthermore, the sensory exploration is overlapped with a symbolic reading of urban spaces and their socio-spatial embedded narratives and memories, through a composition of drifting, remembering, and reflecting on past and present urban transformations that have (re)shaped and (re)produced the atmosphere and form of urban spaces' walkability. The research method explored here is Interactive Walking [Gantois 2021]. The essence of this method, originally developed for tracing the social and deeper significance of heritage sites, holds an inspiration for this research, where spontaneous walks accompanied with chronological sketching turn into journeys that expose relational issues and brings contradictory layers of meaning into dialogue [Gantois 2022]. The poetic and critical gaze generated, through the combination of walking and sketching in this method, enriches the observations with revelations induced by "written notes, memories of other places, points of rest and encounters with inspiring perspectives and sceneries" [Gantois 2022, p.516].
Based on fieldwork and direct walking observations, this research focuses on Prague which provides a diverse array of walking investigations. The contemporary capital is recognized for its exceptional historic architecture, mosaic of high quality urban public spaces and modern urban developments, yet its walkability structure is fractured due to influential urban transformations. Additionally, impacts of distant wars (i.e., Ukraine and Palestine) are vividly witnessed within Prague urban landscape, shaping its temporal sensory walkability.
In sum, this research critically reflects on the constrained viewpoints that taper the scope of walkability as 'pedestrian accessibility for short distance mobility' and redirects the gaze towards incorporating the complexity of walking as a (sensory) movement and (embodied) experience. By adopting a body-centered approach, Prague's forms of walkability are explored within an assemblage of sensory experiences, moving beyond the subjective. Through walking, this research emphasizes the relationship between the body, space, and memory; tracing lost pasts, imposed urban transformations and local impacts of global crises, all which shape the sensory embodied walkability of built environments.

ACKNOWLEDGMENT

This work was supported by the Grant Agency of the Czech Technical University in Prague, grant No. SGS23/127/OHK1/2T/15.

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Daniela Coppede Pacheco Cioni Coppola
University of Florida, Graduate School of Architecture
daniela.coppola@icloud.com

Diagramming & mapping.
The underlying system of architecture

Key Words
Conceptual diagram, Visual thinking, Phenomenology, Poetic embodiment, Furniture design

Architecture is a multidisciplinary field in which the idea is generative. It is a mediation between ethics and poetics, intention and intuition, and physical and metaphysical aspects.
Making something physical, built, is not all there is to architecture, for there is no architecture without an element of poetry. Alberto Perez-Gomez, in his book Built Upon Love (2006), argues that if architecture is seen merely as a product of social or economic forces, this misses the point. He emphasizes that the engagement between ethics and poetics is a fundamental responsibility of architecture (2006, p. 3).
In the realm of artificial intelligence, where machine force prevails over human force, phenomenology enriches architecture, allowing human participation and poetics to thrive. This research project aligns with phenomenology on the essence of consciousness and defines the fundamental concepts of things.
Perez-Gomez calls attention to the necessity of the valorization of the poetic imagination of architects (2006, p. 15): How do architects generate ideas? What inspires them?
In the cognitive process of idea-making, the narratives collected through our perception throughout our existence come into play. We use the body and its senses as a medium to perceive what is beyond us and internalize all our experiences and observations creating in our minds a narrative that may or may not be related to what we see or experience and which is personal. Thus, we form our repertories that are accessed during the creative process and, in conjunction with the specifics proposed by a given design, lead to an idea.
Architects can be inspired by something, and its essence becomes Architecture; in this way, we borrow the essence of what inspired us. This process of construction of an idea can happen in a structured or intuitive way.
The purpose of this project is to test a methodology that can be used by architects to construct

ideas, recalling poetics in the making of architecture and bringing to light the use of conceptual diagrams as an instrument of thought.
Diagrams in architecture are as old as architecture itself, and have been present since its most primitive expressions: "From Stonehenge in England to the ancient native American-Indian petroglyphs carved into rock, diagrams were used to express senses of space and place." [Garcia, 2010, p.5]. This research focuses on diagrams - no longer as pure geometry or structure, but rather as containing all the meanings that underlie its essence. It is about the use of diagrams not as a justification of ideas, but as a tool for generating ideas, whether as Map - a system that considers the morphology of things, or Diagram - a system that does not consider the morphology of things.
This work revisits Maelee T. Foster's [1] arguments about the elaboration of conceptual diagrams, or parti diagrams, as a process of constructing and reinventing the design idea and understanding the underlying systems in architecture [1997, p. 199]. Those systems nourish, co-exist, and relate to each other in layers of content, including concept, spatiality, and tectonics, being the mediator between the conceptual idea (metaphysical) and the built environment or artifacts (physical). Conceptual diagrams are a cognitive and visual instrument of infinite production that generate designs of all scales.
Architecture, at its different scales, exists to meet man's individual and collective needs, whether in the chair he sits in, in the house he lives in, or in the city in which he relates to others. All of them define space and shape the human multisensorial experience.
This research project adopts this theoretical premise and tests it using the example of furniture design, focusing on the potential of the methodology, the body, and the object of design.
The methodology starts by understanding the essence of a painting by Di Cavalcanti depicting the conquest of Brasilia, as an inspirational element. A parti diagram is generated by mapping - considering the morphology of the painting - and diagramming or outlining its descriptive organization. The methodology consists of: Empathizing, Dissecting, Dematerializing, Abstracting, Organizing, and Constructing Space; the resulting diagram summarizes the ideas embedded in Di Cavalcanti's masterpiece.
Then, another layer is added to the descriptive diagram, the body.
Historically, the human body is the object of man's own desire in search of beauty. Artists through the ages represented the human body and many of their works of art were adopted as the standard of perfection. The body is our reference to understand the magnitudes of others and is the repository for individual sensations and experiences; in fact, Juhani Pallasmaa suggests that the body is at the center of all our experiences with and in the world [1996, p. 40]. Borrowing human bodies from other masterpieces, the body is introduced within the diagram as both "scale" and "program," establishing a dialogue between their conceptual, historical, philosophical, and contextual aspects, and the diagrams resulting from their relationships are used to inspire the creation of objects infused with their essence.
After this process of negotiation between the diagram, the body, and the essence of the object of design has taken place, an idea is born.
In search of a more humane and culturally contextualized architecture, full of experiential and symbolic qualities which enhance man's existential feeling of being and being in the world, this project aims to uncover another layer of how design may be approached.

ENDNOTES

[1] Maelee Thomson Foster (1932-2018), Professor Emeritus of Architecture at the University of Florida, was one of the first women to be hired, tenured, and promoted to Full Professor in the College of Architecture, and advocated the use of conceptual diagramming as a creative process in a lineage originated by Josef and Annie Albers, to Maelee T. Foster, to Albertus Sunliang-Lui Wang, to Daniela Coppola.

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FIGURES

Fig. 1 - Coppola, D. *David as Christ: The Diagram and the Presence of the Body.* Sketch and Collage. 2020.

Alessandro Di Egidio
Università degli Studi "La Sapienza", DiAP - Dip. Architettura Teoria e Progetto
alessandro.diegidio@uniroma1.it

Fighting technological alienation. Performing media as a sustainable practice of human-machine symbiosis

Key Words
Body-machine hybridization, Actionable interface, Amplification of physical reality, Virtualization vs. amplification, Post-organic

This paper seeks to explore the dynamics of hybridization of the mechanical technological universe with the organic universe of the human body, recognizing an increasingly vague margin between the two fields.
Considering the risks of alienation that the technological age is producing on humanity and its ability to relate to the environment in which it lives, the text elaborates the need for a restructuring of the relationship between humans and the technological world.
An attempt will therefore be made to reveal a different approach to the technological device. This is intended to be interpreted not as a tool for virtualizing reality, but rather as an interface to be acted upon through bodies, a filter that amplifies physical reality by revealing its more difficult-to-perceive sides.
An approach to multimedia therefore that rehabilitates the role of physical places in their relationship with technological innovations, making them spaces of actions, movements, and experiences of bodies.
Through the experiences of Urban Experience [1] and Teatro Mobile [2], the text aims to highlight how the relationship with multimedia can bring human beings closer to the lived space, which becomes again the stage, augmented, of their existences.
Technological advancement has historically been the bearer of great social upheaval. The advent of new technological tools has generated "new environments capable of inflicting considerable pain on individuals" [McLuhan 1968, p. 7]. The radical change of speed brought about by scientific progress was accompanied by a period of great confusion: in the 16th century, Hieronymus Bosch depicted the new chaos of space resulting from Gutenberg's invention and introduction of printing, which had destroyed the cognitive foundations of the old medieval world.

McLuhan defines technology as software that renders obsolete the efforts of the body (hardware) to deal with the interference and imperviousness of the real world [McLuhan 1992a, p. 162].
Viewing media as reconstructions and expressions of biological capabilities pushed beyond the human limit, the Canadian sociologist, on the eve of the electronic revolution, confused the central nervous system with the geometries of microchips. Amid possibilities and dangers, the new nature of homo *elettronicus* was thus delineated: freed from the material and natural laws governing the physical body, the human acquired the ability to become a consciousness present in multiple places at once; diffused by satellite technology, insensitive to gravity, "sitting in his room receiving data, images, sounds, tactile sensations, from all over the world at hyperbolic speed [...] while the body will remain fixed, the mind will float in the electronic vacuum" [McLuhan 1992b, p. 117].
The world of the electric machine thus acts on the human body in terms of physical dilation and spatial decentralization. At the same time that the body acquires the mechanical codes of the invading technology, the electrical universe deciphers from the human model the capacities of sensitivity, flexibility, intelligence and communicative capacity [Palumbo 2000a, p. 1].
In the field of disciplines concerned with the design and interpretation of space, this corresponds with an aspiration to become the living body of hitherto inorganic matter.
Thus, in this convergence defined by Palumbo as *postorganic* a dynamic of slippage of the reacting subject takes place. The machine appropriates the sensible connotation that belonged to bodies, while these are progressively emptied of the capacity to perceive, react and interact with physical reality.
This process of robbery by machines of sensory activity also occurs with respect to the natural environment and, consequently, physical places.
The construction of space in the electronic age tends to reproduce in an organicized mechanical manner the sensory response dynamics of both human bodies and natural physical space. Regardless of anatomical or zoomorphic form, new realizations or modifications of environments replicate the organic sensory response. The hypersurface thus transfers into the domain of the determinate and circumscribed to the terms of a programming language what was previously yes predictable through scientific studies, but also rich in the realm of indeterminacy.
In light of the changes brought about by the electronic revolution, a different paradigm defining the relationship between body and space must be recognized. At the dawn of the third millennium Palumbo, investigating the relationship between new media, ecology and space, identified the terms of new lines of architectural research.
Rather than to the project, in this text we intend to refer the programmatic points intuited by Palumbo to the body. Projected into a specifically virtual dimension, the body, boundless, is disseminated, deconstructed; uprooted it is subject to a tendency of deterritorialization, mobility, temporality, precariousness of balances; fluid it is dissolved from the physical form into a spatial vibration; virtual it is subject to extreme dematerialization, launched toward the "multidimensionality of the dimensionless" [Palumbo 2000b, p. 13].
It is noticeable how the concept of contact with the physical world is excluded from this relationship. The human being, at the mercy of the technological storm, is delocalized, an inhabitant of a non-real space. Above all, he is an inhabitant of an artificial space.
The evolution of electrical technology into computer and virtual technology marked a crucial point in the history of scientific progress. The possibility of having the infinite piano on which to perform any score, the ability to exert control over entities, to make imaginary processing become immediately usable reality mark the entry into the Age of Technology [Ghia 2013a, p. 56].
What are the results of this golden age of progress? In an essay on ethics declined in the field of architecture and space, Ghia poses the problem of the subjection of human beings to a technology that can no longer direct, but only reproduce in a manner equal to itself. Picking up on the questions introduced by Pirsig in *Zen and the Art of Motorcycle Maintenance* concerning the struggle between the classical, rational spirit and the romantic, irrational one, Ghia asks whether, having recognized a problem in the positivist scheme that has driven progress, we can ask Technique to take a step backward [Ghia 2013b, p. 59].
Is it possible, faced with the hypothesis that such a radical loss of human beings' ability to interact with the physical world is contributing to the environmental and energy crisis that threatens the very existence of the human species, to ask technology to restore the balance of the relationship? Above all, can human beings prescind from the level of technological dependence to which they have conformed?
In this text we seek a use of the multimedia tool that rehabilitates concrete and tangible physical reality in the paradigm from which technology has excluded it. The reading of the technological device in the key introduced by Carlo Infante [3] is proposed. According to the concept of the

performing media, the multimedia tool is an amplifier of physical reality.
The interface takes on haptic character through the gestures of bodies in physical environments. The body acts in the multimedia tool, activating the space; the multimedia tool performs the space, amplifying the physical characters that the body has more difficulty perceiving.
The technological activism practices of the associations Urban Experience and Teatro Mobile equip themselves with the collaboration of technological tools to augment the acoustic reality of the environments they traverse: by means of a narrative voice, they exhume the DNA of the sleeping territories they traverse, act within them, and interpret them as a stage, merging with the physical and sonic conformation of the places.
The multimedia tool operates as a medium of rapprochement between bodies and space, pandering to the revolution that McLuhan announced: from a visual, perspectival, linear world to an acoustic, multicentric, diffuse, yet real world.

ENDNOTES

[1] Urban Experience is a field of cultural design for urban regeneration and active participation, connoted in playing cities through the creative practices of performing media: an enabling condition for the social creativity of networks to reinvent public space between web and territory
[2] Teatro Mobile is a traveling headphone theater association that addresses projects related to the discovery of significant places of cultural, urban and environmental heritage.
[3] Carlo Infante is changemaker, freelance lecturer in Performing Media, cultural designer, founder of Urban Experience, and dynamizer for urban resilience. For more information https://www.performingmedia.org/profilo-sintetico

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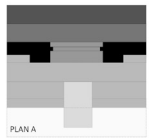

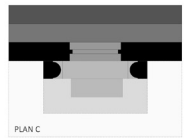

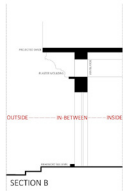

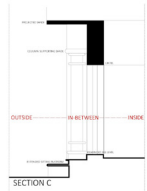

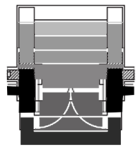

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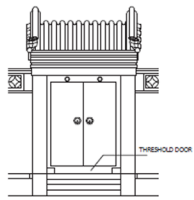
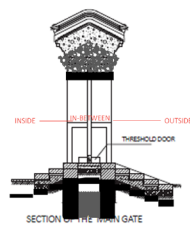
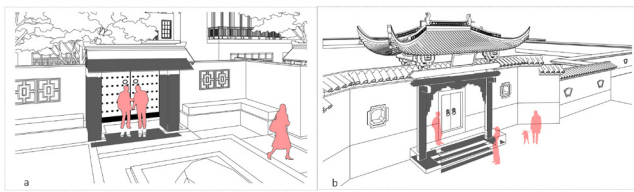


ELEVATION OF THE MAIN GATE



SECTION OF THE MAIN GATE



Sarah Javed Shah[1 2], Liheng Zhu[2]
[1,2] Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
[1] University of Engineering and Technology Lahore, Department of Architecture
[1] sarah.javed@polimi.it, [2] liheng.zhu@polimi.it

The [socio-cultural] production of space.
Doorstep: Exploring threshold in non-western contexts

Key Words
Socio-cultural space, Threshold, Doorstep, Boundaries, Collective realm

The post-modern era surged a notable interest in the conceptualisation of 'space' across diverse disciplines. Prominent philosophers, geographers, sociologists, and theorists beckoned a new, 'socio-cultural' turn in understanding space. As for Henri Lefebvre (1991), space and society are two inseparable components: "(Social) space is a (social) product" (Lefebvre 1991, p.26). Contemporary architectural discourse integrated philosophical concepts of space, enriching interdisciplinary interpretations and making space an inextricable architectural component. "Any definition of architecture itself requires a prior analysis and exposition of the concept of space" (Lefebvre 1991, p.15). By the second half of the twentieth century, the discourse centralised the social construct of space, moving away from the Euclidean space and aesthetic concerns towards the social nature of space, or space as experienced by humans through uses, activities, inhabitations, appropriations, and the gamut of social and cultural prodigies. Such conceptualisations paved the way for renewed thematic discussions and revaluations of conventional concepts of space, such as new ways of interpreting the relationships between humans, objects, and space while overcoming the dialectics of inside/outside and public/private - through the redefinition of architectural boundaries, "thresholds, and interstices, the dialectics of inside and outside, and the complex relationships among interiorities and exteriorities" (Popov, 2010, p.91).
The overcoming of these polarities, which, in their new blurred relations, still afflict our contemporary condition, was symbolised by the simplest element of transition between public and private, "from street to home: the 'doorstep' by Team 10 (modern) architects" (Marchi 2017, p.156), who expressed their ideas about the archetypical conception of the 'threshold'. Aldo Van Eyck (1962/2008) adopted the *zwischen* (in-between) and transformed it from a non-spatial to a spatial concept. This radical concept was also central to the framework of

the CIAM '53 (International Congress of Modern Architecture - 1953) as "Extensions of the Dwelling" (Mumford 2002). The concept rejects conventional oppositions, suggesting a 'third' space perspective that surpasses polarities without settling in the middle and embracing the tension between inside and outside (Secci & Thibault 2005). The in-between third space fosters a nuanced understanding and encourages creative exploration beyond binary thinking. Hence, the in-between threshold (doorstep) is a space of informal relationships, mediating between the dwelling and the street, whose indefinite limits constitute the third element between the inside and the outside, between the individual and the collective realm.
"The phenomenon of the threshold thrives on spatial ambivalence" (Boettger 2014, p.10), suggesting that the threshold is a transitional space where conflicting spaces intersect and socio-cultural aspects interact. Rather than resolving these tensions, threshold embodies them, highlighting the complexity and continuity of human experiences.
This extended abstract aims to develop a corresponding discourse on the (socio-cultural) production of (threshold) space in the non-western context - (Lahore) Pakistan, and (Chengdu) China. The basis of this research comes from the spatialisation of socio-cultural phenomena, integrating Lefebvre's notion of the social production of space and Van Eyck's conceptualisation of threshold as a socio-spatial relation between the private inside and public outside, particularly 'the home and the street'. When applied to non-Western contexts, these ideas remain highly pertinent, as significant types of threshold spaces have profoundly existed in them, reflecting a similar concept of embodied tension but manifesting distinctively due to peculiar social dynamics and cultural norms. The authors attempted to use a cross-cultural approach, employing 'drawing' as a method of enquiry to illustrate the fundamental disposition of threshold, doorstep, as a socio-cultural process and product.

Tharra in the Walled City of Lahore
In the organic urban layout of Lahore's walled city, the concept of close-knit *mohalla* (sub-neighbourhood) emerges, characterised by the coexistence of extended family members - a joint-family system, aligning with socialist ideals that emphasise shared living, wherein individuals equally enjoy the pleasures of collective life (Nevile 2006). These mohalla(s) are usually formed according to the families' ethnicity, religious sects, races or occupations or by different trade groups, "where families reside together for many generations" (Jamil et al. 2022, p.356). The town's layout intricately blends social and cultural activities, interweaving public and private spaces in pedestrian-friendly ways while "nurturing community engagement" (Malik et al. 2017, p.136). The narrow labyrinth street pattern and juxtaposition of houses were initially intended as a defence system against invaders and a strategy against the harsh climate of Lahore; this urban morphology eventually contributed to cultivating a vibrant collective realm. The socio-cultural literal form of doorstep in Lahore's Walled City is called the *tharra* - an extended deck or raised platform at the entrance that intricately links the street to the house. *Tharra*(s) function as mediating spaces between components that regulate their proportions and dialectic and serve as social spaces that facilitate interaction with the neighbourhood at the street level. Through these *tharra*(s), the streets become an 'extension of the dwelling', a safe space for women during the day while keeping 'eyes on the streets' while children play in them. In the evenings, *tharra*(s) become a hub for men to socialise and talk about current affairs, often until late at night. In the early morning, the elderly residents take to these decks to bask in the first rays of sunlight, ensuring they receive their daily doses of vitamin D while reading newspapers. *Tharra*(s) do not align with the binaries (outside/inside and public/private) they connect; instead, they represent the 'third' defining their relationships. Their 'in-betweenness', and conceivably their inherent ambiguity, makes them hubs of multiplicity, rich in varied meanings and functional possibilities, deeply rooted in the cultural norms.

Menkan in AnHui
In Chinese cultures, thresholds are characterised by distinctive and pronounced details. The Chinese doorstep known as *menkan* - extends beyond its physical function and embodies a socio-cultural significance deeply rooted in traditions. The *menkan* is commonly intricately crafted wooden doorsills, usually ranging from 8 to 12 cm in height; however, its elevation may extend up to 20 to 30cm in some instances and is supposed to "protect the inhabitants from evil spirits" (Boettger 2014, p.21). A taller threshold symbolises wealth and power and acts as a functional barrier, preventing tiny pests, rainwater, and strong winds from entering the home. Beyond its practical function of demarcating boundaries and setting the tone for entering a space, the *menkan* also encapsulates a code of conduct - it is a silent yet powerful reminder for visitors to approach with reverence and respect (He 2012). This cultural etiquette emphasises the importance of politeness and gentleness before entering a space—a subtle gesture deeply ingrained in Chinese culture. The *menkan* is not uniform across China; it exhibits regional

variations in materials and colours. Stone thresholds are standard among economically modest households, while affluent families opt for expansive materials like mahogany wood. For example, within the Palace Museum (formerly known as the 'Forbidden City') in Beijing, the doorsills are intentionally painted red, symbolising imperial power. They are believed to bring good fortune, aligning with the historical and cultural significance associated with the site. While urbanisation has diminished its prevalence in cities, traditional villages and specific architectural contexts (like Hui-style structures), maintain the cultural importance of thresholds (Nie et al. 2023). The doorstep in Hui-style architecture is an integral component of the crucial structure called 'Pailou' (the main gate of the building). These robust stone-crafted thresholds are crucial beyond mere aesthetics (Cen et al. 2023). Their primary function is to shield the wooden doors from moisture, ensuring their longevity in a climate prone to dampness.

Conclusion

The 'doorstep' is a threshold space with a purpose, where meaning flows through, transforming mediation volumes into actual places. Distinct spatial characteristics make it a 'third' space, which embraces the tension between opposites (inside/outside and public/private). It unfolds socio-cultural possibilities of collective living, constructing a unique experience as one crosses, pauses, or uses it. It is a space that is intermediate and indeterminate (or ambiguous) but possesses specific social constructs and particular cultural meanings. The research on cross-cultural meanings and significance of doorstep is intriguing due to its depth and multifarious complexity, illustrating the rich diversity of human culture and traditions. In Western contexts, the doorstep primarily implies a boundary between the private inside and the public outside, marking the transition from the individual domain (home) to the collective realm of the street. Whereas, in non-Western contexts, the doorstep carries additional cultural significance - serving as a gathering place for collective engagement, as a space for cultural practices such as storytelling or communal meals, or where rituals and ceremonies are performed to protect the home from negative influences, or which simply signifies the social status of the residents. The article provides insights into the varied perceptions, uses, cultural significance, and linguistic nuances associated with threshold space (doorstep) in two non-Western but dissimilar contexts. The socio-cultural manifestation of the doorstep in Lahore, the *tharra* enriches the urban fabric as mediating spaces, extending dwellings onto the streets. *Tharra*(s) serve as dynamic hubs for social interactions and cultural practices, daytime activities for women, and evening gatherings for men – a modest element that personifies various meanings and performs several functions – epitomising accessibility and inclusivity of the collective realm. Meanwhile, the *menkan* in Chinese culture goes beyond its practical function, symbolising the significance of solitude and traditional Chinese culture's hierarchical order. It symbolises wealth and power and serves as a silent code of conduct, emphasising politeness, whereas it is not utilised as a space for sitting or engaging in activities, as it is believed to bring about bad fortune. Regional variations in the doorstep's size, materials, and colours reflect economic and socio-cultural differences.

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FIGURES

Fig. 1 - Plans and sections of typical forms of Tharra (doorstep in Lahore's Walled City—raised sitting platforms at the entrance level with gradations of publicness from outside , in-between, to inside.
Fig. 2 - Socio-Cultural Production of the Tharra: (a) informal space for social interaction; (b) Interaction between inside and outside; (c) 'eyes on the street' while children play (d) appropriation by street vendors; (e) movement and connection; (f) extension o the dwelling on to the street.
Fig. 3 - A typical plan and section of Chinese Menkan (threshold space)—a traditional doorsill representing wealth and power.
Fig. 4 - Socio-Cultural Meanings of the Menkan: (a) connection between inside-outside with columns and shades in traditional Chinese architectural vocabulary o symbol or power and wealth with elaborale roof details.

Francesca Berni
Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
francesca.berni@polimi.it

The weather body, the water space. Exploring the landscape as technological environment

Key Words
Landscape, Shānshuǐ, Weather, Water, Technology

This text investigates the concept of corporeity [1] within the frame of the interplay between body, landscape, and technology. It draws inspiration from the Chinese **shānshuǐ** (山水) notion of landscape to inform its exploration. Commencing with the establishment of the initial meteorological stations in China during the era of Treaty Ports, this exploration interprets the landscape as the primary place where our existence unfolds as an incessantly expanding and transforming body. The development of meteorological stations during the Treaty Ports period, also known as the era of Unequal Treaties, was entwined with the convergence of European and Chinese cultures. This amalgamation of worldviews transpired over a century, from the 1842 Treaty of Nanking to the 1949 Chinese Communist Revolution. The technological and infrastructural [2] advancements during this historic juncture in China reveal the contours of the first globalization process as it is known nowadays. This encounter precipitated widespread changes, influencing the architectural lexicon, urban development, and the space-time conception, all catalyzed by the advent of systematic weather forecasting. Geographical organization of infrastructure development, particularly in the context of telegraph diffusion, most observation and monitoring points originated in the United Kingdom [3] administration. These installations were strategically positioned along concession territories, encompassing coasts, ports, and meteorological stations. The objective was to preemptively address disruptions or delays in commercial trades [4] resulting from atmospheric events (typhoons). Indeed, the behavior of the weather measurement device depends on contextual conditions, illuminating a spatial continuity rather than distance or separation. The complexities surrounding atmospheric weather and its perception and interpretation propel an exploration of the symbiotic relationship between space and body, aiming to uncover a profound and intrinsic connection: a perpetual dance of transformation and mixture, challenging the notion

of an additive or dialogical link among bodies. Space emerges as a fluid medium with varied densities, where we are immersed and seamlessly integrated [5]. The botanical realm illustrates this dynamic, challenging the traditional dichotomy of space as an object and the body as a subject or vice versa. Plants eloquently disprove the concept of separation, demonstrating that everything is in everything [6]. Thus, the environment of space conceiving transcends notions of here or there, before or later. When we think, we act; when we act, we are with the space and the space itself. This investigation delves into the essence of the design process, focusing on its foundational phases of perception, imagination, behavior, and action. It envisions the body as a vast microcosm of microcosms, participating in a perpetual and expansive now and here. This perspective acknowledges the unceasing dynamism of our surroundings, even when they may seem inert. In this context, nature [7] inspires through attentive observation and replicating dwelling behaviors [8], constituting an ongoing process of world interpretation and translation, [9] no interruption between bodies and space. A seamless unity prevails over distinct times, spaces, and living entities, serving as a reminder that the visible and the invisible are intertwined within the same fabric of bonds. This viewpoint underscores the landscape with the human body as an irreplaceable technological apparatus for architectural design processes. Observing the shānshuǐ [10] within the discourse of meteorological stations, the image of the mountain water mirrors lightness-heaviness reasoning. Both encapsulate the essence of a dynamic between two opposing elements that are mutually essential. Compared to the European perspective, the Chinese landscape culture unveils a distinct approach to understanding space, time, and transformation. The issue of representation, particularly in the void depiction, underscores two cognitive environments through drawing and writing in the conception of the visible and invisible within matter and spatial transformation. The development of landscape painting traditions in both cultures reveals noteworthy differences, particularly concerning the body, corporeity, and the role of movement in space cognition. The body assumes a crucial role because functioning like a technology precisely translates the space where and when it is. It demonstrates that a body is inherently a body primarily because of and as a consequence of its corporeality, understood in its energetic essence. It lies in the movement (perceptible or imperceptible) -the invisible force that propels it- that allows space to behave. This abstract endeavors to enrich the comprehension of the landscape (meant as the project environment) by investigating it through diverse cultural and disciplinary lenses. It also aims to demonstrate how the body's space is the place to understand the landscape inasmuch as ethical foundations within architectural design culture.

ENDNOTES

[1] Morante depicts the unknowable of the body, telling a transformation journey through natural elements: "In verità, di tutte le voragini fra cui ci moviamo alla cieca (lo sprofondo della terra sotto i nostri piedi, e sopra e intorno il precipizio dei mari e dei cieli) nessuna è tanto cupa, e per noi stessi inconoscibile, quanto il nostro proprio corpo." [Morante 1982, p.233]
[2] The engagement with Western sciences marked a systematic dissemination of technologies for weather forecasting, underscoring the profound interplay between technology, infrastructure, and landscape: "Although meteorological instruments had been invented (some of them preceded western discoveries by several centuries), yet they were never made us of on a large scale, and were looked upon rather as curiosities than as instruments to be utilized for human benefit." [Chu 1918, p.136]
[3] As Zhu explains in his research about typhoons and meteorological intelligence in Nineteent-Century in China: "[...] the British Empire in China, both its formal and informal sections, did its share by establishing an observatory at Hongkong, extending its telegraphic observation network over China." [Zhu 2012, p.10]
[4] Anderson's *Predicting the Weather* points out the connection between culture and science telling how meteorology in Victorian Britain was a "[...] science of expectations, not only in the literal sense that it dealt with statements about future weather, but also figuratively, in that it summarized what Victorians thought science could or should be." [Anderson 2005, p.285]
[5] Mathur and da Cunha underline the imperative for a paradigm shift in our way of conceiving space transformation driven by hydrologic thinking: "Is it time for a new imagination—a hydrologic one—that says that we do not inhabit a surface but rather a ubiquitous wetness?" [Mathur, da Cunha 2020, p.139]
[6] Coccia clarify the idea of permeability and cohesion: "L'acqua di cui il mare è costituito non è semplicemente di fronte al pesce-soggetto, ma è in lui, nell'atto di attraversarlo, di uscirne. Tale interpretazione del mondo e del soggetto conferisce a questo spazio una geometria complessa in mutazione perpetua." [Coccia 2018, p. 46]
[7] In *Cosmotecnica. La questione della tecnologia* in Cina, Hui establishes a connection between the continuity inherent in nature and the human body, with the notion of technology. "Si potrebbe definire natura questa realtà preindividuale che l'individuo reca con sé [...]. La Natura non costituisce, così, il contrario dell'Uomo, bensì la prima fase dell'essere [...]." [Hui 2021, p.22]
[8] Metta encourages an understanding of underlying mechanisms of what is visible for a renewed relationship between landscape, nature, and design process: "[...] per il progetto, la natura non è un

repertorio di immagini da replicare o con cui dissimularsi, ma un set di comportamenti umani e non umani con cui cooperare, diventandone complice." [Metta 2022, p.24]
[9] Nietzsche describes transformation as translation: "Noi vogliamo sentirci tradotti nelle pietre e nelle piante, vogliamo passeggiare in noi stessi quando andiamo in quei viali e in quei giardini." [Nietzsche 1882, p.179]
[10] In *Vivere di paesaggio*, Jullien reminds the tangibility of the invisible in shānshuǐ notion of landscape: "[...] la nozione d'aura è necessaria, proprio perché disfa ciò che è circoscritto e definito, marcato e ontologico, per esprimere il modo in cui il paesaggio apre su un aldilà del tangibile, dissipando la sua pesantezza inerte -ma è un «aldilà» che non è «altrove», e dunque non abbandona il tangibile." [Jullien 2017, p.84].

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Cigdem Akifoglu[1], Pelin Dursun Çebi[2]
Istanbul Technical University, Faculty of Architecture
[1] cigdemakifoglu@gmail.com

Bodily experiences on paper space.
Imaginary narratives

Key Words
Paper Space, Body-Space Experience, Graphic Narratives, Architectural Representation, Alienation

'Paper Space' is an imaginary realm that constructs its own narrative within its own platform. It is an arena for fiction and rethinking, in which several discourses are reproduced, constructed, and assembled in such a way that they are revived in the mind. A novel body-space experience is attained through exploring the boundaries of paper space and the alternative expressive potentials it creates for spatial representation. Tschumi provides an imagistic and imaginary definition of paper space [Tschumi, 1977]. He further defines 'paper space' as a space of words and drawings that enables imaginary experiences, delving into the boundaries of the imaginary within this space. In other words, he looks for architectural narratives that involve experiences beyond static representation. Architecture has always been an open discipline to new representation tools, images, and concepts [Arana 2013, pp. 19]. Tschumi's pursuit has led to the initiation of considering architecture and spatial experience not merely as static representations but as an interactive and experiential empirical research field that establishes architectural representation as an experiential domain. This pursuit has expedited the intersection of the path of architecture with new forms of representation. Therefore, it is possible to evaluate the potential of paper space and the imagistic spatial possibilities it brings as a response to architecture's quest for narratives grounded in experience beyond static representation.
In this regard, the research focuses on the transformed bodily spatial experience within paper space. Within this discourse, this research explores graphic narrative forms that intersect with architectural representation, aligning with the potential of paper space, where imagery and narrative converge. Graphic narrative forms provide a gym for the imagination by including components that are not mechanical or static but rather dynamic, transforming, and experientially open [Domenico 2017, pp. 3]. Thus, graphic narrative forms, as an extension of paper space, have the potential to serve as active and interactive research environments,

offering responses to the new forms of representation sought by architecture while moving away from representations that merely depict the static and metric aspects of architecture.
In light of this, it is possible to discuss a new bodily spatial experience in the graphic narrative forms created through the representational potentials of paper space. The narratives and architectural images brought together in paper space have the potential to generate a new bodily subject that reinterprets the space. The body, experiencing the existing through the lens of paper space, reconstructs its current experience by confronting images of a space that is often encountered in daily routines and gets lost within the mundane from different angles.
Spatial experiences often become mundane and imperceptible within the user's routine. To rediscover the unnoticed, the commonplace, and the invisible, it is necessary to reconstruct spatial narratives through the body. This enables the body to engage with the narrative, starting to rediscover the ordinary, to see and experience, and to explore the familiar anew. In this regard, the existing graphic narrative forms in paper space provide a new spatial experiential environment where the narrative is constructed through the body, surpassing the static representation posed by architectural representation.
Alienating bodies from the existing is crucial to rediscovering the mundane and reconstructing the routine spatial experience through imaginary narratives. The concept of alienation was first introduced theoretically by the Russian formalists Jakobson and Shlovsky. Alienation aims to achieve two primary objectives: the artistic recovery of sensations lost in everyday life and the continual renewal of artistic tradition [Boztilki 2013, pp. 8, 9]. In pursuit of alienation, new and striking expressions are invented [Parla, 2000: 46]. In this regard, this research utilizes the concept of alienation to analyze architectural representation in paper space through graphic narratives. In the context of evolving body-space relationships, it aims to open a discussion on spatial experience through imaginary narratives emerging in paper space. The aim is to initiate a discussion through the question: "Is it possible to facilitate the forgetting or reconstruction of known spatial experiences through the representations of graphic narrative forms, positioning bodies on the paper space as 'foreigners' who encounter these spaces for the first time, thereby enabling them to rediscover the unnoticed and the mundane?" Within the scope of this research, initially, the transforming relationships between body and space and the concept of alienation will be discussed on a theoretical basis. Subsequently, graphic narratives in the mentioned paper spaces will be deconstructed through the concept of 'alienation' using selected examples, following the traces of the transformed bodily spatial experience.
In an architectural representation environment where routine spatial experiences tend to become monotonous, the representational potentials of paper space and graphic narrative forms allow users to reconsider their values, worldview, and perception of the commonplace by shaking them. The body, alienated in paper space, starts to dynamically perceive the existing. Consequently, the body reconstructs its spatial experience, starting to see space beyond the ordinary. Being in an experiential and exploratory environment outside the familiar, the body reimagines its unique, non-static, and non-fixed spatial experience within the range of possibilities. In the framework of this research, it is possible to say that paper spaces, allowing dreaming through imaginary narratives and breaking routines through alienation, provide an exploratory environment for architects seeking alternative bodily spatial experiences. Graphic narratives within paper spaces present an alternative potential for architectural representation, diverging from traditional representational forms that mirror static and ordinary experiences as they are. In doing so, they challenge the conventional, static, and unidirectional narratives of bodily spatial experiences. As a result, graphic narratives within paper spaces contribute a new dimension to architectural practice by creating representational environments where spatial experience is rediscovered and constructed through imaginary narratives crafted by the body.

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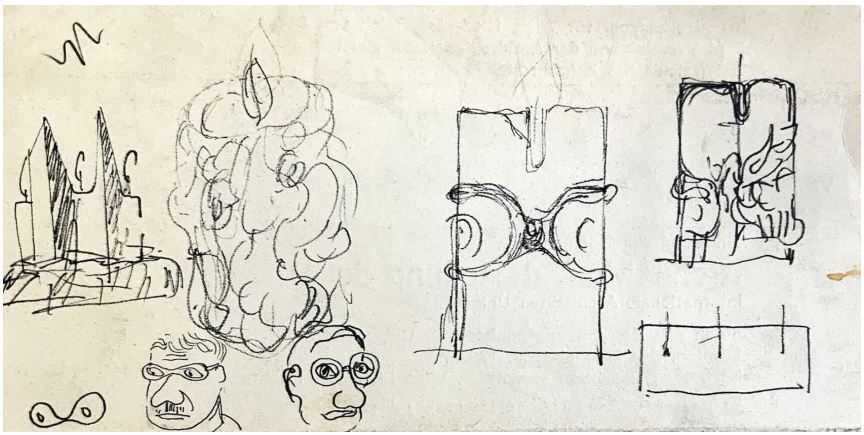

Beatrice Lampariello[1], Silvia Groaz[2]

[1] Université Catholique de Louvain, LOCI, Belgium

[2] École d'architecture de la ville & des territoires Paris-Est; Université de Liège, Architecture Department

[1] beatrice.lampariello@uclouvain.be

From object to subject.
The body architecture of Hans Hollein

Key Words

Hans Hollein, Body, Postwar architecture, Austrian architecture

The human body has always underlain both architectural practice and discourse. The body's idealised proportions provided a system of architectural rules and meanings; its states and sensations were objectified in the Romantic theories of Edmund Burke and in the "affecting experience" of Heinrich Wölfflin; its nerves and bones became anthropomorphic metaphors for Eugène Emmanuel Viollet-le-Duc; its movement and health informed the functionalist and therapeutic shelters of the Modern Movement, smoothly tailored to the body's needs. However, at the end of the Second World War a new conception emerged, in which the body no longer served to define, centre, or fix norms [Vidler 1990]. From the 1960s the human body became the starting point for the definition and understanding of architecture, leading to the theorization, in the 1970s, of a radical change of relation: "the body from object became subject" [Vergine, 1974]. Investigated beyond its biological, neurological, and technological functioning, the body was let free to manifest its more unconscious, ritualistic, and sensorial facets [Rouillard 2004]. Hence, the body had to be understood in its "situations" rather than in its "locations" [Merleau-Ponty 1945]. At the crossroads of these experiments, among the Viennese neo avant-garde, is the multiform practice of Hans Hollein, which is the subject of this paper. As an explorer of universes merging art, architecture, fashion, engineering, and psychology, Hollein searched for a multidisciplinary synthesis [Lefaivre 2003; Branscome, 2018] in which design was conceived as the "expression of humans per se–flesh and spirit at the same time" [Hollein, 1963a], where "building spring into being" [Hollein 1960]. As such, the building, both as a verb and a noun, can be considered as a veritable "body architecture".

Starting from the mid-1950s, Hollein, then barely over twenty years old, embarked on an obsessive exploration of the human body that would accompany him throughout his lifetime. The corporeal and sensual dimensions impregnate his sketches, texts, and exhibitions across

all scales of design. Evoked in stark contrast to the functionalism of the Modern Movement, these dimensions served as a pretext for visionary projects in which the human body or its various parts—both male and female—assumed spatial configurations, charged with sacred and sensual values [Hollein 1962].
His exploration of the interaction between body and architecture was rooted in various influences, starting with a profound affinity for the corporeal dimension of Viennese Catholic symbology and German mythology [Melis et al. 2017]. This fascination was later emphasised by his travels through the United States and Mexico, driven by a quest to understand Native American rituals, which left an indelible mark on the architecture of the *pueblos*, imbuing it with the essence of sacrifices of living beings [Hollein 1972]. Notably, Hollein stands out among his contemporaries as the sole architect who delved into the complexity of the human body, surpassing its mere biological functions or technological extension [Sexton 2017]. His aim was to redefine the concept of building starting from the body for the creation of a sensory environment.
Hollein transfigured his life experiences, from illnesses to travels, from artistic to architectural to even religious references in different forms of "body architecture", some bearing anthropomorphic traits, while others hinting to more abstract evocations, designed either for distant observation or for sensual explorations. The sacred body is one of the firsts to be translated into a variant of "body architecture". The crucified Christ depicted by Cimabue underwent a schematic reimagining, evolving into a plan composed of a series of interpenetrating spaces. The recurrent invocation of religious references was meant to usher in a new way of existence infused with the spirit of the divine sacrifice, rescuing humanity from the restrictions of *existenzminimum*. Skyscrapers, discovered during his travels in the United States, lost their technological and modernist connotations, morphing into fleshy limbs, anthropomorphic figures, raised fists, and genitals [sketches series *Skyscrapers*, 1958-62]. These Oldenburg-like totemic objects required to be contemplated from a distance, acting as new, dominant and strong "spaceradiators" establishing new sensorial forces within the urban landscape [Hollein 1960; 1963b]. The naked bodies of reclining women, pivotal in Viennese artistic imagination from Egon Schiele's drawings to Gustav Klimt's paintings [George, 2020], evolved into new unités d'habitations, sprawling across a landscape intersected by fluids and rivers [sketches series Woman, 1958-1979]. In this transformation the Modulor's unit of measurement was redefined into inhabitable sensual cavities, recalling Niki de Saint Phalle contemporary penetrable female bodies. Archaic masks featuring religious symbols and human faces cladded the facades of some of Hollein's buildings, transfiguring the "face" of architecture into a visage with ancestral origins. A "primordial womb" [Celant, 1990] became the subject of his diploma project at the College of Environmental Design at Berkeley University in 1960. Titled *Space in Space in Space*, it consisted of a vital organ containing and generating space, embracing the daily activities of its inhabitants within its continuous sinuous surfaces, offering new forms of interactions [Hollein 1960]. The project's representation through clay models integrated into the natural environment of a hypothetical desert, reminiscent of the *pueblos* much regarded by Hollein, intended to consciously distort any dimensional scale [Buckley 2019], hinting at the future evolution of this "primordial womb" into a series of *City Structures* towering above New York, Vienna, or Salzburg. Hollein embraced the conception of a "body-city structure" able to restore to the city, then considered as the alienating abode of human life, its connotation as an ancestral shelter. In this exploration, the body reached beyond its human physical limits, to encompass the very artefact that serves as the "extension of the castle of our very skin": the city [McLuhan 1964]. Hence, one could even interpret Hollein's famous 1968 motto, "everything is architecture" [Hollein, 1968], as implying "everything is a body". Not coincidentally, this very motto was made to be uttered, on the pages of "Bau" magazine, voiced by a female model reclining against the backdrop of a natural landscape, embodying Hollein's idea of *unité d'habitation* as a maternal and sensual womb.
By examining both primary and secondary sources, along with delving into an unpublished corpus of archival notebooks and sketches, this contribution focuses on Hollein's paper projects ranging from single buildings to entire cities, between 1956 and 1964. It unveils how Hollein explored existential, primal and behavioural conditions, ultimately uncovering a lost sensual-erotic quality inherent in architecture [Hollein 1967]. In aiming to delve into the depth and intricacy of Hollein's early reflections on the body, this paper highlights one of his most innovative aspects: the transformation of architecture into body, flesh and spirit, devoid of any organicistic metaphors. Instead, Hollein envisioned the body as a primal sensory environmental device, able to catalyse new forms of contemporary rituals and actions, and generate unprecedented spatial configurations. Ultimately, this paper places Hollein's projects within the context of Mittel-European literary, artistic and philosophical culture, which challenged the various levels of body's existence, sexuality and consciousness, transforming

Vienna into the epicentre of body-based performances and happenings. The ambition is to reveal the extent to which body-architecture interactions became central to new forms of postwar multidisciplinary design theories.

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FIGURES

Fig.1 - Hans Hollein, Drawing, n.d. Frühe Skizzen - HN-751, Architekturzentrum Wien, Vienna

Laura Suvieri
University of Perugia, Department of Building Engineering and Architecture
laurasuvieri2@gmail.com

The silent body. Exploring the neglected nexus of type, materiality, and human perception in Carlos Martí Arís

Key Words
Type, Perception, Standard body, Design

In Carlos Martí Arís' critical typological perspective within the twentieth-century treatise landscape, an apparent absence of the theme of corporality emerges. The *Variations of Identity* constitutes a cornerstone of the modern typological theorization and a pillar of the contemporary architect's forma mentis; hence an analysis of this conceptual gap is addressed by exploring the role of the body and perception in his work. Thus, the theme of corporality arises as an underlying preconception, defining a silent body between the lines of Martí Arís' work, whose absence is redundant in a debate that investigates the sense of space, at first thought divorced from man. Light and shadow, color and spatial perception, functions of the bodily filter toward architecture, seem to be understood as additive rather than foundational attributes by the author in a purely theoretical treatment that forgets the human dimension of the city. Yet, in reality, the modern idea of the body is identified in his work with the human intellect, which, wise, recognizes the quality of space through knowledge of type.
Designing has always faced cosmological, political, and economical orders that have shaped spaces according to a predetermined human dimensional standard. After the birth of the city of the car, in a contemporary world where humans are slowly regaining their role as the unequivocal recipient of design, the following methodological challenge is brought up: how can we conceive space from a typological perspective with new paradigms that may involve even virtual reality? The metamorphosis of the body is explored as a standard undergirded by time, which figures today as an absent, yet implicit protagonist of the city designed from typological hybridizations.
Martí Arís outlines his purely abstract type as a "formal invariant" that persists over time while acquiring different declinations [Martí Arís 1998, p. 12]. In the act of abstraction from mundane and physical connotations, therefore, the "filtering of the visible" becomes the key

to understanding this "ordering principle" [Martí Arís 1998, p. 27]. This epistemological nature induces the elimination of the body, the interlocutor of space, from the role of typological value as spatial perception is purely related to boundary conditions. Indeed, the author emphasizes the physical differentiation, linked to the genius loci intended as a variant outside the elemental matrix, of the Roman cities of Timgad and Djemila which, although sharing the same formal invariant, induce a profoundly different perceptual experience [Martí Arís 1998, p. 88-89]. However, it is in the same book that the determining role at the typological level of the relationship between light and shadow and the over-dimension of space for the experiential perception is implicitly recognized [Martí Arís 1998, p. 21], addressing for the first time the human scale. In fact, the Gothic cathedral becomes a fitting example of the corporality's belonging to the idea of the ordering principle. The Gothic masters defined this type from the untying of the roof by elevating it to a superhuman scale, embodying the concept of the sacred, which assumes meaning only when related to a term of comparison, the body. Moreover, the sanctioned sacredness of the sharp contrasts between divine light and sinful shadow, the primordial components of the basilica archetype, are acknowledged as the typological language of sacred architecture in several cultures and historical eras. Transcending the processes of hybridization of type, the ray of light of the Pantheon, the imposing centrality of the Church of St. Sophia, the gaudy colors of the Gothic stained-glass windows that excel over the shadow of the aisles, underpin the idea of the body, addressed as the "human intellect", as a filter that can a priori recognize the sacredness of such architectures [Martí Arís 1998, p. 21-24, 54-67]. Those clearly belong to the language of universal type, that allows the body to experience the divine.

In the typological treatment, from Durand and Quatremère de Quincy to Martí Arís, the representation of types occurs in black and white. The omission of color matches the failure to refer to the human figure, which is not related to the typological structure; rather, the dimensional relations between the parts are defined, scalable independently of the viewer. A fortiori, the absence of the term body in the entire author's work underscores this silent lacuna yet references to man's intellectual perception recur: type undergoes metamorphoses shaped by the mind. For Martí Arís type is avulsed by space and time, yet he acknowledges on few occasions the decisive role of history in typological hybridizations as result of human way of thinking [Martí Arís 1998, p. 75-76]. To emphasize the declination of the formal matrix as a function of the passage of time, Moneo also positions himself [Moneo 1978, p. 28]. If, therefore, history dictates the mutations of type, shall the relationship between body and built environment be considered a formal invariant or subject to a metamorphosis daughter of its time? Indeed, the dimensional canons for design have undergone historical evolution. The cosmic and virtuous balance reflected by the aesthetic perfection of Greek and Roman statues is transformed into the formal centrality of the *Vitruvian Man* depicted by Da Vinci. Moreover, Le Corbusier's definition of the *Modulor* figures as a further confirmation of the man placed upstream of the act of designing by an architect recognized by Martí Arís himself as one of the greatest typological masters of the Modern Age. Is it permissible, then, to assume that the body related to space may be a preconception undergirding and intrinsic to the type that defines its changing component over time? Clearly, each of the bodily standards mentioned should be contextualized to the architecture of each time, since both canon and architectural principles are expressions of cosmological cultures and politics. The result is a perpetual search for a bodily canon, son of its time, that satisfies the rules of design suggested by contemporary needs. Thus, the canon is mutable and Martí Arís does not assume it as the foundation of the type, but rather as a variable component that influences the linear evolution of the type in the process of mutation it undergoes.

In the era of virtualization and detachment from material reality, architects aiming to integrate typological theories into design face challenges posed by contemporary urban landscapes. Those include the imperative to restore human centrality within cities dominated by automobile-centric planning paradigms. This goal often conflicts with the rigid dimensional guidelines initially proposed by Durand for composition and later reiterated by Neufert in architectural manuals, hindering the adoption of a holistic approach. The new *Renaissance* proposed by the practices of tactical urbanism and universal design constitute the strategies, at the typological level, that aim to centralize an active human experience of architecture, denaturalizing the state of distraction that connotes the standard of non-perception of the built context [Benjamin 1978, p. 361]. If for Martí Arís the mental activity required for architectural production is limited to the elaboration of type as a generative process, forgetting and taking precedence over the social and experiential role of architecture [Martí Arís 1998, p. 30-38], for Moneo it is necessary to enshrine the direct communication between the individual and society through the built environment, conceiving space as a formal meeting place where the issue of historical memory and relationship to context takes over, posing man to the center.

Therefore, emphasizing the body's dual role as both subject and object is essential in designing typological series within the built environment. This highlighting aims to foster a sensory experience, serving as the foundation for human engagement in urban life across various perceptual dimensions. Those encompass aspects such as the texture of surfaces, the juxtaposition of solid masses with voids, the intricate "urban fabric" [Rossi 2018, pp. 23]. Such considerations enable the body to absorb the stimuli of the modern cityscape. Although technological advancements and virtual reality may exacerbate urban alienation, they also present an intriguing avenue for enhancing perceptual engagement within the urban context, particularly in the realms of design and experiential immersion, which could be involved within the designing phase, to boost "the potentially hidden properties in the typological structure" of architecture [Martí Arís 1998, p. 106]. The pressing need to reawaken sensory experiences within an urban setting, along with the need of a human scale design of buildings, reemerges in contemporary design practices. These practices align with the recognition of the profound impact the built environment has on humans, characterized as thinking beings. In this context, typological theorizing serves as an initial framework for discerning the qualitative significance of architecture in the interaction between space and individuals. In particular, this approach emphasizes the central role of the archetypal human body as the main figure and user of typological designed spaces as also implicitly assumed by Martí Arís.

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Inês Salgueiro[1], Rui Américo Cardoso[2], Luís S. Viegas[3]
[1] University of Porto, Faculty of Architecture
[2,3] University of Porto, CEAU – Center for Studies in Architecture and Urbanism
[1] inessalgueiro.wi@gmail.com, [2] rac@arq.up.pt, [3] lviegas@arq.up.pt

On the importance of the body's experience in space and the act of drawing for the architectural conceiving process

Key Words
Space-Body-Mind, Drawing-Memory-Experience

To investigate the intricate dynamics of the space-body relationship, we begin by exploring the notion of experience, elaborating an understanding of the space-body-mind relationship informed by neuroscientific insights. Drawing is then highlighted as an essential action for the conceiving process in architecture, as it allows the discovery of one's own method of thinking rooted in experience. Finally, we discuss the impact of the current era of virtualization on human development and, consequently, on architectural practice.
Placing the body at the center of this disciplinary discussion means considering it an active entity of sensory experience and understanding of the world, a "knowing entity" [Pallasmaa 2009, p. 12]. The body is considered a primary instrument for the architectural conceiving process. This strengthens an understanding of architectural practice that goes beyond technical mastery. By "intertwining" [Holl 1989, p. 10] apparently disparate categories, such as intellect-feeling, construction-emotion, as well as space-body-mind, architecture can provide an intellectually stimulating and sensorially captivating experience. The aim is to delve into the power of the mind, more specifically the mechanisms inherent to perception, memory, imagination, and creativity. The focus is on the architect and the strategies used to develop the ability to imagine experiences in spaces that only yet exist in the imagination.
The human mind incorporates both physical and imaginary experiences. However, according to neuroscientist António Damásio, the empirical knowledge of the body's interaction with the world: "only becomes explicit once it has been expressed in the form of *imagetic representations* in a mind" [Damásio 2020 p. 70].
To elaborate on this statement: the moment the body contacts with an external stimulus (touch, for instance), a chain of electrical impulses is triggered, which are conducted through the nervous system to the respective sensory cortexes in the brain. This neural activity traces

out a specific pattern with a characteristic rhythm, disposition, and direction. However, these patterns of neural activity do not constitute explicit or operative information, neither for reasoning nor for imagination. According to Damásio, we need the mind and its ability to not only interpret these patterns of neural activity, but also translate them into the so-called "imagetic representations", in other words, mental images, to make our knowledge of the world explicit and operative. These mental images appear in the mind as representations which are not exclusive to vision, they are possible in all senses of the human body.
In concise terms, the action of remembering an experience requires: first, the ability to store in memory the patterns of neural activity, of one or several senses, which characterize the experience in question; second, the ability to reactivate them synchronously in order to mentally recompose the evoked experience.
Just as the human mind has the ability to vividly reproduce experiences that have been lived physically, it also has the ability to generate new experiences through the combination of images in its imagination. Neuroscientist David Eagleman identified three cognitive operations essential for the development of reasoning and creativity: "*bending, breaking, and blending*" [Eagleman in Beamish & Trackman 2019]. Creativity does not imply inventing something entirely new, it is rather the ability to "create the extraordinary out of the ordinary" [Bjarke Ingels in Beamish & Trackman 2019]. "This ability to literally imagine is the source of the richness of human thought" [Damásio in Almeida 2020, p. 70].
The architect's mind is particularly stimulated and exercised not only to become aware of the experience of one's own body in space, but also to simulate experiences in imagined spaces. Drawing, in its diverse manifestations, stands out as a fundamental instrument for bringing ideas from the mental to the physical realm, activating both perception and expression. "As a privileged medium of visual thinking, drawing activates the possibilities of seeing and making visible" [Silva 2023, p. 418]. Following that idea, the drawing practice is intensified by the demands of the architectural design process and involves exploring various drawing techniques that range from simple sketches to rigorous drawings.

> "It serves as a simulation that is gradually clarified through the body's intuitions and the intellect's verifications. (...) This drawing allows the combination of alternatives for the desired form, it is the successive adjustment of body and place, of sensibility and intelligence" [Carneiro 2002].

Álvaro Siza's conceiving process is distinguished by the finesse and fluidity in collecting impressions, observations, thoughts, and ideas through sketches. In the phase of acknowledging the intervention context "drawing allows one to retain, in a much more complete and durable way, what really matters for the project" [Siza 2017]. These sketches are records of perceptual, sensory, and intellectual information practically without the use of words; the intent is not the final result, but rather the moment of its elaboration; what has been imprinted in the memory because of that drawing that resulted from the desire to get to know the place.

> "It is a matter of understanding the restlessness of this line that does not delimit, but rather runs through the forms, intensifying their forces and tensions; (...) A. Siza's sketches configure the paradoxical (in)visible and (i)limited existence of what they touch and apprehend" [Silva 2023, p. 421].

Furthermore, the architect reveals that:

> "When a project gets to the point of being rather defined, I mentally go through it and it is only then that I can decide in a rather spontaneous way every detail of it. Project needs that moment when everything gets connected" [Siza in Bêka & Lemoine 2023, p.104].

These approaches highlight the intrinsic relationship between space-body-mind, while acknowledging drawing as an empowering action for the creative process.
The concepts of "retinal architecture" and "computerized hand" [Pallasmaa 2006, p. 28; 2009, p. 95], raise concerns about the potential loss of multi-sensory qualities in the body's experiences in space, resulting from the excessive and/or premature use of computerized methods. While the integration of new technologies in architectural practice is not dismissed, it is argued that mastering analog methods, such as drawing and models, is fundamental to achieve a more conscious and perceptive use of digital methods.
The emergence of hyper-realistic 3D simulations, along with the integration of AI across multiple domains, mark the current era of virtualization. While these technologies offer unprecedented possibilities, they also raise concerns about the potential for deception in virtual experiences. The iconographic power of AI-generated images and the predominance of visual stimuli can weaken the intensity of other senses, feelings, and emotions. These

virtuous images emerge in an immaterial universe, bodyless, weightless and scaleless, diverging from innate "morphological patterns of human thinking, enhanced by the systemic nature of imagination" [Quadros 1994]. In contrast, the hand-drawn line can convey nuances of speed, density, hesitation or confidence, allowing the conceiving process to be in tune with the subtleties of intuition and multi-sensory experience.
Today, the exponential development of new technologies is invading everyday life at a speed that is outpacing human capacity to process. Promoting awareness and critical thinking are imperative in navigating the far-reaching consequences of these transformations, which remain largely unpredictable. Possibly because they may manifest themselves silently in the intricate processes of the mind or in the profound relationships established between the body and the world. Therefore, the challenge for the future lies therefore in the ability to develop strategies, primarily cognitive, related to the mental processes of perception, memory, and imagination, that enable us to effectively harness the potential of emerging technologies. Nevertheless, it is equally vital to recognize the profound impact that the body's experience in space has on human development and, consequently, on the creative conceiving process in architecture.

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Mario Coppola
Università degli Studi di Napoli Federico II, Dipartimento di Ingegneria Civile Edile e Ambientale
mario.coppola@unina.it

Coexistence: The goal of architectural composition now.
Architecture as trespassing tool to embrace culture, body, Earth

Key Words
Coexistence, Corporeal, Immersive, Trespassing, Parametric

The link with the body, with its complexity, curvilinearity, adaptability, has been gradually denied by architectural western research. Over the centuries, the architecture that has been developing from the Hellenic tradition up to the current international rational/minimalism, except for the various, smoky proportional systems (which transform the body, its vitality and imperfection, into a sequence of rigid, sterile, cumbersome rules), has moved away from the body dimension above all through the tectonics rooted on the orthogonal, two-dimensional trilithic system. This research has dried and reduced, simplified and abstract, every element which was directly connected to the sensuality/three-dimensionality of the body: from the inlaid columns, from the rich in branches and extroflections capitals of the ancient temples, to the still cylindrical but smooth columns of Villa Savoye (which however hidden in his bowels flexuous stairs and walls), up to the compositions of only parallel or perpendicular parallelepipeds by Chipperfield, the last Pritzker Prize, western architecture follows a trajectory clearly moved by a desire for denial of the body and corporality. A desire for abstraction, emancipation, separation of architecture - the world of man - from the rest of the world, that is, from the world of body and any other emerging configuration of the cosmos (the human being, incidentally, is one of these).
Despite being energetically, structurally and psycho-somatically valid, the auto-configurations of the matter that shape the living and non-living structures – for example the rocky stratifications in which atmospheric agents sculpt splendid and effective topological optimizations – have been systematically expelled from architectural culture even when Le Corbusier used to collect his Objects à Réation Poétique (shells, pieces of branches, skeletons, generally sinuous, sensual objects) to set them in his projects as counterparts of platonic geometries. As if, hidden in the source code of the will to form of the vast majority of western architects, there

was the desire to generate a vivid contrast, we may say a violent one, between the body, its soft, continuous yet full of differentiations and instable geometries, and the envelope that contains it. The Vitruvian man conceived by Leonardo da Vinci comes to mind: the human body, designed in all its carnality, its evident delicacy and temporality, its being composed of uncertain lines, buzzed, just materialized by the tangle of forces that is the making of life, and, around, the circle and the square. Two flat, non-existent-in-nature figures, invention of the human mind that from these has traced the poetics of all - or almost – the architecture and the city. At the bottom of the research of this incorporeal, timeless, we could say indestructible envelope – autonomous from the self-configured world and its harsh realities – there would seem to be a man-child whose dream is to deny himself, that is, his own body, its fragility, and therefore his inextricable attachment to this planet, its resources, its balance. A child who, physically unable to move away from his parents, seeks a violent detachment, a violent emancipation: I remain here and yet I do not belong to this place. A fantasy of omnipotence, a Prometheus becoming - paraphrasing Edgar Morin, poetry of a Don Quixote persistently in love with his battle.
From this perspective, the emergence, in the recent decades, of the virtual dimension, which is the final step of the escape from the corporeality, makes total sense. A conquest of the same desire for abstraction and reduction that is no longer metaphorical and formal, as experienced in architecture, but radical: the genesis of a world that - apparently - no longer responds to the constraints and restrictions of the matter, if we ignore the impact of the virtual world on the real one in terms of, first but not only, carbon dioxide. By pretending that this impact is null, the tension towards the virtual prefigures a fate in which reduced, abstract, two-dimensional architecture gives way to a literally immaterial one, all internal to electronic cards architecture. The Vitruvian man would be a prophecy: the human being, as in the Matrix movie, definitively enclosed in a trap of bits and digital grids, unable to breathe, to touch, to feel the warmth of his body and the relationship with the bodies of others, blocked in an aseptic, icy, impalpable space. A perfect space in the sense of Per-Fectum: finished, completed, accomplished. Strictly speaking: dead. Like ecosystems at the end of this evolutionary (or self-destructive) path.
There is a brake on this movement. We think, for example, of the resistance of paper books to e-books or that of porn, one of the major uses of virtual space. Online pornography exemplifies the paradox of a human being attracted by the immaterial and yet unable to renounce to living flesh. Its success suggests a parallelism with the architectural field, where the proliferation of metropolis transforms, outside its borders, the biosphere into a boundless landfill and produces, inside, a certain suffering (well documented in the research by the neuro-scientist Colin Ellard). This discomfort in turn triggers the obsessive research of non-anthropized places and a request for hyper-sensual architectures, in some ways pornographic, such as those coming from parametricism: exasperate curvilinear surfaces, large twists inspired by moving bodies and, above all, subversive volumes, which seem to wriggle out of the shirts of the city, which, in turn, does not include exceptions. A catalog of forms that, despite an immediate popular success, oppose to the existing city "body-exaggerated" architecture, which, in their tout-court refusal of traditional tectonics, repeat, without resolving, the Cartesian split: on the one hand the metropolis made up of axis and pieces, on the other eccentric bodies that, after an initial overdose, soon become fulsome, cloying.
Then, what does it mean today to design a more "body-centered" architecture in antidote to the immunization/virtualization/mineralization movement of contemporary society? And is it possible to operate such a transformation enriching each element in play without operating new splittings, new exclusions, new Tabulae Rasae?
The essential feature of the body is not to be made up of autonomous and opposing pieces, geometrically and functionally closed, disconnected, like the parts of an inert, elementary mechanism (the body is a complex mechanism). A body, like a non-anthropized landscape, is made up of three-dimensionally articulated elements/systems into a synchronic and sympathetic transformation: skin, bones and muscles, mutually influenced by the movement, flocks of swallows harmoniously coordinated by the wind and other components of the flock, or smooth and unified streaks of rocks shaped by the action of atmospheric agents which, in the course of the millennia, have made each element, initially autonomous and heterogeneous, an organic part of systemic morphology and differentiation. This interactive nature, of mutual exchange and physical interconnection – that is, con-deformation – is the basis of what is understood for corporeality, and this interaction is the fulcrum of the success of architecture that has exploited in the last thirty years. This architecture used the tools of digital design to obtain immersive, three-dimensional spatiality: just like the American Antelope Canyon, the spaces of parametric architecture return to those who cross them the feeling of being part – because their body is part – of a compassionate, physical unique; a warm, welcoming, tactile place that extends the senses entering into resonance with mirror neurons – pretending to zero human memory/identity. The point is that, just aiming to the body in an attempt to overturn the

previous situation, this research drastically denies the right angle, which, on the other hand, was invented exactly for the opposite reason: separating the building from the ground, the architecture from the horizon, from the non-human world; and, inside the architecture, to split the elements in the most clear way, according to the same operation which, from antiquity, guides the slaughter of the body of animals to be divided into parts (also the Earth, divided into cardi and decumans, is a slaughtered body).
The compositionally coherent coexistence of the opposites, prophesied by Le Corbusier's latest research, constitutes the third way: a promising but extremely arduous and therefore still rarely practiced way. First of all because it requires that both sensitivities take a step back compared to their deep desires and accept mutual hybridization, trespassing. On the other hand, without trespassing, the Cartesian paradigm is not left. So, the opening of the project to the dimension of complexity, corporeality, must be truly heteronomous and therefore even inclusive of "piecety", orthogonality and repetition, as sedimentary formations are: negentropy does not come from continuous interdependence of homogeneous elements – curves, topological surfaces, single and double curvature surfaces: the diktats of parametricism – but from the weaving of mutual connections between heterogeneous elements. Making the right angle and the trilith parts of a wider composition, of a planetary scale harmony that is capable of transforming the temple and the body into no longer antithetical and opposing but mutually related, con-transformed elements: this is the way of a body-centered architecture, meaning the body of all the living – as well as that of the only planet that hosts us and that, we hope, will continue to host us if we will be able to inhabit it.

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FIGURES

Fig. 1 - Mario Coppola + MidJourney Artificial Intelligence - *Temple and body 2024*.

Anna Proskuriakova
anna.prosk23@gmail.com

Reimagining interaction between industrial heritage and human bodies. Revitalization of post-industrial areas as an opportunity for small and medium-sized Italian cities

Key Words
Industrial heritage, Environmental discomfort, Production spaces, Resilience

Global challenges and a future for the former productive landscape.
The COVID-19 pandemic has shifted how we view our work and living spaces. Remote work has become more common, reducing the need for commuting to offices. This opens up opportunities for people to work from wherever they prefer. This means that new ways of working and physical environments can significantly affect productivity, quality of life, well-being and innovation activities. Moreover, it prompts a reevaluation of how our bodies engage with and experience the spaces that constitute the majority of our daily environment. Thus, place quality returns to be crucial, as it directly affects our health, social interactions, productivity, and how lightly we impact the environment [Carmona, 2019].
The pandemic has led to a new geography of work, with knowledge workers leaving large cities for suburban or semi-peripheral areas, a trend expected to continue long-term [Mariotti 2023, p.2]. In Italy, this shift offers opportunities for repatriation and foreign relocation, offering a chance for smaller cities. In this changing landscape, there is an opportunity to reconsider the role of industrial heritage in our evolving world and contemplate how these spaces can be optimized to enhance the comfort and well-being of our bodies, fostering a harmonious and comfortable environment for individuals.
Pre-COVID academic literature in Western countries has extensively explored how global cities and networks adjusted to economic restructuring, the shift toward service-based production, and the demands of the global market. This period also saw a rise in marginalized areas that were excluded from these new economic processes, leading to the decline of previously industrialized regions [Sassen, 1996]. While larger European cities have made significant progress in addressing challenges of de-industrialization, smaller European cities, including those in Italy (referred to as "Italia in-between" by Curci, Zanfi, and Lanzani), face unique obstacles in achieving sustainable regeneration of their ex-industrial areas. Quite often, these

territories represent a widespread combination of environmental discomfort and settlement malfunction [Lanzani, 2023]. Smaller cities encounter constraints such as limited resources, political passiveness, and the absence of a unified framework to evaluate their unique contexts. However, these areas hold potential to support less populated regions by leveraging their infrastructure, social networks, and accessibility and offer opportunities for decongesting the most densely populated metropolitan areas.
Now, in the face of new challenges, examining these areas from a corporeal standpoint becomes increasingly relevant, especially considering the impact of climate change on productive spaces and their legacies. These areas, characterized by a regular secondary network and often surrounded by empty open spaces, face challenges due to the absence of green elements [Armondi, 2011]. The presence of impermeable pavements and impervious walls further intensifies these challenges, leading to strong environmental discomfort that our bodies perceive. This environmental aspect must be considered when envisioning the future of production spaces and the role of industrial heritage in creating sustainable and comfortable environments.

Revitalizing Ex-Industrial Sites: Exploring Pathways to Renewal and Flexibility
Step-wise collaborative and proactive initiatives can unlock economic, social, and environmental benefits, ultimately enhancing the quality of life for residents. For instance, in case of Havenkwartier in the city of Assen, the municipality and large developers, faced resource constraints to execute large plans decided to revitalize the site through limited short-term investments [Bergevoet, 2016]. This approach focused on enhancing open public spaces and introducing new programs for existing buildings. The goal was to achieve stepwise development, where each investment acted as a potential starting point for subsequent improvements. One notable aspect of the Havenkwartier regeneration was that, to overcome the physical discomfort associated with the abandoned harbor like the sense of neglect and decay or safety hazard, all initiatives were focused on emphasizing the experience of water, which served as a guiding principle for all the projects. (Assen Havenkwartier Masterplan 2012) Water, in this context, served not only as a strong identity element but also contributed significantly to enhancing the comfort and well-being of individuals. Water features were not just aesthetic additions; they played a multifaceted role in improving the environment. Beyond providing visual appeal, it helped improve air quality by acting as natural air purifiers, regulated temperatures, and created a tranquil atmosphere conducive to relaxation and stress reduction. Moreover, by offering opportunities for physical activity like boating and walking along waterfront promenades, water features encouraged a healthier lifestyle among residents.
While traditional methods such as energy conservation, material recycling, and repurposing industrial artifacts remain crucial for sustainability, efforts must also prioritize advancing social, green, and creative economies. These initiatives not only unite communities but also nurture a sense of belonging. In smaller and medium-sized cities, these sites have the potential to transform into hubs that gather residents and cater to their evolving needs. For instance, in the city of Bordeaux, the initiative known as "Darwin Eco-système" illustrates this approach. Local entrepreneurs were encouraged to establish businesses in the area with a clear focus on ecological projects, leveraging their expertise to ensure the site's future viability [Cargnin, 2022]. The emphasis was on developing flexible solutions that meet the evolving needs of the community while preserving the industrial heritage. Efforts were dedicated to create a landscape where individuals can authentically connect with their surroundings and feel the community. In this case, site-specific artistic practices played a crucial role in activating a dialogue between industrial heritage and our perception of space and body comfort or discomfort that it can produce. These artistic interventions added layers of meaning and engagement, inviting residents and visitors to explore and interact with the site in new ways.
From one side, it may seem that leaving former industrial areas in an almost untouched way may challenge our perceptions of comfort and discomfort. While it may create a sense of neglect, this approach allows more space to be allocated to wild nature, recognizing that wastelands hold the potential to serve as habitats for diverse plant and animal species. The goal is to prioritize the preservation of open spaces and greenery and motivate us to reconsider our body's relationship with these spaces and the way we inhabit them. These areas can act as ecological refuges or biodiversity islands within urban landscapes and shift our ideas about these spaces, beyond nostalgia for existing structures, and instead appreciate the abundance of urban biotopes with their intricate complexity. Adopting this mindset can transform these spaces into captivating realms that inspire creativity and self-discovery for artists, children, filmmakers, and urban explorers [Gandy, 2022]. For instance, former railway yard in the Schöneberger Südgelände in Berlin has been transformed into a nature park, showcasing the potential of wild spaces within urban environments [Kowarik, 2005].

Conclusion

The changing landscape of our work and living spaces, accelerated by the COVID-19 pandemic, has prompted a reevaluation of how we engage with our environments. In this evolving context, it is crucial to reconsider the role of industrial heritage and ex-industrial spaces in our cities and to reflect on how we design, readapt, and interact with urban spaces inherited from industrialization. The goal is to create environments that respond to the physical and psychological needs of the human body, promoting individual and collective well-being in a constantly evolving world.

These considerations underscore the importance of reintegrating human presence into abandoned territories. The challenge lies in envisioning spaces that foster innovative methods of creating both tangible and intangible assets within ex-industrial zones. Conceptualizing these spaces as shared, open, and capable of breaking the historical "fence" associated with industry provides a potential solution to the challenge of industrial disposal. Approaching this issue from a bodily perspective involves understanding how these revitalized spaces can actively contribute to the well-being and dynamic engagement of individuals within the urban environment.

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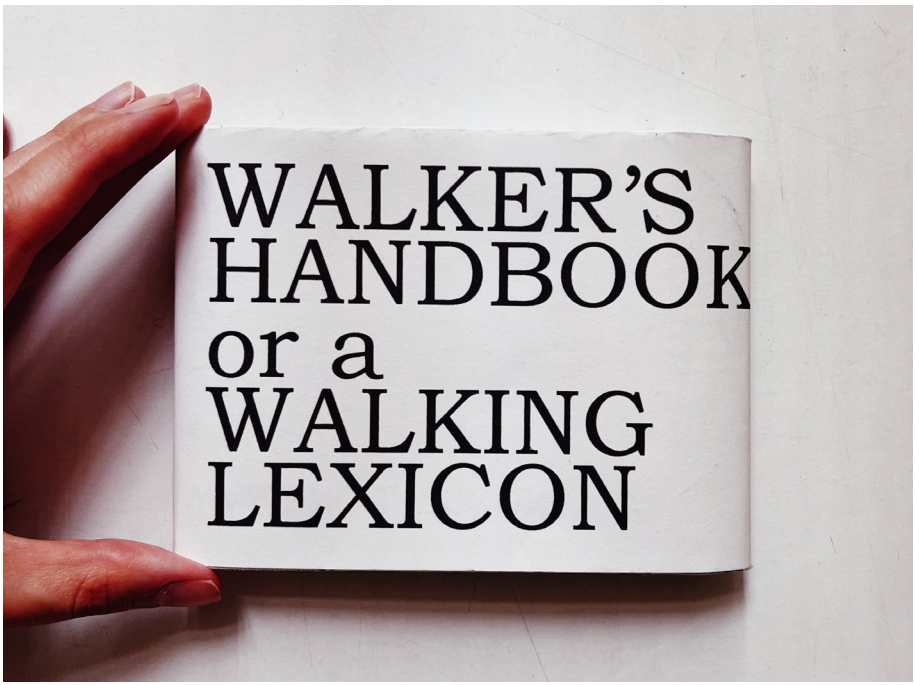
FIGURES

Fig. 1 - Proskuriakova A., Neglected Space, 2023, photo, 16x24 cm, Verbania Proskuriakova A., Neglected Space, 2023, photo, 16x24 cm, Verbania


WALKER'S
HANDBOOK
or a
WALKING
LEXICON

Nilsu Altunok[1], Pelin Dursun Çebi[2]
[1] Yıldız Technical University, Department of Architecture
[2] Istanbul Technical University, Department of Architecture
[1] naltunok@yildiz.edu.tr

Looking at the city from our body through the "Walkers' Handbook or a Walking Lexicon"

Key Words
Body and space, Critical walking, Critical spatial practice, Lexicon on walking, Design-research

The paper explores the relationship between the body and space, challenging traditional Cartesian and rational views that limit interactions to measurements and visuals. It suggests that embracing critical spatial practices can foster new relationships between the body and its surroundings, offering alternative perspectives for engaging with the urban environment [Altunok 2023]. The paper aims to unlock the creative potential of the relationship between the body and space through critical spatial practices, using the concept of walking as a focal point. It challenges Cartesian and rational notions of this relationship through four key inquiries: ways of seeing, representation practices, and the tools and methods used, all shaping architecture's vision of the city.
The first key inquiry involves our perception of urban space and how the body interacts with it. Movement, both of the body and objects within space, renders space dynamic. As such, our experience of space is intimately linked to bodily movements and behaviors, alongside the inherent qualities of the space itself. According to Peter Blundell Jones [2015], bodily experience plays a fundamental role in our awareness of space, highlighting an inseparable connection between body and mind. Furthermore, the interaction between body and space is not static; rather, it's a dynamic process where both space and body transform [Altunok and Dursun Çebi, 2021]. This dynamic nature implies that architectural design approaches based solely on standardized templates, ergonomic principles, and fixed dimensions are inadequate for capturing the complexity of body-space interactions [Altunok 2023].
The second examines the limitations of traditional architectural tools in capturing experiential aspects and understanding urban environments through bodily engagement. These tools primarily include perspective drawings, which originated during the Renaissance and remain prevalent, along with orthographic drawings like plans, sections, and elevations. Sigfried

Giedion [2008] identifies perspective drawing as a revolutionary concept in spatial representation during the fifteenth century, setting a standard that persisted for five centuries. This method projects objects onto a flat surface from a single viewpoint, disregarding their true shapes or relationships. However, this fixed perspective conflicts with the dynamic, experiential nature of body-space concepts. As epistemological perspectives evolved, the rigid viewpoint of space from a singular vantage point began to be questioned and eventually discarded.

The third inquiry focuses on the prevalence of the bird's-eye view in comprehending and depicting the city. Sigfried Giedion [2008] observes that this perspective has unveiled previously unseen dimensions of the universe, prompting speculation about the novel emotions and perceptions it engenders for artists. While the bird's-eye view extends the visual horizon beyond immediate confines, it also distances objects from the viewer, creating a detachment in terms of both distance and scale [Altunok, 2023]. In his article, Mark Dorrian [2007] correlates the elevated eye view with the feeling of separation from the city and relates them to the transformation of cultural history.

The fourth and final inquiry centers on the enduring tradition of investigating cities from a top-down perspective, a practice deeply entrenched in modernity. In fact, with modernity, architecture has been integrated into the ideology of the plan totally [Tafuri 1998b]. Tafuri distinguishes between two senses of the term "plan": as an ideology and as a typology. While these senses are interconnected, this paper focuses on problematizing the latter: the plan as a typology. Lefebvre [1991] highlights a pivotal moment around 1910 marked by the fragmentation of space, leading to the disappearance of Euclidean and perspectival spatial frameworks. Architectural typologies stemming from this shattered spatial understanding remain prevalent tools in architectural design today, with their emphasis on logic and perspective. However, this paper challenges their adequacy in capturing and articulating the nuanced interactions, experiences, and experimentation of body-space dynamics at ground level.

Upon these queries, this paper critiques architectural design approaches based on disconnected body and space relationships by thinking of walking with its metaphorical meanings and connotations rather than its literal meanings. "Walking, as a mode of thinking, moving, and experiencing on the earth's surface, is claimed to be a bond-making practice between the subject and the object. When someone walks, the burgeoning experiences become folded and folded continuously with time, space, and trace. Walking is more than just a tool to cover a distance. Sometimes, someone walks yet stands at the same point in thought. Occasionally, it is optional to travel long distances to walk. One can walk either in a room or in a city. Walking can be practiced by most of the inhabitants of the earth. Just a pair of legs is needed" [Altunok 2023, pp. 24-25]. Such that, walking provides diverse encounters with the ground, the city, and the landscape.

We envision the act of walking as an avenue for critical engagement with urban environments, where the reflection of this walk serves as a tool for illuminating the experiential dimension rather than being an end in itself. To think of "other" meanings of the "walk", this research discusses theoretically how the act of walking can become a way of dialogue with space.

Subsequently, it visits various walks, walking theories, walkers, and walking styles to disassemble them to construct its framework. While visiting them, texts by Francesco Careri [2017], David Le Breton [2021] and Frédéric Gros [2021], which open up the literature of walking from different perspectives, serve as an initiator. The disassembly is critical in its origins because it includes subjective method-building tactics for offering a rewriting of the existing walking literature. Moreover, through the unique rewriting operation, this paper's own subjective critical walking method originates. The dismantlement operation is based on our encounter with Manfredo Tafuri's *The Language of Criticism and the Criticism of Language*, written in 1974. Tafuri [1998a] says, "At the origins of the critical act, there always lies a process of destroying, of dissolving, of disintegrating a given structure. Without such a disintegration of the object under analysis no further rewriting of the object is possible" [p. 153].

While dismantling walking modalities such as philosophers' walks for meditative reflection, the *flânerie*, Dada excursions, Surrealist deambulations, Lettrist *dérive*, and Situationist psychogeographical discoveries, we offer a textual intervention to the existing walking literature that includes scribbling, turning the text upside down, and subjectively interfering with it, thereby creating a unique and subjective procedure [Altunok 2023]. This intervention is about decoding the already written literature rather than summarizing it. The resulting textual manifestation arises as a rewritten composition liberated from the constraints of grammatical conventions that dictate sentence construction. Instead, it seeks to convey the immanent concepts that inherently emerge within the discourse surrounding walking. Some of the concepts appear to be critical in terms of different perspectives such as social, material, political... There is no doubt that those concepts can be positioned in various ways to frame various critical walking trajectories of selves. According to Springgay and Truman's [2022]

critical walking voicing, critical walking methodologies especially pay attention to the unique characteristics of a place and how it is intertwined with current challenges. This paper's search for its own critical walking method is parallel with Springgay and Truman's implication.
In the subsequent intervention, we put forth the identifiable concepts of the walking literature as a foundation—an underlying lexicon—for the critical walking method of the paper. Moreover, we aptly call this lexicon the "walker's handbook," an intentional renaming aimed at fostering individual walkers to embark on their unique critical walks. The discussion will be expanded through our own personal observations and bodily experiences. The handbook which is the outcome of the design research serves as a steer, encouraging subjective exploration, rather than being a how-to-walk or travel guide. It empowers each walker who embraces it to shape and redefine their excursion, incorporating their own perspectives and insights throughout the journey.

ACKNOWLEDGMENT

This extended abstract is derived from Nilsu Altunok's Master's thesis entitled "A Spatial Conception Based On Walking: Critical Walk" completed at Istanbul Technical University under the supervision of Prof. Dr. Pelin Dursun Çebi.

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FIGURES

Fig. 1 - The cover of the "Walkers' Handbook or a Walking Lexicon" (Altunok, Nilsu, 2023).

Mingyue Zhang[1], Jin Baek[2]
[1,2] Seoul National University, Department of Architecture and Architectural Engineering
[1] zmy1995@snu.ac.kr

The body in-presence in architectural experience.
Merleau-Ponty's body phenomenology interpreting the strolling spaces of traditional oriental gardens

Key Words
Body experience, In-presence, Merleau-Ponty, Body phenomenology, Traditional garden promenades

This paper aims to explore the correlation between the phenomenology of architecture and the experience of strolling in traditional oriental gardens, introducing the philosophical concept of "presence" from German philosophy to analyze the body in-presence experience in architecture. Le Corbusier, the luminary of modern architecture, unequivocally asserted that the true essence of a building, both its interior and exterior, reveals itself through personal exploration [Le Corbusier 2003, p. 42]. Herman Punter, the first mentor of American architect Steven Holl, also emphasized to his students that the only way to truly learn architecture is to experience and contact it in person, and they should be cautious about relying solely on impressions generated by photos [Master 2005, p. 2]. Juhani Pallasma, the Finnish architectural theorist, echoed the sentiment that Regarding architecture, although thinking is important, its significance is secondary to personal experience [Liu 2009, p. 91]. Those discourses broadly emphasize the importance of personal embodied experience in architecture, and this experience is the comprehensive interpretation of 'in-presence'. Simultaneously, traditional Chinese gardens, exemplified by Chinese Suzhou Gardens, reproduce landscape paintings through three-dimensional space, emphasizing the meandering path experience. Chinese Suzhou Garden, on behalf of traditional oriental gardens, its design takes nature as its purpose and embodies the phenomenology's respect for nature and people-oriented spirit [Peng 1986, pp. 10-12].
"Every step unveils a new scene, and with each step, the scenery transforms," encapsulates the quintessential viewing encounter within the renowned Suzhou Gardens. "Although crafted by human hands, it appears as if sculpted by the divine," resonates globally for its exquisite fusion of artificial beauty and natural beauty. From the perspective of the architectural layout of the garden, visitors can experience a winding path-style strolling experience [Peng 1986, pp. 29-30]. In the garden elements setting, the rockeries formed by stacking Taihu stones embody the gardener's imagination of the authentic mountain peaks [Peng 1986, p. 44].

Intertwined with the waterscape, they conjure an artistic portrayal of mountains and flowing water, allowing viewers to emotionally connect with the objective scenery throughout their contemplative journey. Therefore, gardens are not only places for living but also expressions of people's sentiments towards the mountains and rivers.

The strolling experience in Chinese gardens has a long history and it bears a remarkable resemblance to the phenomenological philosophical school that emerged in the late 18th century. Phenomenology emphasizes the "intentionality" of consciousness and the "return to the essence of things." It posits that individuals shape their mental worlds through the "intentional activities" of consciousness, a concept in alignment with the essence of Chinese gardens. Architectural phenomenology is divided into two major fields: Christian Norberg-Schulz's phenomenology of place and Merleau-Ponty's phenomenology of perception. This study specifically delves into Merleau-Ponty's phenomenology, which underscores the necessity of returning to existence itself to comprehend the essence of things. Within this framework, Merleau-Ponty's body phenomenology has become the core of the phenomenology of perception, trying to identify the intersection of Chinese and Western philosophical thoughts through the analysis of the experience of strolling in traditional Chinese gardens.

Merleau-Ponty's phenomenology of the body provides an important theoretical framework, emphasizing that the subject of perception is the body, rather than the objective body as understood in traditional philosophy [Mereau-Ponty 2001]. In his phenomenological view of space, people's understanding of space is first based on the body [Mereau-Ponty 2001]. This body does not refer to the physical body, but the phenomenal body, that is, the body that appears in the individual's original perceptual experience [Liu 2015]. The phenomenal body can be understood as embodied consciousness or the body with the participation of consciousness [Yan and Wang 2017]. In other words, the phenomenal body is understood as the unity of the objective body and the mind. In the field of architecture, this means that people's understanding of space is first based on the body, rather than abstract rational thinking. The experience of physical presence has become the core of architectural perception. Architecture is no longer just an object but has meaning in people's personal experience.

This research combines Merleau-Ponty's body phenomenology, emphasizing that the subject of perception is the body, and attempts to reveal the intersection of Chinese and Western philosophical thoughts through the analysis of the strolling experience in traditional Chinese gardens. The study aims to liberate traditional Chinese gardens from the constraints of conventional humanistic thought and offer a reinterpretation from a phenomenological standpoint.

To do so, the method of this study is as follows. First, it conducts a thorough literature review on the themes of 'body in-presence,' 'Merleau-Ponty's body phenomenology,' and 'traditional Chinese garden,' elucidating the distinctions between prior studies and the present purpose. Subsequently, a meticulous examination of Merleau-Ponty's *The Phenomenology of Perception* is undertaken to dissect his interpretations of various bodily aspects including habitual body, body-subject, and body experience, alongside investigating the concepts of perception as body and body as perception. Following this, the focus shifts towards an analysis of the historical development and contextual background of traditional Chinese gardens. Especially, this study is devoted to exploring the expressive characteristics inherent in the strolling space of these gardens, while emphasizing the significance of the body in the perceptual experience of garden strolling. Finally, the findings from these explorations are synthesized to conclude.

The analysis results of this study indicate that there exists a significant blank in academia regarding cross-cultural, philosophical investigations that amalgamate Merleau-Ponty's phenomenology of the body with traditional gardens. As previously mentioned, the design of traditional gardens is related to Chinese landscape paintings, which emphasize winding paths and fragmented experiences through three-dimensional spatial reproduction. Unlike Western architecture which emphasizes integrity, traditional Chinese gardens focus on individual experience, which is consistent with Merleau-Ponty's body phenomenology. Garden design transcends reliance on drawings, finding completion on the ground concerning the human body, embodying the principle of respecting nature. Concurrently, Chinese gardens are meticulously structured around nature, achieving harmonious coordination between architecture and the environment, thereby exemplifying the presence of space. In summary, this study provides a new theoretical perspective for traditional garden architecture and space research, underscoring the central role of the experience of embodied presence in architectural perception. By exploring in-presence, the research advocates for more consideration of the visitor's presence experience in design and theory, opening up a new research lens for cross-cultural architectural research.

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Antônio Frederico Lasalvia
M. Architect (Universidade do Porto), The New Centre for Research and Practice
lasalviaaf@gmail.com

Paxton after Paxton:
Form as formlessness in the dance of architecture

Key Words
Dance, Architecture, Philosophy, Contact Improvisation, Recursivity

In 1851, the gardner Joseph Paxton disturbed fully developed assumptions about architecture with his radical building system conceived for the World's Fair: the Crystal Palace demonstrated not only that the materiality of construction was bound to deviate into unprecedented paths thanks to the advent of new technologies - such as plate glass and cast iron - but also that modularity in construction, although familiar to Western tectonic culture, could mean fast assemblage and disassemblage. In 1972, the choreographer Steve Paxton performed an analogous disorganization of expectations in the sphere of dance with the advent of an unscripted form: the development of Contact Improvisation testified to heterodoxical possibilities latent in the encounter between dancers, a direction that was not current among widely held notions about what constituted erudite dance. Both Paxtons have mobilized thought utterly and irreversibly in their areas of work for generations to come. In the face of such paradigmatic revolutions, a question comes forward: how can discipline-specific subversions be translated into other spheres of practice?

This article proposes just this exercise: to rethink the stance of architects towards the built environment based on an insight first realized in the field of dance. The hypothesis presented here is this: what connects the unrelated transformations brought forth by both Paxtons, with more than a century in between them, lies in the conception of a recursive structure that is able to acknowledge feedback. Could this approach become a robust methodology for architecture in the 21st century? The last part of this article suggests a positive answer to this question, by briefly presenting three contemporary examples that deal with the actualization of virtualities in space.

0. Introduction

How does the way one conceives of movement can affect the seemingly static built environment? This paper points toward a transdisciplinary reconceptualization of architecture based on a crossing of the fields of dance and philosophy. This is sustained through the breakdown of the epistemological consequences of two unconnected events that revolutionized their respective fields of practice: on the one hand, the systematic approach developed by Joseph Paxton in 1851 with the assemblage of the Crystal Palace, and, on the other hand, a form coming from the avant-garde experience led by Steve Paxton in 1972 with the development of Contact Improvisation (CI). The argument is divided into three parts.

Part one refers to some of the innovative aspects materialized in the Crystal Palace based on the reading of historian Sigfried Gideon and architectural theorist Kenneth Frampton. Of particular interest here is how the adoption of available, but mostly ignored means of construction was made viable through the articulation of a looming lineage of tectonic rationalism;

Following that, part two briefly describes the development of Contact improvisation based on the account given by anthropologist Cynthia Novack. As some of the more radical propositions of CI are made explicit - such as the absence of choreography, the dilution of authorial agency and the composition of dance derived from inevitable bodily constraints - the general aim of this part is to suggest the opportunity for an analogous shift within the making of architecture;

Finally, in part three, what is common to the work of both Paxtons is made evident through a methodological analogy. It is argued that both of their approaches were based on conceiving of an open system, which is fruitful precisely because it allows itself to transform according to different solicitations. This abstraction is exemplified by the extrapolation of these possibilities into the sphere of architecture. Based on a systematicity analogous to the one embodied by the Crystal Palace and by Contact Improvisation, three contemporary approaches to the built environment are discussed, namely, through the work of architects Lacaton & Vassal, Georges Descombes and Carla Juaçaba. The choice of these authors comes from the contemporary relevance of their approach, which was analyzed in depth with resources to interviews in previous studies (Lasalvia, 2021).

1.Joseph Paxton

After just eight days of design and over six months of consistent assembly, a colossal bright indoor space stood well within the heart of Britain. The fact that the Crystal Palace was the first specimen of its sort [1] may cause surprise to the historian of techniques, since this monumental structure spawned from the backyard of English factories, at industry's birthplace. By 1851, already three generations into the first industrial revolution, the timing for a epochal revelation was just right [2], and when it finally crystallized before an expectant public, it was acknowledged accordingly: "In contemplating the first great building which was not of solid masonry construction spectators were not slow to realize that here the standards by which architecture had hitherto been judged no longer held good", wrote the german Lothar Bucher in the aftermath of the universal exhibition. (Giedion, 2008, p.253).

By approaching space with the will to systematize it, Paxton composed his pavilion according to a modular logic. The module itself was a result of state of the art technology, which allowed for a load-bearing system rationalized to the limit in order to achieve maximum transparency. The result can be described as flexible because, as a system, it was able to respond to input coming from the site. After the building was dismantled, it could be reassembled with a different layout and volume by a simple rearrangement of its components.

2.Steve Paxton

In 1972, within the context of wider progressive cultural shifts related to civil and social rights, and under the direct influence of avant gardist explorations that blurred clear distinctions between authorial gestures and the expressions of the everyday [3], a group of young artists led by choreographer Steve Paxton created what was to be known as Contact Improvisation [4]. More than 50 years later, this practice proved to be a generous gateway for reflections that reach far beyond physical movement.

According to the first generation that took part in the invention of CI, an interest towards the situatedness of the body came out of an exhaustion with precedents of dance tradition (such as preordained choreographic gender roles, the idea that movement should be expressive, structured or that its display should exhibit virtuosity). In pursuing an investigation that bent the legacy of formal dance, this group of young movers adopted a pragmatist-like attitude towards the body that focused strictly on what it could do - in relation to itself, in relation to other bodies, and, most of all, in relation to gravity. From this small set of variables, viable

articulations between parts were rehearsed and, perhaps unsurprisingly to art practices after Minimalism, the end result was not impoverished by the reduction of means, but, on the contrary, enhanced.
Described succinctly, CI movers engage in spontaneous encounters, usually in the duet form, which are choreographed on the spot. This means that conduction in this dance is not based on individual guidance, but stems from a playful structure that builds upon haptic hearing for an unrehearsed agreement to arise. Within this exchange, codependency is fundamental and practitioners constantly negotiate different arrangements so they can jointly respond to gravity. The result is a composite anatomy made from decentralized bodies, where the parties involved must fluidly operate based on a reflexive ability - the capacity to act and be acted upon - in order to engage with opportunities that are renewed at each instant.

3.The actualization of virtuality in space
The connection between Joseph Paxton and Steve Paxton is not one of direct epistemological influence, but one of analogous methodological approach. In brief terms, both authors deal with the pair virtuality/actualization based on a systematic approach, in which a large amount of difference can be produced by a small set of rules. Their radical propositions are similar to the extent that they adopt two consecutive steps: (I) Acknowledging the constraints of a system in an affirmative manner; and (II) catalyzing contingent differences based on feedback. For example, on the one hand, Joseph Paxton displayed the intervals of the bearing structure as a compositional artifice, and arranged the building's modules according to the available space at the site. On the other hand, Steve Paxton endorsed the force of gravity and the resistance of friction and, based on these two factors, conceived a form for two or more dancers to interact spontaneously. From an abstract point of view, both systems establish a virtual space for action, which becomes actualized once the conditions of reality are encountered.

ENDNOTES

[1] Although formally the same components were used a year before on a lily-house design, programmatically, the crystal palace had no antecedents.
[2] Historically, the delayed appearance of undisguised machine-made components in civil construction attests to Bernard's Stiegler insight that "technics evolve more quickly than culture" (Stiegler, 1998, p.12). In other words, disruptive innovations must have a phase of slow metabolization prior to wider social use becoming the norm.
[3] A genealogical link can be traced from John Cage's and Merce Cunninham's experimentations with chance at Black Mountain College to the display of the ordinary by the Judson Church Group. (Novack, 1990)
[4] Although Steve Paxton actively sought to decentralize his role in the development of CI, and open handedly stated "I feel like I have invented nothing", out of stylistic reasons this article will refer to him as the "inventor" of this practice. Other figures that took active part in the early period of Contact's development include Nancy Stark Smith, Danny Lepkoff, Lisa Nelson, Karen Nelson, Nita Little, Andrew Harwood, Peter Bingham and Ray Chung.

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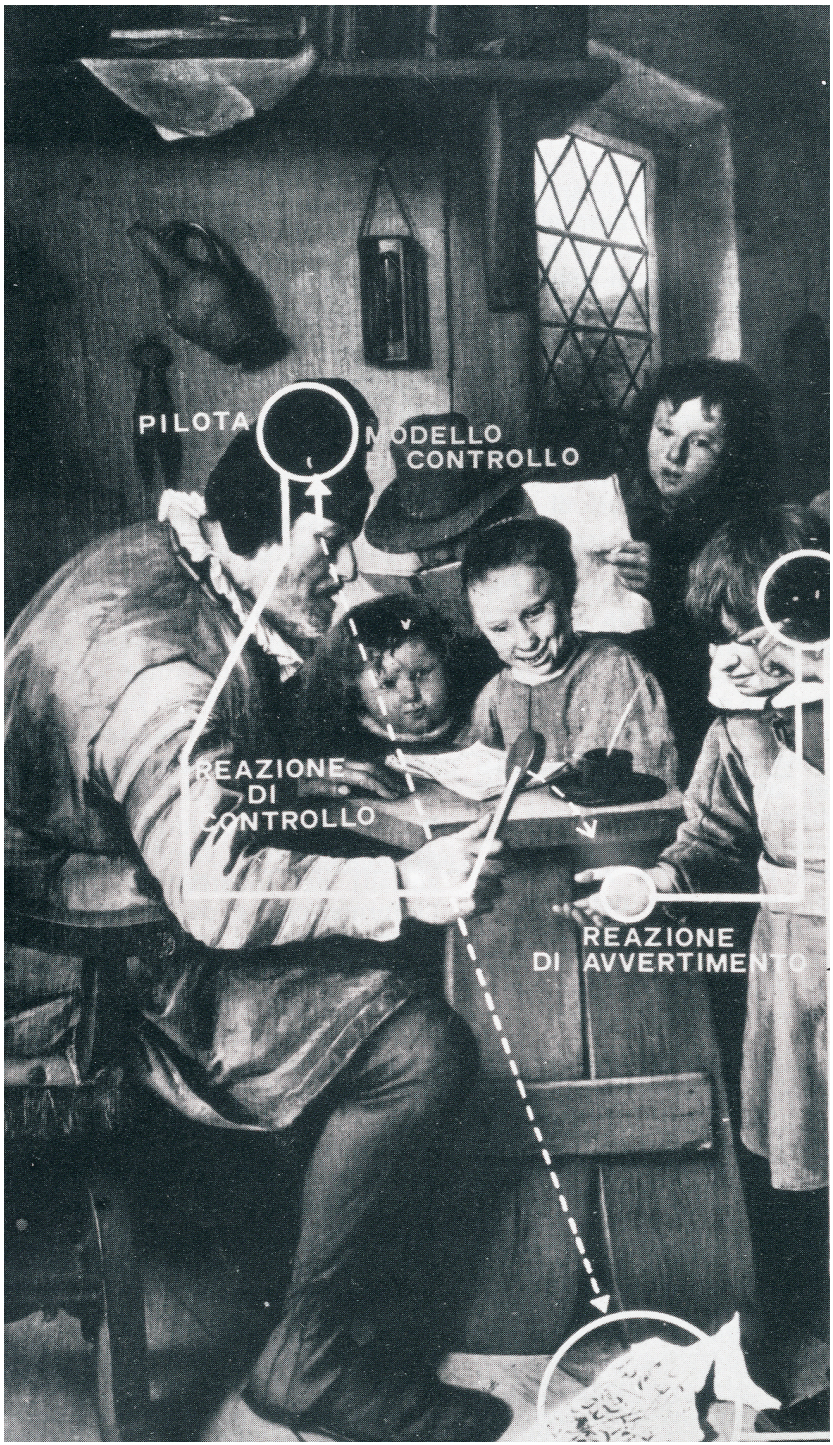
PILOTA
MODELLO
CONTROLLO
REAZIONE
DI
CONTROLLO
REAZIONE
DI AVVERTIMENTO

Roberto Podda
Xi'an Jiaotong - Liverpool University, Architecture Department
roberto.podda@xjtlu.edu.cn

Eye-foot-hand.
Actuality of a phenomenology of bodily life in the "exponential" space

Key Words
Phenomenology, Space, Body, Architecture, Technology

If, as amply argued by L. Wittgenstein in "Tractatus Logico-Philosophicus" [1922], reality can be described as an indissoluble whole in that it consists of a "system of structured facts", so, following this definition, we could say that even for the human's artifact, which by its very nature belongs to reality, there are mainly two basic elements constituting factual reality: concrete "facts", and the "structure" that relates them.
It is in the realisation of the human being/world that the body, experience after experience, "crisis after crisis" using Husserl, acquires its own subjective, corporeal and inter-corporeal intentionality [Franzini 1996, p.13].
The body roots itself, its vital being, through cognitive operations that always have an 'aesthetic-sensible' foundation, living in finiteness. In this, the body takes on a dialogical value, and, in it , the experience of the real is ossified.
What we might call today, in the words of Dino Formaggio [1996, p.13-14], "the science of bodily intuitions", must today reshape its space. It is a question of studying the theoretical implications arising from the massive use of the "exponential technologies" [Kotler 2012] which implies a redefinition of the relationship between the human body and the new totality.
This implies a revision of the concept of corporeality in view of the current paradigm shifts. Contemporary human is today called upon to put their 'finiteness' to the test, creating new categories and drawing from it the possibility of reshaping the dialogue between body, space and hyper-technology.
The fracturing of perceived and expressive space, and consequently the fracturing of the body-world relationship, has distant roots. Tracing a genealogy of it, we must begin by addressing the current of thought that defined architecture as "Raumgestaltung" (conformation of space). While Erich Brinkmann and August Shmarsow are two of the main protagonists, it is here important to read a short extract from the studies of Geoffrey Scott [1914, p. 226-230] who

wrote that: «architecture gives us spaces of three dimensions in which we stand (...) our minds are by habit fixed on tangible matter, and we speak only of that which stops our eye; matter is given form, space comes of itself. Space is 'nothing' - a mere negation of the solid. And thus, we come to overlook it.
However, much we may disregard it, space acts upon us and can dominate our spirit». Not only does Scott clearly define the value of the "enclosed void" as the centre of architectural action, but at the same time he anticipates the second component, "movement", which derives from it.
In this regard, a few years before, Henry Focillon specified [1934. p 34] «Because of its essence and destination, the art of architecture is implemented in the 'real' space, the space where our walk moves, occupied by the activity of our body (...) We must not forget that the architectural mass simultaneously presents a dual aspect: external mass and internal mass, and that the relationship between one and the other is of singular interest for the study of architectural form».
Focillon highlights a series of concepts that now, starting with the concept of the body moving in space "the space where our walk moves, occupied by the activity of our body", which represents the theoretical basis to establish the concept of sequence and therefore of perception in architectural space-time. In the Italian cultural sphere, Bruno Zevi, in 1948, published his book "Saper vedere l'architettura" (knowing how to see architecture), a fundamental historical-critical work in his production, in which the author proposes a historiography of architecture based on the concept of interior space.
Luigi Moretti [1951, p. 1-8, 91] in his article "Discontinuity of Space in Caravaggio", finds the breaking point at a precise moment when he writes: starting from that late Renaissance in which we begin «out of a kind of biological fatigue, or rather because of the fatal pendular opposition of the spirit to worlds already conquered, to concentrate the density of reality on particular areas in the surface of representation and to empty others. »
If Moretti identifies in Caravaggio the break of the space, Gidion [p. 432] and his book 'Space, Time and Architecture', identifies Cubism as one of the moments in which the concept of the so-called "fourth dimension" was clarified with increased vigour. Analysing Cubism, he writes: «Cubism breaks with Renaissance perspective. It sees objects in a relative way: that is, from several points of view, none of which has exclusive authority. In dissecting objects, he sees them simultaneously from all sides - from above and below, from within and without. He moves around and inside his objects. Thus, to the three dimensions of the Renaissance that have remained the constituent facts for so many centuries, a fourth is added: time. (...) The presentation of objects from multiple points of view introduces a principle intimately linked to modern life: simultaneity. It is a chronological coincidence that Einstein began his famous work, Elektrodynamik bewegter Korper, in 1905 with a precise definition of simultaneity. »
Body movements in the void space make it possible to "see dynamically", a dynamism that makes the acquisition of reality similar to a flow of impulses in which the human observer is immersed, and of which he himself is not only the instrument of decoding but also its engine and generator.
The Swiss art historian H. Wölfflin wrote in 1898 [pp. 11-17], « As human beings endowed with a body, which teaches us what it is to lose, to contract, to force and so on, we collect experiences that enable us to perceive the characteristics of other forms. (...) Our bodies and their emotional underpinnings, both on a conscious and preconscious level, shape the way we think or actively engage in the world, and in our urban cultures such shaping takes place in an environment designed by an architect. »
Moving to the actuality, as pointed out by Harry Francis Mallgrave [2015, p.10] in his book "The Empathy of Spaces", the knowledge acquired in recent decades by cognitive neuroscience substantiates these intuitions, giving a central role to "sensory-motor mechanisms."
We are therefore, writes Mallgrave [2015, p.10], «embodied beings in which minds and bodies, environment and culture are interconnected at different levels», and our experience of the world is predominantly set in architectural space, in which, every perception «corresponds to a hedonic/affective experience that conditions our evaluations, even the seemingly 'objective' and rational ones». [Gallese, p. XII] Gallese advances the concept of 'embodied simulation' to describe this process that incorporates perceptual, experiential l, and imaginative phenomena, constituting our modality of openness to the world. [Ammannati- Gallese 2014, p.23-48]
But what is happening today to the relationship between the human body and space with the widespread spread of new 'exponential technologies'?
The City becomes an entity in which the human body is "flirted" through the multiplicity of networks that have become so performative and pervasive as to "herald the formation of a disseminated collective hyper-subject" [Costa 2012, p. 84-85].
The "hyper-technological prostheses" connected to global networks make each of us a node of the system potentially able to interact simultaneously.

Thus, there is a profound change in the concept of the city transforming itself no longer into a place but into a scene in which "the otherness between two states of time of the "present" is plastically expressed: the present of the intimate of the actor and the public present of the practicable scenario frequented" [D'Alfonso 1994, p. 284].
This City is always alive and viable, and it can be used simultaneously at different times and in different ways, exponentially expanding the possibilities of organizing an agenda of personal time no longer has to consider physical limits.
This article questions whether it is still relevant today to speak of a phenomenology of body life in the 'exponential' space.

ENDNOTES

[1] Urban Experience is a field of cultural design for urban regeneration and active participation, connoted in playing cities through the creative practices of performing media: an enabling condition for the social creativity of networks to reinvent public space between web and territory
[2] Teatro Mobile is a traveling headphone theater association that addresses projects related to the discovery of significant places of cultural, urban and environmental heritage.
[3] Carlo Infante is a changemaker, freelance lecturer in Performing Media, cultural designer, founder of Urban Experience, and dynamizer for urban resilience. For more information https://www.performingmedia.org/profilo-sintetico

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FIGURES

Fig. 1 - Havickez Steen_The school Master_1665_National Gallery of Ireland_Dublin_Example of typical action-reaction setting scheme. Podda, R. (2024). Luigi Moretti: Lessons of SPAZIO (1st ed.). Routledge. https://doi.org/10.4324/9781003328308, pp. 257.

Gamze Sensoy
Eskisehir Technical University, Department of Architecture
gamzesensoy@eskisehir.edu.tr

Tracing the experience through the metamorphosis of body-space relationship

Key Words
Experience, Body, Space

The body, along with it the space and its experience has always been a problematic issue from past to present. Arguments regarding the gradual disappearance of experience have been gaining strength. In this context, the fact which motivates the research is the observation of the change of experience loss. The research question of the study is what kind of link there may be between the transformation of the body-space relationship from past to present and the lack of experience. The model research [Jaakkola 2000] was determined as the method of the study. Thus, considering the paradigm changes, it is aimed to explore the common pattern by discussing the body-space interaction of the early 1900s, 1960s, 1990s and later. These interactions according to periods were interpreted in the context of experience and common points were discovered.
The 1900s was a period in which established values were evaluated depending on the changing living conditions along with technological developments and industrialization. Society, which is encountering a discontinuous, new modern experience, is dealt with in a functionalist approach and interpreted as an orderly system consisting of interrelated parts. Space, organized around standards and measurable values, is functional and hierarchical. It is supposed to be of ideal size and shape and its counterpart is the standardised male body, the Modulor. This search for universal measurement regarding space, frees the body from uncertainty. The body is recognized as an organism with regulated relationships between organs. It is considered as an object formed by the combination of parts independent of the soul. The ideal body is always preserved with events such as dieting, exercise, or well-being. Space, which reflects the machine metaphor with an understanding of an order, is a prosthetic that completes the fixed structure of the body. The transformation of the exterior of the space into a framed visuality has detached the gaze from the body. Essentially, the body has to live the idealised life, and the prescribed experiences that are performed for it in the everydayness of the city. The body,

whose actions to be performed, the route to be followed and the time to be reached are certain, moves through the city streets like products in a harmoniously functioning factory. Architecture intends to move away from chaos and preserve order. Therefore, the body is under control and its actions are determined. Experiences are ideally structured and regular in the Cartesian space.

Scientific progress has paved the way for the paradigm shift of the period. Subatomic studies in the early 1900s and quantum mechanics in the later period have changed the perception of matter defined by Newtonian physics. The theory of relativity rejects the idea that a linear cause-and-effect relationship is the same for all observers. The 1960s in particular were a period of awakening and mobilisation, during which people reacted to war, politics, and discrimination, creating a polyphonic environment. As modernism's grand metanarrative was challenged, multiple narratives emerged and pluralism became dominant. The binary situations in the concept of modernity are now derived from neutral pluralities. This pluralisation is also evident in the theory of 'body without organs' Deleuze and Guattari's. The body without organs, which Artaud [1975] attributes to being liberated from all automatic reactions and having achieved true freedom, is constantly shaped by intervention, and consciousness is considered as a value that controls the body through its parts. The body, which comprises of organs functioning in order, or the organism, would establish new relationships freely when it is liberated from control and becomes a body without organs. In this sense, the concept of the body without organs opposes rigidity and hierarchy, and is therefore formless. Deleuze & Guattari's [2005, p. 164] concept of the organ without body is presented as a separate entity that encompasses the logic of transplantation. The marginality of the transplanted organ and the new organism create a hybridity and the purity of the body is deformed. What organs without the body and the body without organs have in common is the potential to deform order and dismemberment of the body. This fragmentation represents a dissolution of the Cartesian forms of modernism. Ambiguity replaces certainty, and formlessness replaces integrity. Space breaks free from its regulations. This issue is actually controversial in terms of the search for an ideal for the body, where parts of the body are becoming objects again. As the body tries to go beyond its limits, it falls apart again. Daily urban life also became increasingly fragmented during this period. Spatial representations, which primarily appeal to tourists, are merely fleeting images in the daily lives of residents. The society of consumption and media refers to a way of life in which daily experiences are shaped by wants and needs. The outcome is now the sole concern, rather than the process by which things occur. Moreover, when success is achieved, the path taken, in other words, the experience, is erased, leaving only the action [Connerton 2009]. Spatial awareness is becoming increasingly superficial. The body passively moves towards targets located in a disjoined city. This time, the body is controlled by different authorities in a different order. Experience has become fragmented, and the dominance of the understanding of space based solely on visuality has separated body and space.

As transformations occur in society, science, and technology; information has now started to be produced with the guidance of information technologies. In this period, after the 1990s, where communication has increased and accelerated, the virtual environment and identities have become prominent topics. New media has created a network society and cybernetic interaction has become possible at any moment in daily life. Transhumanists believe that technological advancements in nanotechnology, biotechnology, neuroscience, and artificial intelligence will free the limitations of biological bodies. In the technological age, the body is often considered insufficient, and by going even further, disembodiment is suggested. Even parents' selection of babies' features is discussed, and the body turns into a designed object. All these developments led to Clynes and Kline coining the term "cyborg" in the 1960s [Teyssot 2005, p. 78]. The body intertwined with technology, known as the cyborg, ironically represents a body that is under control. It can be argued that attempts to idealize and purify the human body can lead to a blurring of the distinction between body and machine. When organ transplants, pacemakers, contact lenses, dental fillings, and even mobile phones are taken into consideration, the human body is now hybrid and no longer a completely biological entity. Everything represented through code has become an extension of the body. Each part of the coded body can be supplied separately, thus, the body becomes fragmented [Breton, 2016 p. 12]. Hacking [2006 pp. 13-14] states that applying such practices to the body makes it even more apparent in a Cartesian sense. In fact, as the technique has progressed, the body has been further broken down and reduced to smaller details. In this sense, the experience is hybridized. The body is both fragmented and under control in the space where layers of physicality and digitality are intertwined.

As the context changes, it can be concluded that experiences are always under different ways of control. The aspect of the ideal body and space determined the experience in the early 1900s. In the subsequent period of pluralism, although the body and space went beyond their boundaries,

the approaches were established in the context of the fragmentation of the body. Experiences were superficial and controlled as part of desires. With digitalization, the extensions of the body have changed and have been disintegrated down to the codes in hybridized space. The experience has been directed within the framework of the counterparts of needs in the digital world. The pattern seems to appear in the form of disintegration of the body and space. In conclusion, the body and space are confined in defined intervals of experience.

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Zümrüt Sahin
Istanbul Technical University, Department of Architecture
sahinz16@itu.edu.tr

The artist's studio unveiled.
Exploration of practice, body, and space

Key Words
Body and Space, Art Practice, Artist's Studio, Lived-space

This study delves into the interplay between artistic production and space, exploring critical questions that reveal the complex relationships between body, space, and practice. How does the active body of the artist interact with the practicing space? Can artistic production be viewed as a dynamic act simultaneously producing and transforming space while being produced in/by it? These inquiries guide research focusing on the spatial relations inside the artist's studio as the space of artistic production.
As the artist's habitat, the studio encapsulates the realm of artistic production and forms a perimeter where the artistic practice resides, and the artist's cosmos unfolds. The artist works, lives, dwells, moves, and creates within the studio. This study aims to raise a discussion on the relations between body, space, and practice inside the artist's studio by emphasizing the production and transformation of space by and through the acting body. It is significant to unfold these relations, especially in the artist's studio, since it narrates the current relations in art, architecture, and culture. The study adopts an interdisciplinary approach, exploring the studio space as an interdisciplinary theoretical terrain between art and architecture. Within the scope of the study, the evolution of the relations between artists and their spaces is presented through examples, from modern to postmodern (post-studio), eventually to the contemporary era. While painting and sculpture artists constitute a majority of examples, such as Ozenfant, O'Keeffe, and Mondrian, installation and conceptual art studios are also examined as part of contemporary artist's studios.
De Certeau draws attention to the distinction between space and place; while a place indicates a degree of stability, space is a composition of moving pieces set in motion by the series of movements that spread within it. As De Certeau states: "Space is a practiced place" [De Certeau 1984, p. 117]. Grabner, referring to De Certeau's "practiced place" underlines the

notion of practice as essential to be recognized as a studio, "Unless it is a practiced place, no physical room or demiurgic attitude can qualify as a studio" [Grabner 2010, p. 5]. Without the artist's practice, it is inaccurate to name that site a studio since the artist's space is produced and defined by and through their bodies' movement, actions, and experiences. The studio is the site of a dynamic interplay between the artist's body and space through practice.

Lefebvre proposes the triad of perceived, conceived, and lived space and declares that the perception, living, and production of space are through the body; he asks, "What, then, occupies space? A body - not bodies in general, nor corporeality in general, but a distinct body capable of signaling direction with a gesture, defining rotation by turning around, and demarcating and orienting space". According to Lefebvre, the body and its space have an instantaneous relationship; every active body is space and has its own space; it creates itself in space while also creating that space. With the energies at its disposal, the living body produces or constructs its own space; in return, the laws of space regulate the living body and the distribution of its energies [Lefebvre 1991, pp. 169-170]. In the studio context, it is the living habitat of a creative individual, dedicating years to artistic practice within the space. O'Doherty expresses, "Space now is not just where things happen; things make space happen." [O'Doherty 1986, p. 39]. What occurs within the studio is integral to the genesis of the studio itself. It is argued that the studio space is produced as a result of the artist's practice, which entails all kinds of routines, repetitive acts, movements, and gestures. In this regard, a duality is observed between art and space, resulting in the simultaneous production of artwork and space. This dual relationship leads to the blurring of the boundaries between space and the artwork and the transition of space to the work of art.

In his book Actions of Architecture, Hill asserts that the user participates in the production of space as well as the architect, through inhabitation [Hill 2003]. In Bollnow's concept of lived-space, contrary to mathematical space, the living body breaks the homogeneity of [Bollnow 1961]. With the presence of an inhabiting body, geometric space becomes lived-space. In lived-space, new rules and boundaries are set accordingly and applied to the body that perceives and moves. A significant example of this production and transformation is Kurt Schwitters' Merzbau, which the artist worked on in his Hanover studio between 1923 and 1937. O'Doherty states, "It grew out of a studio - that is, a space, materials, an artist, and a process" [O'Doherty 1986, pp. 44-45].

Rosenberg introduced the term "action painting" while emphasizing the bodily engagement of abstract expressionists and named the canvas an "arena in which to act" and what is on the canvas an "event" instead of a painting [Rosenberg 1952, p. 22]. Accordingly, Pollock's distinctive painting style through expressive body movements influenced Rosenberg's idea of an action painter. When Marie revisits Rosenberg's text, she asks: "Where and what is the body/figure, and on what ground? Where did the action take place? [...] But is the "four-sided arena" the two-dimensional canvas on the easel or the three-dimensional room of the studio?" [Marie 2010, p. 81]. Marie clarified that the event was happening inside the studio space, which is the arena of this encounter between the artist, the body, and the materials.

When the concept of the event is viewed from the perspective of architecture rather than art, it has been emphasized by Tschumi that there is no architecture without an event or a program, and events and actions are inseparable from the spaces that enclose them. As Tschumi states, "Bodies not only move in but generate spaces produced by and through their movements." [Tschumi 1996, p. 111]. Tschumi's relations of body, event, and space can be transferred to the space of the artistic production and the events that happen inside the studio space that are integral to it.

Moholy-Nagy states that a definition of space found in physics is "the relation between the position of bodies" [Moholy-Nagy 1947, p. 57]. Pallasmaa highlights the body as the center of sensation, reflection, and consciousness, while in Merlau-Ponty's phenomenology, the center of the empirical world is the human body. According to Pallasmaa, our bodies and actions are in a never-ending interplay with the surroundings, and bodily interaction is indicated in an encounter with any artwork: "When working, both the artist and craftsman are directly engaged with their bodies" [Pallasmaa 2005, p. 12]. In a studio-based practice, the artist has many tools lying around in the studio, and they are agents of making in the process. In some situations, the body embraces and becomes the tool itself instead of an external tool.

In this context, it is critical to consider the production of art from the context of space and to trace this relationship between space and artistic practice as it shapes our perception and experience of art and architecture. Positioning the artist's studio inside a web of relations presents its capacities of bodily engagement and inhabitation as a creative space. Moreover, these relations are site-specific, and each studio is a unique example. In these studios, the relationship between artists and space is shaped by various factors, including artists themselves, artworks, working methods, materials, and context. Although the degrees of

bodily engagement shift, the bodily encounter of the artist is always prominent. In this regard, the study presents a continuum of the artist's studio from different eras, and their architectural spatial potentials are acknowledged for their richness. The spatial relationships found through dismantling the artist's studio lead to new openings in the relations between space, art, and architecture. In such a way, architectural potentials in studio practice and artistic production are recognized.

ACKNOWLEDGMENTS

This extended abstract is derived from Zümrüt Sahin's master's thesis entitled "The Production and Transformation of Space: Dismantling the Space of Artistic Production", completed at Istanbul Technical University under the supervision of Asst. Prof. Dr. Iffet Hülya Arı.

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FIGURES

Fig. 1 - Steps of the Method (source: authors).

Rafaël Magrou
ENSA Paris-Malaquais – Paris PSL University
rafael.magrou@paris-malaquais.archi.fr

Re-composing the theatrical space from the fourth wall

Key Words
Theatre architecture, Set design, Fourth wall, Stage/hall relationship

Generally assigned to their seat, spectators are invited to move around in space and time, following a dramaturgical and scenographic device specific to each creation. On the one hand, they are placed in the middle of a group or even a crowd, and are able to ignore these proxemics, while they are concentrated or even caught up in the event unfolding before their eyes; on the other hand, what manifests itself before their eyes and engages all their senses takes them into other universes, elsewhere, for the duration of the performance. In *Les espaces autres,* Michel Foucault refers to the fact that the theatre is a "heterotopia":

> "The heterotopia has the power to juxtapose in a single real place several spaces, several locations that are in themselves incompatible. This is how the theatre creates a whole series of places on the rectangle of the stage that are foreign to each other" [Foucault 1967]

From this situation, the director, set designer and actors have every leisure to make a wide variety of spaces pass on stage, composed of more or less illusionistic devices to really carry the audience in a world that must be believable. These correspond to more or less explicit ideological and aesthetic presuppositions, enabling the audience to receive the play correctly, through unrealistic or unbelievable elements that are nevertheless considered by the audience to be completely normal. To the dimension of place is added that of time, and therefore of movement, mainly mental since the spectator is generally fixed in one point of view. In most of the cases, he cannot move to appreciate the performance from different angles, with the exception of experiences that invite him to wander or to incorporate the performance space.

A limited schematization of theatrical spaces

As mentioned, Foucault describes a rectangle that can be interpreted as facing the audience head-on, which is the most common diagram; but the stage can take on a variety of shapes, and the audience can be placed in a wide range of positions. The history of theatre architecture bears witness to this through the many morphologies it proposes [IZENOUR 1977], extended to the experiments carried out by theatres-in-the-round such as Glenn Hugues at the Pentagon Theater in Seattle (1942), Margo Jones Theater in Dallas (1947) or André Villiers and Paquita Claude for the Théâtre en rond (1950s-60s), but also experiences lead by Peter Brook at the Bouffes du Nord or Théâtre du Soleil at the Cartoucherie of Vincennes (1970s). Also, the scenographic choices considerably increase the relationship between spectator and actor, if we were to consider for instance the work of Jerzy Grotowski and Jerzy Gurawski in the 1970s or Claude Régy with Daniel Jeanneteau in the 1990s. Whether it is a shelter or a building, to use Antoine Vitez's terms [VITEZ 1991, p. 91], this aspects is rarely considered when analysing configurations. In the work carried out by the Compagnie Louis Brouillard in the 2010s, author-director Joël Pommerat and set designer Éric Soyer have questioned this relationship between the audience and the stage, creating in the circle (*Cercles/Fictions*, 2010 and *Ma Chambre froide*, 2011) or two-fronted (*La Réunification des deux Corées*, 2013). The presence of the actors, central to Joël Pommerat's work on writing for the stage in relation to the audience's relationship with the stage, is the primary motive for this reflection on what might be described as "scenographic architectures [1], since they deploy formats and structures that allow for very different relationships to the stage. Where is the fourth wall in this type of situation?

The fourth wall rather seen as a spatial concept

Considering the examples mentioned above, the fourth wall, known as the invisible screen separating the two volumes (audience and performance space), generally located at the edge of the stage, at the framing or lighting rail, is fully questionable as a spatial concept. This notion, introduced by Diderot in the mid-eighteenth century – "Imagine, on the edge of the theatre, a great wall separating you from the parterre; play as if the canvas were not rising" [Diderot 1758, p. 210] – and named by André Antoine a century later, is supposed to define the distant or intimate relationship between the spectator and the actor. If the actor so decides - or if the author and/or the director has decided for him - it is entirely possible for him to move around not only on stage but also in the auditorium, thus integrating the audience into the space of his action. For a stage actor, breaking the fourth wall means coming into direct contact with the audience, whereas keeping it up allows the audience to be ignored. The filter that is the fourth wall therefore establishes this relationship of presence in a shared space, made up of the stage AND the auditorium. In the creation *Ça ira (1) Fin de Louis* (2015) where the audience is figuring the national Assembly while the merging of the French Revolution, Pommerat and Soyer merged auditorium and stage into a single playground as actors are playing in the audience [Magrou 2023]. Where is the fourth wall in this type of situation? In a different way, in *Roman Tragedies* (2008), Ivo van Hove invited some spectators on stage to sit on sofas next to the actors, by blurring the boundaries between hall and stage.

Rethinking the roles of spatial design

Then, the auditorium morphology itself is modified, since spectator, even when assigned to their seats, contort their bodies to watch the action. There is a friction between the audience and the action.The relationship between the spectator's body and the space can be much more mobile than it seems, depending on the movements of the actors and the demands made on the audience. So, is this to the theatrical space to command the organization or to the scenographical disposal to distribute the places?

With this brief problematization, we intend to question the very notion of the fourth wall, which, if we take the few examples illustrating our point here, is not fixed to the stage frame, but noticeably moving in space, seemingly carried away by the actors, like a second skin, an 'architecture' in itself that the actor carries around with him, deciding (in agreement with the author and director) to open, a door or a window, in order to address the audience or a chosen individual directly. Could this be another starting point to redefine theatrical architecture? Could this « wall », i.e. actors positions in space, associated to drama and not to architecture or stage design, be the possibility offered to generate or to develop other architectural figures? At the end, isn't it the porosity or the impermeability of this membrane that makes the experience of live performance authentic and unique?

ENDNOTES

[1] We borrow this formula from Jacques Gaulme, Des Architectures scénographiques.

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FIGURES

Fig. 1 - *Cercles/Fictions* (Compagnie Louis Brouillard, 2010). In Les Bouffes du Nord Theatre, Paris, salutes from the actors © DR.

Francesca Casalino
Università degli Studi di Roma "La Sapienza", Dipartimento di Architettura e Progetto
francesca.casalino@uniroma1.it

Dancing bodies. Anna Halprin and her workshops at Dance Deck and beyond

Key Words
Dance, Body, Space, Nature, Architecture

Anna Shuman [1920, Illinois - Kentfield, 2021], of Jewish descent, learned dance from her grandfather, who practised religious ones. As a child she studied the techniques of Ruth St. Denis and Isadora Duncan. Then, at the University of Wisconsin, she was introduced to Margaret N. H'Doubler - a pioneer of Dance Education - who encouraged her to study the anatomy of the human body, improve her movement, and experiment with improvisation, to learn how to concretely feel her body free in space. At the College Anna also met Lawrence Halprin, who would become her husband in 1940.
When they moved from San Francisco to Kentfield to a house in the woods, she felt deeply disoriented because she was far from her usual interaction with the artistic world of the metropolitan city.
Lawrence, who was a landscape architect, meanwhile designed marvelous gardens and water squares to encourage people to experience urban space freely [Haprin L. 1949]. So he decided to design and build a place for Anna where she could perform in the domestic space. The Dance Deck was a wooden platform perched in the clearing, cantilevered towards nature, and some of the trees were even incorporated into the structure. "Its total immersion in open space, the absence of closed wings or walls, the irregular shape of the stage, the canopy of trees that takes the place of the proscenium, the interference with the weather, all stimulate the work of unconventional exploration of space, which leads her with increasing conviction through dance" [1].
In 1955, Anna moved all her dance classes outdoors and attracted American avant-garde artists from the city, including composers, dancers, architects, and sculptors. In this setting, starting in 1959, the Dancer's Workshops took place, centered on improvisation, the relationship of the human body with the natural environment, and the desire to create a new performative manner that overcame theatrical conventions and the boundaries between the various arts.

The research of those years led Anna Halprin to redefine the precepts of postmodern dance, releasing the movement of the body both from the stage space and from the mirrors of ballrooms, and leading the body to move in space without directions or mediations. During the workshops, dancers were asked to follow only their senses and to walk, observe, touch and feel, undress and dance; to learn to touch the earth again, to return to Nature, to feel part of Her.
"For me, not only isn't my body a mere fragment of space, but for me there would be no space if I wouldn't have a body", claimed in those same years Maurice Merleau Ponty [1965, p. 156]. Before starting any workshop, Anna showed the artists how the bones of the body work using a mannequin: "... how do I raise my arms? I start from the shoulders, then the elbows, then the wrists, then through the fingers, but every time I make a move I notice what happens. I feel my ribcage rise with my elbows. When I reach my wrists, it lifts me off the ground. When I reach my fingers, my tendency is to curve my lower back ... And what happens when I relate to gravity? I don't exist in isolation. Movement always exists in relation to something in its environment, whether it's inertia, gravity or anything else" [2]. Therefore, if impulses originate in the body, it's through movement that they unravel in space.
Under the shadow of the oaks and redwoods, the shadows of the dancers' bodies and those of the vegetation refracted on the same plane of reflection, and the unpredictability of the gesture was followed by the iridescence of the reflection of the windblown leaves. Thus, through the experience of bodies, "the dualism between outside and inside is greatly reduced" and the "interaction between subject and object, between organism and environment" is intensified [Dewey 2014, p. VIII]. John Dewey - to which Anna's poetics owes much - wrote numerous texts on the role of art in experience and on the body as an alternative means of knowledge. He observed: "Every art does something with some physical material, the body or something outside the body, with or without the use of intervening tools, and with a view to production of something visible, audible, or tangible" [1967, pp. 58-9] by the performer and the spectator.
Dance, like art and theatre, suggests the dimension of space to architecture. For this reason, in the late 1960s, the Halprins organised workshops in which people specialised in different disciplines (Moore, Reynold, Subotnick, Leistiko, Ehreth, Hickey, Stauffacher) would intervene to benefit from the interaction between arts [3]. "Last summer, for 26 days, a group of architecture students, architects and dancers learned to feel their bodies in tension and space, to experience the sensual effects of a wild Pacific coastline, of a crowded urban plaza ... Dancers became architects and architects became dancers ... ", narrates Burns [1967, p. 131-2]. Actually, the Experiments in Environment, took place between the Sea Ranch, the Tamalpais Mountains and the San Francisco, applying unconventional perceptual techniques (kinaesthetic, bodily and exploratory) to evaluate the landscape - urban and natural - through dance, music and multimedia tools.
In the Sea Ranch area on the coast of Sonoma County, the "Driftwood Village" was built: in contact with the sound of the water, the rustle of the wind, the cliffs and the wood, the dancers and the architects had to build an environment that was in harmony with the place and that responded to their needs and interests [4]. Some built an enclosure to shelter themselves; some erected a hut in which they could take refuge; others devised beds made of stones and timbers on which they could simply lie down; still, others dug in the sand to finally isolate themselves in the damp sea soil [5]. The experience in the isolated landscape of Dance Deck, on the other hand, allowed the dancers and architects to undress and experience the natural elements directly. And finally, in the city, they sought the adherence of religious or political minorities, again transforming the creative act into a participatory one.
Even today, in the digital age, the Halprins' workshops represent a point of reference for the research of artists, architects and dancers, who find, especially in the RSVP system [6] a transversal methodology, based on "a common approach to space, forms, movement, creation and process, as well as on shared attention to the environment and diversity" [7], useful for evaluating creative processes and creating collective scores.
All this testifies to something that Anna Halprin has always thought: dance isn't just a way to entertain, but to get to know oneself and one's surroundings, to reflect and move, in this continuous exchange between the "I" and the "other", between the body and the space.

ENDNOTES

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interview-with-anna-halprin/ (accessed 9 January 2024).
[3] The Halprins were influenced by the Bauhaus exponents they met at the College, from whom they learnt about hybridisation between disciplines and the sharing of knowledge.
[4] Archive images: https://searanch.ced.berkeley.edu/s/sea-ranch/page/driftwood-city (accessed 25 March 2024).
[5] It seems that these ways of designing and emotional conditions found concrete realisation in the contemporary Sea Ranch complex on which Moore and Halprin had already been working on for years, together with other architects.
[6] Acronym for resource (r), score (s), valuation (v) and performance (p).
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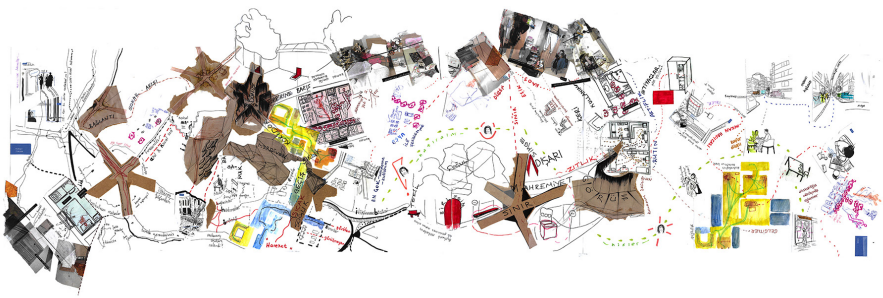
FIGURES

Fig. 1 -Reflections and entanglements, of shadows and bodies' Source: https://www.wjepson.com/warNER/PHOTOS/1HALPRIN/INDEX.HTML#



Ezgi Selin Karadem[1], Ceylin Çelimli[2], Dila Görügen[3], Aleyna Çeliktenyıldız[4], Ruhide Küçükoglu[5], Pelin Dursun Çebi[6]
[1, 2, 3, 4, 5, 6] Istanbul Technical University, Departmant of Architecture
[1] karadem18@itu.edu.tr

How do we use our bodies to Investigate our surroundings?
Deciphering the individual and collective narratives of the architects

Key Words
Body, Experience, Morphology, Motion, Space

Space is the foundation of architecture. To design, one must comprehend the architectural space that surrounds us, with its unique structure and characteristics. This enables the architect to be aware of the spaces around them. This situation is similar to M. Ponty's [2011] view that 'we communicate with our surroundings through our body, and we understand and grasp with our body.' Merleau-Ponty [2011] understands the lived body as a latent, lived relationship between an intelligent but pre-reflective body and the world it encounters and perceives through continuous immersion, awareness, and actions. This body is more than just an organism and more than just a thinking and comprehending body. It is a body that is open to the world and exists simultaneously with it. Here, we speak of a conscious body that perceives, feels, experiences, and transforms with its experiences [Duru 2015].
This process becomes more profound when the body that establishes a relationship with its environment is referred to as an architect body. The body here is more than just a body that considers the dialogue in question to be part of its daily routine. The architect's body is an intellectual body that seeks to convert this awareness into data that can then be used in design. At the same time, it is a body capable of extracting these information sets from its surroundings, decoding the space with all of its codes, and investigating the space using its own research tools. The awareness gained from this relationship leads to a series of debates with other sets of information and personal experiences, designing the space, integrating it into current life, and restructuring it. As a result, the relationship under consideration may be subtle enough to warrant further discussion.
Lawson [2005] argues that space organizes our lives, activities, and relationships. According to Hillier, space is never a static backdrop for our material existence. Buildings contain social thoughts within their spatial forms. Spaces are critical components of how societies and cultures are built in the real world [Hillier 1996]. In other words, spaces convey information

about the essential codes they contain. The body interacts with space using these codes, comprehending it and giving it meaning. It is reshaped by it, while also attempting to replicate these codes through its body.

The process of an architect's body establishing a relationship with space is a form of discovery process that helps structure and enrich the architect's understanding of space and spatial experiences. These experiences, which are recorded, collected, defined, and even reproduced, later form the core of the person's spatial knowledge and lead the architects to decide on the principles and concepts of the desired space, acting as the groundwork for the design process. Spatial knowledge can be described as a network of interconnected concepts: body, scale, proportion, experience, perception, atmosphere, senses, time, memory, context, light, structure, material, architectural features, movement patterns, spatial articulation, and relationships, among others [Dursun 2009; Kurtuncu et al. 2008].

In its relationship with its surroundings, the architect's body transforms understandings, selected/researched/engaged codes into certain forms of expressions. These narratives are valuable in terms of the information they contain and are often personal in the way architects are accustomed to. Manolopoulou [2006] calls these "unformed drawings," which range from memory aids and quick observations to creative impulses and detailed proposals. These drawings are notable for being flexible and 'alive,' reflecting the evolving understanding of space.

The aim of this study is to problematize the relationship that the "architect's body" establishes with its environment, the process of dialogue that is established mutually. By emphasizing the differences from the everyday body that interacts with its environment, it begins by discussing how they handle this relationship through which concepts, how they read and make sense of them, and their individual dictionaries used in the process of comprehending the environment through their personnel narratives and representations. Then, it reveals how this comprehension can be fragmented and structured through dialogues with different architect's bodies, based on evolving awareness, and how their own dictionaries and representations can be restructured. The study is based on student work produced in the *Architectural Morphology* course at Istanbul Technical University, Faculty of Architecture during the fall semester of the 2023-24 academic year. The course views architectural design as a discovery process, emphasizing network thinking and the use of scientific data, particularly graph-theory tools like Space Syntax, as creative and informative resources in design. Within the scope of the study, students are asked to describe their lived space by answering these questions: How do we understand and conceptualize space? How do we express meaning in space? How do we think about, talk about, and interpret space? What tools do we use in this process? Individual and collective narratives and textual documents created by students are examined to determine how they understand and express architectural space, with a focus on the tools and methods chosen, as well as the concepts and dictionaries used. Collective narratives are spatial narratives that architect bodies create by transforming and rewriting their individual stories, which they enrich by learning from one another. They are thought to be beneficial in terms of expanding and deepening spatial awareness.

The findings and student evaluations presented in the study have shown that the architect's body decodes spatial knowledge based on personal preferences and knowledge. These familiar codes have been transformed into personal narratives. The lived space has been described variously as an apartment room, a dormitory room and building, or as urban spaces like streets and cafes, with personal dictionaries mostly described through concepts like memory, ownership, movement, privacy, identity, body, and experience. Discussions based on the theoretical underpinnings of spatial configuration in the course have been seen to lead to a reevaluation, association, and transformation of existing knowledge codes. It should be stated that spatial configuration in architecture focuses on network thinking, using graphic-theoretical tools to decipher the potentials produced by spatial formations, thereby offering a scientific, data-driven, theoretical understanding of architecture and the built environment [Hillier 1996; Dursun 2007]. Seamon [2007] also suggests that "space syntax provides powerful conceptual and empirical support for the phenomenological claim of a reciprocal relationship between human action i.e., everyday spatial movement — and qualities of the physical-spatial environment — i.e., the world's underlying pathway structure, or spatial configuration."

Discussions with students have revealed that new knowledge codes about space bring forth new awareness, and personal dictionaries have been expanded and multiplied through spatial relationships, the logic of space, movement flows, density, patterns, actions, and spatial perception-seeing-going relationships. This process has resulted in the fragmentation and reproduction of existing individual narratives as collective narratives (Figure 1). The students' "third eye" perspective resulted in the multiplication of familiar spatial codes. Scientific discussions on spatial configuration have resulted in an environment that guides the intuitive

rather than limiting the individual dictionaries of the architectural body. The study intends to investigate this discussions mentioned in student texts, narratives, and the individual and collective vocabularies that emerge from them. It also calls into question the potentials of scientific tools, like space syntax, in the architect's interaction with their environment. The study proposes that understanding the concepts architects use to problematize their relationship with space, both known and discovered during the process, will raise an awareness of how these concepts can be expanded and diversified. Such an understanding is considered crucial as it initiates the architect's design process and guides the structuring of important information for shaping the space to be designed.

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FIGURES

Fig. 1 - Collective Narrative of Architecture Students (Ezgi Selin Karadem, Ceylin Çelimli, Dila Görügen, Aleyna Çeliktenyıldız, Ruhide Küçükoglu, Elif Gündogdu).

Beatrice-Gabriela Jöger
"Ion Mincu" University of Architecture and Urban Planning, Bucharest,
Department of Interior Architecture and Design
beatrice.joger@gmail.com

Between virtual and corporeality. Challenges in experiencing architecture today

Key Words
Architectural space, Experience, Dimensional, Non-dimensional

Experiment/experience are extremely used words by generation Z, whose representatives are our students. It is also a key word in the field of architecture. On the one hand because without the experiments of our forerunners we would not have arrived here today, and on the other hand because you cannot really know an architectural space if you do not have experience it. The paper seeks to theoretically investigate how experiencing architecture in real or virtual influences an issue observed by the author, a challenge that has deepen during its 30-year teaching experience, and mostly in recent years: the difficulty of architecture students to understand the object and the architectural space, to be able to describe it and to be able to communicate the architecture they design.
More than four decades ago, in a 1982 interview, referring to the relationship between intellectuals and the real, Jeanne Hersch said that:

> "it is a fundamental feature of us this 'erasure' of the real [...] in general. Let's take the arts. Non-figurative painting, non-narrative novel, non-expressive music, etc. [...] Things go so far that even some physicists tell us that their physics has nothing to do with reality. [...] This has been the great loss of our age: the sense of the real has shattered" [Lovinescu 2023, pp. 225-226].

Although she was referring to the transformations in Western philosophy of those years, Hersch's words also comment on and predict the transformations in the whole culture, therefore implicitly also in architecture. One cannot stop thinking about her words when we see, for example, at least the last two editions of the Venice Biennale, where the word, the story, the description of the process rather than that of the architecture itself dominates. Her view was that the reason is:

> "A conjunction of phenomena. On the one hand, we live in a civilization of speaking. Words replace reality. We rarely get the chance to meet the thing we're talking about, we generally deal with speaking about it. In urban civilization, things are not at hand. [...] We can no longer represent things. We only make contact with them through indirect ways, formulas, chaining calculations, and only at a given moment do we reach experience. All this weakens our sense of reality" [Lovinescu 2023, pp. 226].

Her phrases are forewarnings of the consequences of mediated knowledge of objects, which has become increasingly evident in the last decade. Formulas and series of calculations today turn into computer programs that mediate our experience of reality, but this also leads to an increasing difficulty in distinguishing the virtual from the real.
It is normal for the complexity of the act of designing a building, an architectural space today, which now includes several specialties that must be coordinated simultaneously, to be mastered with the help of digital tools, from the early stages to the simulation and even monitoring of the finished building. The issue is that the students are very attracted to the technical means of representation, relying on them too much not only as a representation tool but many times without appropriating first the basic architectural vocabulary and so forming a minimal "database". This leads to difficulties and errors in expressing and communicating their intentions and creations.
From very poetical descriptions to extremely scientific demands, the definitions of architecture given by Vitruvius via Alberti represented the foundation stone for generations of architects since the Renaissance to nowadays. But architectural space is not only the result of the act of building. It is, in the same time, the process, as Yves Pauwels [2012] says:

> "It is the fabrica, which brings into play the art of the manufactures, craftsmen who intervene in all levels of the site. But, also theory, reasoning, calculation, therefore of a more purely intellectual science which involves ratiocinatio, rationalization of the idea of buildings".

Until a few decades ago, this rationalization of the idea of architectural creation was done mentally and depended on the richness of each person's imagination. Andre Chastel even defined architecture as "being a *cosa mentale*", a discipline of the spirit. Today, our mind is often replaced by digital tools that show us an image of our architectural creation. They give us a "correct" version, accurate and rational, that can be visualized, explored and sometimes better understood in the virtual world – be it mental or digital – and becomes in a way the model/goal to be achieved by realizing it physically, with materials, in the real world. Physically realized, it means that an architectural space, based on Greek geometry – defined by points, lines and surfaces – is a dimensional space, but according to Schmitz, this is a non-logical, erroneous understanding of space, due to its circular definition [Schmitz 2018, p. 77].
Instead, Schmitz presents us with an understanding of space through non-dimensional space, where "absolute place" is the only reference. The absolute place is the "specific place of the body", where Schmitz distinguishes between body (*Leib*) and corps (*Körper*), the former being dimensionless, like the states it passes through. The non-dimensional space can be that of the senses (acoustic space, for example; or that of the wind touching us) and states (of silence, weather-meteorological, for example) [Schmitz 2018, pp. 79-81].
This leads us to the question if immersed in the virtual (non-dimensional) space and being touched by different states through the stimuli perceived by some of our senses, are we really experiencing the architecture? If the non-dimensional space is that of senses and states, then do we necessarily need a physical space to perceive it?
A possible answer lies into the fact that an (non-dimensional) atmosphere is actually created (perceptible but impalpable) through which the architecture is communicated to us by the "transmission of a strong emotion" [Zumthor 2006]. It is that atmosphere that Zumthor tries to explain to us through its constituent elements, through the architectural objects that surround us and through what we sense and feel going through them.
Thus, the physical traveling through architecture becomes an important factor in its perception and understanding. Deciphering the characteristics of an architectural space appeals to all our senses and even more, as "as architects, we need to sharpen at least a dozen categories of sensing" [Pallasmaa 2017, p. 66]. A living architecture has its noises (hearing), we can touch it and feel the materials of which it is made (tactile), we can feel pleasant smells or not (olfactory), we feel its temperature (multisensory) and it can awaken our memories (psychological). It is the cognitive whole resulting from the analysis and composition of the information gathered through all our senses, that gives us the measure of knowing an architectural object.
Architecture pedagogy uses numerous physical/concrete examples to help students continually expand their personal "database". One of the most successful ways for students to experiment

various real materials are the workshops. Working with wood, clay, plaster, textiles, iron or concrete helps them to understand the properties of one material or another, to explore and stretch its physical limits or to use it in an innovative way. One can observe that the students participating in hands-on workshops or projects significantly improved their skills not only in thinking and creating architectural objects but also in communicating their projects/creations. As the recent years of restrictions during the Covid pandemic have shown us, virtual media has been helpful for enriching knowledge about materials and technologies, but this would not have been possible if the students did not already know the materials presented, because some senses cannot (yet!) be conveyed through digital media.
We have not addressed yet the temporal dimension of the experience of the architectural space, which transforms, is different, on at least two levels: in the real versus the virtual experience, and in the real one – depending on the person experiencing, who based on its knowledge, decodes, interprets the received message.
Until a complete digitally mediated knowledge of architecture is possible, it will have to take place through direct observation, direct spatial-temporal experimentation, physical immersion in a dimensional and non-dimensional space, calling on all knowledge and senses possessed, inherited and accumulated.

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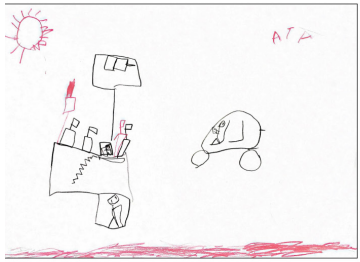

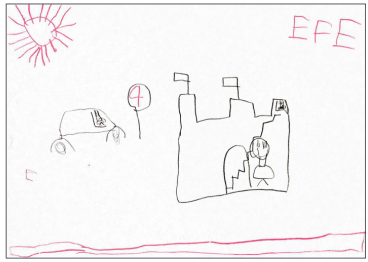

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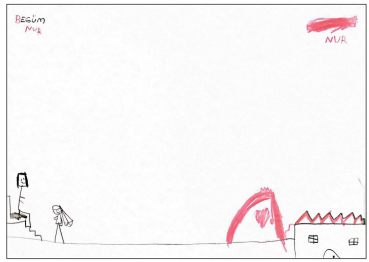

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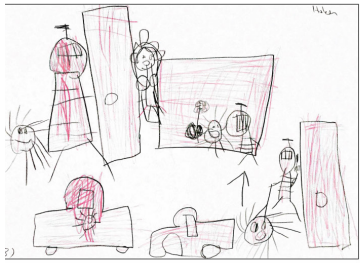

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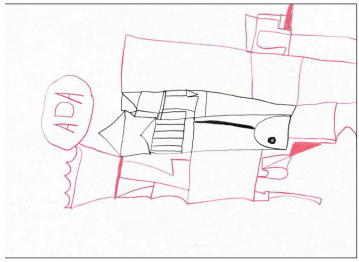

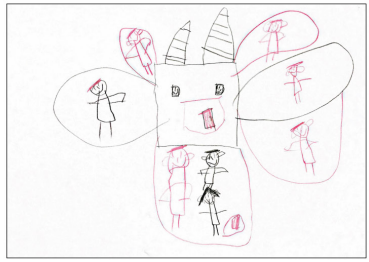

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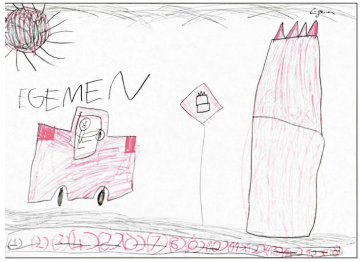

drawings with instante representation approa

Elif Cemre Çelikcan
Baskent University, Department of Architecture
e.cemrecelikcan@gmail.com

Spatial cognition And representation of a verbally experienced environment.
A study on preschool children's spatial construction through drawing

Key Words
Spatial cognition, Preschool children, Preoperational period, Cognitive representation, Cognitive development theory

The question of how children develop fundamental concepts of space and represent in cognition the physical environment is a great interest among developmental psychologists. Jean Piaget, who has worked on cognitive developmental stages since the birth of humans and the insights of space in these stages, says that the child builds up his knowledge of space primarily through 'acting-in-space'. According to Piaget, the representation of space results from the extensive manipulation of objects and from the movement in the physical environment [1964], rather than from any immediate perceptual copying of this environment. Thus, much of the research on cognition and cognitive representation of space is based on experiments that start with people's physical experience in space. Empirically-based theories and related findings of the studies proposes a wide range of information mostly through the subject's bodily or visual experience of space. A further question may be, how the cognitive representation of space in children will develop without 'acting-in-space' or without the visual learning of an environment? How do children reconstruct in their thought the places that are not physically accessible and that they have not experienced visually and physically; and how is the external representation of this cognitive construct? This study asks how the cognitive representation of space will develop in children without 'acting-in-space' or without the physical learning of an environment through the spatial cognition of a verbally described environment in children from the second ontogenetic development stage based on Piaget's theory; preschool children at 'preoperational stage'. For this aim, an experiment is conducted with a subject group of 46 preschool children to test their spatial cognition of a verbally described environment. They are asked to draw the environment they encountered through listening to a narration of the actions of a character in a short story. To evaluate the findings, subjective, objective and representational variables are determined. By using the chi-square test, correlations of these variables are examined.

The interaction between humans and the environment has a very substantial potential for architectural design. Beginning with studies in psychology, environmental psychology and environment-behavior studies are areas that have significantly contributed to the discipline of architecture. The most basic concept in human-environment interaction research is environmental learning. Environmental learning takes place through information acquisition processes at the levels of perception, cognition and evaluation. Learning/perceiving of the environment occurs through the conceptualization of the environment's organization [Ünlü 1998]. Here, perception can be summarized as how environmental information is gathered; cognition as how information is organized; evaluation as how information is classified and assessed [Rapoport 1977]. The environment envisaged for environmental learning is the 'whole life' environment as well as the physical environment [Moore and Golledge 1976]. Thus, there are many components such as elements, events, occurrences, patterns, conceptual similarities, sensations, personal meanings, collective symbols. Environmental perception and environmental cognition processes are two levels of human-environment interaction. In the perceptual process there is a knowledge acquired through the perception of the environment; the cognitive process involves all knowledge processes, such as perceiving, thinking, imagining, remembering [Hart and Moore 1973]. The parallelities and distinctions between these two concepts have been discussed by many theorists; among these discussions it can be said that the ones of Piaget and Werner set the basis for the research field. In talking about the two different levels of gathering information, Piaget says that one is symbolic (the perception) and the other is the operative (cognition). Werner says that perception is a sub-system of cognition and a function of it at the same time.

Perception is an important level of environmental learning, but perception alone is not enough to learn the environment; it also is a system that develops over time. Piaget says that spatial cognition has come about as a result of the movement in the physical environment and the extensive manipulation of objects. The representation of space does not take place through a sudden perceptual copy of the environment; it occurs through the coordination and internalization of actions in space. With this theory, Piaget once again emphasizes the operational level of acquiring knowledge.

At this stage, it will be useful to refer to the concept of representation. Moore and Golledge describe the notion of representation as "a hypothetical construction of subjective knowledge of a directly unobservable environment" [1976]. It is stated that the representation is a dynamic process before everything else; it is an organized but also a non-specific process. It is also pointed out that this process, which is variable between individuals and social and cultural groups, actually defines a kind of psychological space and therefore depends on time and space. The term representation here is the cognitive representation; the internalized reflection and representation of external phenomena. In order to understand cognitive representations, external representations of this information are needed; cognitive representations are inferred from these external representations [Hart and Moore 1973].

Once again with Altman and Cheemers' statement, "it is explicit in Piaget's thinking is the notion of an active organism that structures, modifies and acts on the environment, rather than one that is merely passive and reacts to the environment" [1984]. Within this framework, a complex approach to spatial and cognitive development of the interaction between the person and the environment is presented by Piaget. It is stated that the development of fundamental concepts of space occurs in four stages; *infancy, preschool, middle childhood* and *adolescence and beyond*. According to this theory, human-environment interaction varies in means of general intellectual development, spatial organization and spatial learning qualities at different ages. Moreover, spatial cognition and perception differs through the stages of development as well. This indicates that researching on different stages may reveal different findings in the way of understanding environmental concepts.

However, spatial cognition, which is also referred to as the reconstruction of the space in thought, is naturally examined through the physical experience of people in space. For this reason, it is thought that a re-discussion of theories about environmental knowing and spatial cognition can open new gateways to study human-environment interaction through a situation where the physical space is absent and the visual, auditory, tactile, odorous experiences are excluded. For this study, the experiment is conducted with 46 preschool children at age 5. It involves a short text which narrates actions in space together with descriptions of physical space. For the evaluation of the drawings, variables are determined at subjective, objective and representational levels. The subjective variable is gender and objective variables are: (1) Place: open, semi-open, closed; (2) Topological Qualities: proximity, isolation, rowing, enclosure, continuity; (3) Projective Qualities: 3D formation, linear formation, block formation [1]. Representational level variables are: (1) Representation approach: spatial, linear, sequential, integrative, instantaneous; (2) Way of representing movement: static, temporal, sequential. The

drawings were grouped into categories according to the dominant representation approaches and involvement of the elements from the text. Five main approaches are observed; in spatial approach, the elements of the story are depicted as a whole through forgeing spatial bonds. In a linear approach, the elements are linearly linked to each other. In a sequential approach, the elements are time-space dependent and drawn as temporally divided consecutive sequences. Integrative approach brings forth an integrative whole of existing elements . Lastly, the instantaneous approach is drawing a chosen and specific frame of time-space within the story. The categorization of the representation approaches is important in order to infer the way children conceived the information from a text. The other representational variable is the way of representing movement; drawing a single static image of the character, drawing the flowing movement of the character or drawing multiple static images of the character. After categorizing the drawings, data analysis was made according to the determined variables with a chi-square test using the SPSS software.

ENDNOTES

[1] Among the objective variables, topological and projective qualities of the environment are taken from Ünlü and Çakır's research method used for the study on perception of primary school children in home environment (2002).

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FIGURES

Fig. 1 - Examples of children's drawings that were grouped into categories according to the dominant

Geon-Il Lee [1], Jin Baek [2]
[1, 2] Seoul National University, Department of Architecture and Architectural Engineering
[1] es9archi@snu.ac.kr

Questioning the meaning of 'atmospheric'. A foundational study on climatic approach to 'atmosphere'

Key Words
Atmosphere, Atmospheric architecture, Impressionism, Fudo

Introduction and Background on the study of 'atmosphere'
The exploration on the concept of 'atmosphere'—incorporating similar concepts such as mood, Stimmung, and ambiance—reflects a delicate nuance within architectural theory. Distinguished philosophers, including Edmund Husserl (Lee NI 1998), Martin Heidegger (Popovic 2022), and Otto Friedrich Bollnow (Bollnow 2011), as well as aestheticians like Gernot Böhme (Böhme 2017), and architects such as Peter Zumthor, Steven Holl, Jean Nouvel, SANAA, and Kengo Kuma, who are often cited as phenomenological designers (Böhme & Borch 2014), have engaged in this discourse to probe the interplay between the human body and spatial environments.
Despite the growing interest, applying 'atmosphere' in practical design remains a challenge. As foundational theories, many researches focus on sensory traits yet lacking in concrete methodologies for 'atmospheric' design. As an alternative approach, this study reevaluates 'atmosphere' through the lens of 'Fudo'—a climatic approach, aiming to integrate human corporeal sensitivity to temperature-humitidy into architectural practice and uncover new research avenues that deepen the engagement with body-environment relations.

What is atmosphere? The concept of atmosphere in major discourses
First, this study delves into some preconceptions from a philosophical background. Exploring Edmund Husserl's 'mood' (Lee NI 1998), Martin Heidegger's concept of 'Stimmung' (Popovic 2022), Gernot Böhme's concept of 'atmosphere' (Böhme, 2017) might give us some fundamental definition on the concept of 'atmosphere'. Subsequently, we shall examine major discourses in architecture and art as articulated by practitioners such as architects Peter Zumthor (Zumthor 2006) and Juhani Pallasmaa (Pallasmaa 2014), and artist Olafur Eliasson (Böhme, Gernot, & Borch 2014). These discussions across various media allow us to infer the overarching significance of atmosphere and their substantive understandings of application.

Upon scrutinizing these major discourses, we can comprehend atmosphere from a more tangible and secular perspective. We may tentatively conclude that 'atmosphere' represents a 'pre-reflective perception of the peripheral environment.'

What is Atmospheric Architecture? Exploring the meaning of 'atmospheric'
What, then, are the distinguishing features that manifest in the actual practice of architecture? Moving beyond the implicit understanding of 'atmosphere,' what qualifies as atmospheric seems more perceptibly distinct yet remains unexplored. AI-generated imagery and web-based searches for 'Atmospheric' and 'Atmospheric Architecture' visually convey the conventional perception of it. The term 'atmospheric' typically expresses sensations of blurriness, fog, haze, and twilight.
The 'atmospheric quality' of prominent contemporary architectural works appears to conform to these trends, seems quite indifferent to the underlying theory. Case studies of notable architects' works could corroborate this inclination. A selection of works by Peter Zumthor, Jean Nouvel, and contemporary Japanese architects such as Kuma Kengo, Ishigami Junya may exemplify the 'atmospheric' essence.
David Leatherbarrow has addressed this in his article 'Atmospheric Conditions' (David Leatherbarrow, 2015), where he interprets the notion of atmosphere as 'atomos' + 'sphere.' It seems that the current architectural oeuvre often reflects this interpretation of 'atomos' significantly. Through case studies of contemporary architectural works, we can discern the characteristics of 'atmospheric' more precisely, leading to the observation that 'atmospheric architecture' frequently represents an inclination towards the 'atomization' or 'particularization' of the traditional existential building mode.

Re-interpreting the Phenomenon of Atmospheric Quality in Architecture: An Analogy Between Atmospheric Architecture and Impressionist Landscape Paintings
If the tendency towards 'particlization' or 'atomization' of architectural presence is a deduction from the case studies on 'atmospheric architecture,' then an analogy with Impressionism could offer further insights. Impressionist painting was, in fact, a precursor in fragmenting and softening classical representations from the visual yet tangible world.
Examining Impressionism, we uncover significant perspectives relevant to assessing 'atmospheric architecture.' This resemblance is notable both in the method of rendering form—through blurring and fragmenting, as advocated by Camille Pissarro—and in the recurrent subject of 'landscape,' which provides substantial parallels for understanding the 'atmospheric.'
Ultimately, drawing parallels between the qualities of Impressionism and atmospheric architecture reveals that the 'atmospheric' quality in architecture can obscure or eliminate classical figures or objects, thereby diluting our focus or orientation to the vibrant world. In essence, it induces a loss of bodily orientation, which seems inappropriate to the original conception of 'atmosphere.'

Critical Understanding and an Alternative Approach Toward 'Atmospheric' in Architecture
The Phenomenon in 'atmospheric architecture' is visually compelling yet corporeally lacking. Does this conclusion imply that 'atmospheric architecture,' contrary to its original intent to foster the human-environment nexus, inadvertently induces a sense of dislocation, an ostensibly unwelcome or 'aura' like outcome?
This query can be addressed through various interpretations of 'atmosphere' like 'decorum' or 'metaphor'(Pérez-Gómez, 2016). But, to gain a more concrete understanding, this study adopts an alternative perspective grounded far more in corporeality and loyal to the original conceptualization. 'Fudo,' rooted in phenomenological climatology, delineates distinctive climatic elements within four domains (Watsuji, 2018). Appreciating these qualities that influence human pleasure within environments—warmth and coldness, humidity and dryness—reveals a novel interpretation of atmosphere. This perspective emphasizes delicate, corporeally perceived peripherality rather than a visual, fog-like enclosure, which prevails in contemporary architectural practices.
A case study of Richard Neutra's house by Baek concerning Watsuji's theory of Fudo paves the way for new potential in 'atmospheric' architectural design by applying the understanding of designing 'warmth and humidity'(Baek, 2016). In East Asian tradition, this study could be termed as architecture of 'Ki' (氣) or 'Gi-un' (氣運), which aligns with the term 'atmosphere' but more specifically denotes energy, spirit, invisible corporeal quality. Designing with 'Ki' may foster an integrated human-architectural relationship that transcends the subject-object divide, revitalizing the exploration of human posture and orientation within the peripheral design of architecture, which can truly be termed as an 'atmospheric architecture.' Additionally, this

conceptual shift can even connect global architectural environmental issues with the aesthetic dimensions of regional climate and culture.

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Zümrüt Sahin[1], Nilsu Altunok[2], Pelin Dursun Çebi[3], Fatma Erkök[4]
[1] Özyegin University, Department of Architecture
[2] Yıldız Technical University, Department of Architecture
[3,4] Istanbul Technical University, Departmant of Architecture
[1] zumrut.sahin@ozyegin.edu.tr

Performing the everyday.
Temporal spatiality constructed by body movements

Key Words
Body & space, Performance phenomenon, Everyday life, Momentary movements, Temporal space

This study aims to discuss the relationship between body and space through the phenomenon of performance, referring to the early 20th-century discussion of the idea of heterogeneous space and the epistemological paradigm shift that was brought about [1]. This standing point defines space through the body in motion and refuses to consider the action and the space in which it takes place - the moving bodies and the space that limits and directs their movements - independent of each other. The epistemological paradigm shift created by the concept of heterogeneous space and phenomenological approaches has brought the interaction between body and space to an increasingly slippery ground, to experimental and ambiguous discourses, leading to the informal scenarios of everyday life being considered performances. In this context, it is intended to search for the performance phenomenon in the informal scenarios of everyday life and investigate what information about space can be revealed through this conceptualization.
Firstly, looking at performance itself, the origin of the word lies in the meaning of performing an action by showing it to an audience. In essence, a performance includes a purpose, actor, story, interaction, and audience. The two essential elements for an action to be characterized as a performance are the actor and the audience witnessing the performance [Senkan 2017]. In a letter written in 1948, Artaud conveys his insightful idea about the current state of performance and performance art: "I design such a theater that it will create stirrings not only in the body of the actor staging the play, but also in the body of the audience watching the play; the actor will not stage the play but will create while staging it. The creation itself will be put forth at that moment..." [Artaud, cited in Antmen 2008]. Artaud's underlining of the performative body and his definition of a role for the audience in the performance is a revolutionary idea that departs from the traditional understanding of theater and a prediction for today's concept

of performance [Antmen 2008]. The phenomenon of performance in architecture considers the practice of architecture as a field of production that enables people to relate to their environment through buildings and refuses to think of the action and the place independently, expressing that the bodies that perform the actions are inherent in this relationship. At this point, it is necessary to take a closer look at the relationship between the action and the space where the action takes place.

De Certeau distinguishes between place and space based on Merleau-Ponty's distinction between geometric and existential space. He defines place as the instantaneous configuration of positions and distinguishes space from place by its dynamic contents, such as flows, vectors, and time [De Certeau 1984]. Accordingly, the actions on the ground and the state of flow that comes together through these actions become a means to define space through the body in motion. The methodology of this study is to investigate how and in what ways the momentary configurations and actions that occur on the ground become the representation of the individual in public through everyday life practices.

When we look at the practices of everyday life as actions that occur within a specific spatial organization and events that are formed by the gathering of actions, we realize that they are layers upon layers. To grasp this layering, we can recall McAuley's conceptualization of the theater play, which argues that the action of the play emerges from the spatial organization of the fictional space and that the sequence of events is determined by the 'collisions' allowed by this spatial organization [McAuley cited in Sanchez 2021]. In the play, fictional space appears as overlapping layers of 'collisions' and sequences of events, while in everyday life, spatial organization appears as everyday movements and the events created by these movements. Tschumi defines the concept of 'event' as a special moment created by a series of circumstances, including spatial organization [Tschumi 2006]. Tschumi believes that the future of architecture lies in the construction of events, which he describes as collisions between the building and the activities surrounding it [Tschumi 1996]. Thus, everyday movements are situated in the layer of conditions that McAuley calls 'collisions', and Tschumi identifies as effective in the occurrence of 'events'. How can the whole formed by these overlapping layers be defined? According to Lefebvre, spatial and social relations are immanent. Analyzing a society's space allows for the emergence of its spatial practice [Lefebvre 1991]. When Lefebvre's discourse is considered with the whole formed by spatial organization, daily movements, and events, the possibility that this whole can produce some social knowledge emerges. Because 'space' reflects the 'events' on it and gains visibility through the performance of the 'collisions' it allows to take place.

Discussing everyday movements through the phenomenon of performance allows us to reveal the hidden aspects of actions that can be characterized as ordinary [Güner 2012] and decipher the inherent social and spatial relations. To illustrate, the Situationists' question, "How does the body perceive the city?" is significant. Situationists accepted walking, as a means for the body to perceive the city and produced various representations mapping this performance. These representations, characterized as psycho-geographical explorations, attempt to reveal the city's hidden social and spatial knowledge by superimposing different people's experiences in the same space. Another example is Fun Palace, an unrealized project by architect Cedric Price and theater director Joan Littlewood, which aimed to organize space according to the movements and actions of individuals' bodies and played a vital role in establishing the relationship between daily life and performance. Therefore, the instant movements, actions, and 'events' we encounter in daily life can also be evaluated in the context of the phenomenon of performance. Within this framework, the following question is asked: What information about urban space do temporal spaces formed by the momentary displacements of the body in daily life produce?

The 'temporal space' in the research question is conceptualized to open up for a discussion of specific performances that occur with the momentary displacements of the body in everyday life. Deleuze and Guattari argue that space is constantly reformed, and its essence lies in transience and displacement [Deleuze & Guattari, cited in Kaymaz & Hale 2018]. The body and the constant construction and disruption of the 'temporal space' are reciprocal. Tschumi draws attention to this reciprocal relationship; according to him, bodies carve new and unexpected spaces through fluid or variable movements [Tschumi 1996]. As the body moves through space, it creates visible or invisible traces, producing the memory of space.

The traces of 'temporal spaces' can be encountered in ordinary moments in the city. For example, the moment one of the two people facing each other on a narrow sidewalk gives way to the other person by taking a step down from the sidewalk, a 'temporal space' is created there. At that moment, the body protruding from the sidewalk, a boundary dictated by the space organization, becomes an actor performing the performance there and establishes the 'temporal space' with its movement. With a second movement, the body that moves back to the sidewalk causes the momentary 'temporal space' to be disrupted. These repetitive actions

are in a constant state of transformation, establishing and disrupting 'temporal spaces' in moments. Considering that social and spatial information about the city is embedded in and contextualized by each other, these examples can be multiplied, and there is a potential to explore these 'temporal spaces'.
This study unfolds how and in what way the momentary body movements and actions in space become the representation of the individual in public through daily life practices. Choosing the informal scenarios of everyday life as the research subject has prepared the environment for analyzing, rethinking, and discussing the movements that we accept as ordinary. The examples examined in the study are those that blur the boundaries instead of finalizing them and whose number can increase continuously. In this sense, the study has brought a different perspective to everyday life's social practices and opened the information produced to discussion.

ENDNOTES

[1] This extended abstract is compiled from the research of authors in the Body and Space Elective Course of the Istanbul Technical University Architectural Design Master's Program. The authors would like to thank the instructors, Prof. Dr. Pelin Dursun Çebi and Assoc. Dr. Fatma Erkök.

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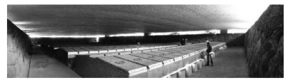
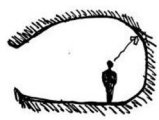
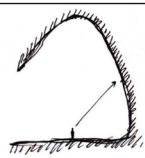
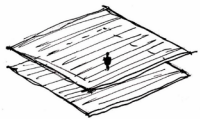
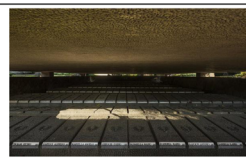
Comparison between two different boundary condition: solid and light

Name of Project	Boundary Condition	Images
Monumento ai Martiri delle Fosse Ardeatine		
KAIT Sqaure		

Comparison of two enclosure space with different scale

Name of Project	Boundary Condition	Images
Grotto Sunna		
Cloudscape Bookshop		

Scale exaggeration in three dimensions

Name of Project	Boundary Condition	Images
Victoria and Albert Museum		
Bruder Klaus Kapelle		
Monumento ai Martiri delle Fosse Ardeatine		

Yue Zhong
Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
yue.zhong@mail.polimi.it

Touching the surface.
"Nahsicht" theory of Alois Riegls in tactile interaction between body-space

Key Words
Visual-tactility, Nahsicht, Architectural phenomenology

Touching the Surface
"Nahsicht" theory of Alois Riegls in tactile interaction between body-space
In the book from 1901 entitled "Late Roman Art Industry", Riegl discusses this aesthetics of proximity (Nahsicht) prompted by some natural and man-made constructions that allegedly has the ability to trigger an amplification of human perception. It revealed the trend of architecture development from tactile surfaces to three-dimension, depth of space.
This concept of "Nahsicht" is most clearly expressed in antiquity architecture. But, with the development of modern architecture, the visuality of architecture has been prominently developed and emphasized, and people are increasingly accustomed to perceiving and judging architecture through an optical point of view. Until recently, architecture was considered a visual art form, to be perceived and judged by sight. Best expressed by Le Corbusier, "Architecture is the masterly, correct and magnificent play of masses brought together in light." [Le Corbusier 2007, p. 341] Because of industrial and consumeristic cultural dominance, vision has the orientation to let us just be an outsider and bystanders, and omnidirectional accepting types of perception, hearing, touch, smell, and taste make us participants. Alva Noë has proposed a question "Is the Visual World a Grand Illusion?" [Alva Noë 2002, p. 202] The kind of dumb question is what inspired the initial concern about visual tactility. With the development of self-media and visual-reality techniques, people can visit various scenery and exhibitions at home without experience in person. In such an era of visual dominance, how infinitely magnified visual ability interact with other perceptual sensations? Or perhaps coexisting in a new perceptual composition mode
The essay revisits the concept of proximity tactility in ancient Egyptian architecture. The existence of "visual tactility" in the architectural language is examined, compared, and complemented

through a series of representative case classification analyses. And a new methodology based on visual tactility is discussed in contemporary social context from both philosophical and phenomenological perspectives, which expands the possibilities in neurodiverse interactive design.

Objectivity and Method

In the review of cases in antiquity architecture, the composition of tactility space is first discussed from two main features and combined with specific architectural form, materiality [Riegl 1985, p.36] and the other aspect, movement, a more dynamic version of tactility, which is based on changes of place and focus which periodically assail the spectator. In many other discussions on tactility in architecture, the notion of tactility has been closely associated with the intimacy of everyday experience. Hence, in addition to the haptic representation of typical buildings, the general rules of architectural tactile effects can also be obtained through a sort of comparative phenomenological analysis of cases with visual-tactile characteristics, and further subdivided to elaborate and demonstrate. It will provide some materials to supersede this simplified view of design as surface manipulation and to broaden the critical potential of the notion of tactility related to architecture beyond the immediate experiential notions. The spatial motifs of tactility in relation to art and architecture at the turn of different times will be discussed.

Design Approach

For the comparison result, the forming of haptic effect is concluded and presented in three aspects: materiality, dimension, and unreadability, which are related to both isolated space features and the co-effect of space sequence movement as below.

Materiality

The architectural ideal of materiality is best expressed though the tomb-type of the pyramid. Any of the four sides permits the beholder's eye to observe an always unified plane of an isosceles triangle, the sharply rising sides of which by no means reveal the connecting space behind. The recognition of pyramid was directly towards the solid and non-penetrating objectivity, giving the observer tangible shape and feeling. And the main design factor of materiality is the material texture. Texture appears to be the most important information to identify objects through touch (The haptic identification of everyday life objects). Bachelard calls these 'images that bring out the primitive in us' or 'primal images'. The word habit is too worn a word to express this passionate liaison of our bodies, which we do not forget, with an unforgettable house' [Pallasmaa 2012, p.62].

Touchable Dimension

Furthermore, smaller size of dimension will enhance the sense of being haptically wrapped and when the surface keeps back off, the observer will be transformed from participant to spectator and lose the haptic perception of the boundary. It is implicated from a premise for Nahsicht, 'to close to surface' which means the form of visual tactility cannot be free from the bondage of distance. When the plane comes closer, our eyes are to a given object or image, the greater the discrepancy between what each of them sees [Crary 1990, p.32]. It reveals the fact that the tactical reaction will be stronger with less distance from the eyes and the texture will be invisible with the scale of the space enlarged. However, one exception, the exaggeration of certain dimensions could enhance the tactical feeling in a linear perspective. For while the former, providing the observer with a fixed, stable standpoint from where to look, the latter bombards the beholder with a potentially infinite profusion of targets, providing no clue as to where to direct the eye [Araujo 2014, p.1-18]. The obvious directivity results in the visual movement on a tactile surface and enhances the effect of tactility.

Unreadable Space

In fact, unreadable space is quite a comprehensive and universal effect of multi-level parameters. This "unreadability" is influenced by two qualities: spatial isolation and unfamiliarity. Isolated space provides the observer with a closed and undisturbed environment where limited boundary information can be fully perceived, while the unfamiliarity of space is related to how we build up three-dimensional space in the brain. Hildebrand is well aware that there is no intrinsic relationship between the two-dimensional images that we actually perceive and the three-dimensional objects that we reconstruct or imagine in our mind [Hildebrand 2018]. Observers are less likely to mentally construct three-dimensionality from an irregular plane. This kind of unfamiliarity prolongs the construction process of three-dimensional space, and more intense visual-tactile stimulation is accumulated through the lasting gaze at the subconscious.

Discussion

Through the similarities and differences in perceiving architecture between the haptic and visual senses, the paper concluded to identify their potential relationship from a body-space interactive design point view. These haptic design parameters can be introduced in the design process to get rid of monolithic and homogenized perceptual models and expand our definitions of tactile neurodiversity. By re-composing elements of geometry, proportion, and materials, a subtle multi-sensory experience is integrated into a more inclusive architectural design process.

As a rational and formalized conclusion, it needs to mention that these abstract methods or parameters are just tools helping to clarify the design process rather than simplify the way of perception. In this final reconsideration on the research, it has to be admitted that, just like most doctrine or methodology, it started from haptic perception and trying to suppress subtle differences and establish category methodology. However, it's not really contradicted with the complexity and the ambiguity of perception. Actually, they are of different levels of design process. Just as Alvar Aalto mentioned, 'It is not the rationalization itself which was wrong in the first and now past period of Modern architecture. The wrongness lies in the fact that the rationalization has not gone deep enough. Instead of fighting rational mentality, the newest phase of modern architecture tries to project rational methods from the technical field out to human and psychological fields.' [Alvar Alto, 1940]

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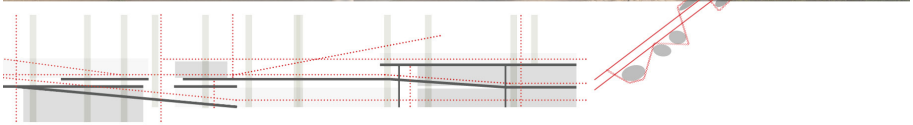
FIGURES

Fig. 1 - Comparison between different boundary condition: solid and light.



Valentina Radi
University of Ferrara, Department of Architecture
valentina.radi@unife.it

Generative thresholds.
The simultaneity of passages

Key Words
Myth, Shape, Body, Natural landscape, Mountain

From the beginning, there was a relationship between man and the real, leading the individual to recognize the physical place as generated by permanent and sacred laws, to be imitated in the method, with the definition of mechanisms and structures useful in creating human expression on earth: the architectural work. this determined and articulated the direct interdependence of the relationship between the human body, knowledge, the definition of inhabited space and the composition of the work, according to a Vitruvian approach. But reality as a physical place in contemporaneity, is experiencing a transitional condition: we are in a contradictory period, emphasized by the increasing use of digital tools that lead to evasion of reality, simulating parallel dimensions, implementing levels of natural complexity, which measure, redefine and let perceive space as a dynamic result of a dystopian relationship with time, with real and ephemeral social relations. This leads to experiencing an inclusive augmented reality, which by proxemics and organic translation is the potentiality of post-real places.
In this scenario, the space of reality remains the living environment of man recursively determined by inclusive devices of invariants and variants of the real. In the invariants, one recognizes the topological space, the conceptual and physical space of the room, the space of the residual monument of memory, and the space of the building, sign and natural residues vital source for new creation, along with the profiles of archetypes mixed with the complexity of nature. THE variants related to the real, suspended between reality and the imaginary, include the new digital tools, introduce us to new combinations of places of life translocated into spaces of the verisimilitude, spheres of conflict-relational, definition of new heterotopic types, and spatio-temporal rituals of passage, accommodating post-real archetypes. Context in which the Vitruvian triad of solidity, use and beauty, translated into man, space, architecture, is translated into a single ductile device: the threshold of overlapping design narratives.

Adaptive artificial device, bearer of interactions, expressions and meanings, between humans and space, in which living and nonliving recombine. Informal built device and adaptive geomorphological form, integrating the space of separation between building bodies, existing social and natural diversity. Changeable planes and rooms derived from waste matter, where the transience of uses is stable. Threshold component of mediation and empowerment, superimposed and grafted onto the pre-existence, applied as a vitalizing overcoming mechanism, hybridizing spontaneous nature to recombine the real. Connective-relational modulator between humans, architectures, urban settlements, social and biological systems, virtual content at different scales. It admits new corporealities built with autonomous figurativenesses, unpredictable perceptions, sonorities, light, wind masses, mnemonics and mixed realities. In time of experimentation, the neologism of anarchic scaffolding is coined.

The triad of man, space and architecture, has been defined in the past in a binary relationship between nature and work, finding in the idealization of the forest and composition of the human body, laws and compositional mechanisms, for the definition of architectural symmetry, achieving balance, spectacularity, and expressive meanings in the perceptual and solemn encounter between the architectural body and light. Order that is traced in the positioning of abstract forms, which guide to the entrances [1]. A mechanism of non-real foreshadowing, a syntax of thresholds of passage, a sequence of planes, voids, heights and materiality, which Vitruvius describes to the temple: "For the mothers and daughters when they ascend the steps for supplication cannot advance through the *intercolumni* [...], as well as the view of the portals is obstructed by the density of the columns, and the simulacra themselves are hidden by them" [Gros 1997, p. 247]. Composition that Le Corbusier identifies in Villa Adriana as "horizontal planes established in accordance with the plan" [Le Corbusier 2002, p. 156], abstract simultaneity of passages, in the detachment between the work and natural reality.

Thresholds of the In-between realm [Van Eyck, 1962] that in modernity, are voids that establish connections between background and figure, spaces that foster previously latent relationships and connections, for a permeability of passage. Areas connected by thresholds of the fourth dimension, ramps, solarium and ground continuity and plano-spatial connections and levels of visual arrangements around the building work are delineated.

The threshold then is a device inherent in the work or included between it and the external context, which today will be able to bring together scattered and separated artificial and natural entities, to accommodate aggressive biodiversity, mixed with building remnants and traces, becoming places of social cohesion. Allowing millennia-old layering planes to interact with new narratives, through regenerative thresholds scaffolding physical and cultural transitions, from porous margins, to relate man and surroundings, interiors and exteriors, just exteriors, allowing simultaneity and permeability of transitions. It will contain diachronic features, and augmented devices of knowledge, visual and perceptual interaction.

The threshold device is recognized because the combination of vital act and proper element of construction coexists in it. From etymology [2], the actions are included, of zone of change, observing the tectonic and ritual context [3], and zone of the movement of passage and grounding in the ground, containing the perception of hesitating in crossing a territory with uncertain boundaries. Threshold materializing in the lintel, sill and step, plane extended toward the street. A polysemy of threshold topography, in which the design of structure, surface and edges will connect other and practicable spaces in contiguity [4]. They will be planes and rooms that meet in the interstices and limits, intermediate spheres exceeding the established order, places of a simultaneous time, that "of juxtaposition, [...] of the near and the far, of the side by side, of the dispersed" [Foucault 2002, p. 19], with unprecedented meanings, emotionalities and trans-natural components.

A regenerative threshold strategy, prefigured as five types of anarchic scaffolding. Anarchic insofar as "*l'anarchie, c'est l'ordre sans le pouvoir*" [5], in a logic of complex approach to the entropy of existing assets and sites, without hierarchical but co-present orders, in which new surfaces create simultaneous landscapes and penetrability between places and nonplaces.

The first is the post-real threshold device in which augmented reality will no longer be background but structure, bringing together the built and natural fragments as crossing frontiers "in the two directions [without erasing] the [original] relationship between one and the other" [Augé 2018, p. 15]. Frontier is understood as scaffolding over height differences, capable of keeping separate and at the same time uniting places of "eternitarie" [Foucault 2002, p. 21]. Rooms are created, open or closed, that accommodate conventionally instituted and performing meanings, derived from compositional geometric processes and direct relation to existing assets and constituent reality. Human events, history and ecosystems are brought together.

Threshold of stratification, in residual areas impoverished of meanings, in which to revive the fixed residual of built bodies, of traces, with roof decks, floors, ground line, set with actions of

addition, subtraction and overlapping. Able to activate functions, establish spatial hierarchies, vertical and horizontal relationships, and nodality. Recombination of post-real archetypes.
The augmented threshold, will be a combined scaffold and knowledge system, to implement in places hitherto unknown, dispersed information, including history data and services that enhance accessibility and operational vitality, including isolated monuments. New parameters of spatial proportion are introduced, and body movements will derive from the proximity between digital humans and building bodies. Human proximity will be a new perceptual sense. Polysensory thresholds are porous, conflicting, perceptual devices, digitally connected to dialogue with the sensory knowledge of their inhabitants. Composing palimpsests in which reality and fiction interact, natural corporealities and adaptive constructions are traversable and ephemeral.
Verisimilar thresholds generate typological rooms above which the private, art, commerce is staged, new heterotopias containing databases. Closed to nature, not codified, but an expression of an agenda. They appear as residence, place of sport, recreation, dissolving in defined times. All declinations of the threshold device can take on the characters of a deck, that is, of essential geometric planes and rooms, informal in figurativeness, from the poor texture of materials, wood, metal, concrete, green soils, trees, scraps. Thresholds will be transitional inserts in position, in arrangement by additions in support, generated by subtraction, or geomorphological modeling of terrain. Activated to convey a conjugation and accessibility in complex artificial and natural ecosystems, accommodating singular and collective augmented human relationships.

ENDNOTES

[1] Amirante, Piscopo, Scala 2016, pp. 151-157.
[2] From the German *schwelle*, the French *seuil*, the English *threshold*, and the Spanish umbral.
[3] Benjamin 2000, p. 94.
[4] Deleuze, think differently.
[5] Proudhon, 1848.

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FIGURES

Fig. 1 - Valentina Radi, *Continuous and generative thresholds*, 2024, collage, 16 x 22 cm.
Athens and housing designed by Le Corbusier, along with the project for d'OltreMare Naples 2023 workshop by A. Gaiani, G. Lelli, V. Radi, A. Amadio, G. Bertelli.
Retrieved Gennaio, 13, 2024 https://muromaestro.wordpress.com/2017/11/24/le-corbusi

Francesca Coppolino[1], Vincenzo Valentino[2].
[1,2] University of Naples Federico II, Department of Architecture DiARC.
[1] francesca.coppolino@unina.it, [2] vincenzo.valentino@unina.it

Spectrographies.
Body, cinema, memory in the architectural project

Key Words
Body, Cinema, Memory, Architectural project

The film "Crimes of the future" (2022) directed by David Cronenberg, remake of the 1972 film by the same director, shows an indeterminate future in which technological prostheses no longer beset man's body from outside, but they are settled inside human members. Like the figure of Cyborg (Harawey 1995) described by Donna Haraway, in Cronenberg's film the impossibility of making a distinction between natural and artificial is no longer limited only to the *Körper* (thing body), but also to *Leib* (living body), it does not only concern the *res-ex¬stensa*, but also extends to *res cogitans*. The technique pervasiveness leads to look at human body no longer as a set of acquired biological data, but as a complex field of inscriptions of codes, which are in the most deep and hidden layers of our mind, where the dimension of memory acquires unexpected features, requiring possible new interpretations in relation to corporeity.
Starting from this consideration, taken as the main starting point, the contribution recognizes the today need to think about the relationship between body and memory. The concept of memory refers to a set of phenomena that have to do with remembering. Felice Cimatti observes that if we try to assimilate the memory to the bodily experience, we discover that there is a dimension of oblivion inside the process of memory itself. The semantic field of memory contains both memory and oblivion: "remembering does not leave the mnemonic trace intact, on the contrary, each mnemonic event inserts trace into a further and different descriptive context" [Cimatti 2020, p. 165]. Bergson's famous cone, through a simple geometric model, attempts to demonstrate this assumption, starting from the fact that pure memory does not exist, as if it were an archive. This is because the flow of memories is always, constantly in movement.
In Bergson's model, in fact, the past and the future intersect on a plane P, that is, the instant in which the body acts, determining the present time: "our body, with everything that surrounds it

[is] the last plane of our memory [...] the moving tip that our past pushes at every moment into our future" [Bergson 1996, p. 203]. Memory is represented through a conical shape because it is never affected by a simple projection operation on the P plane of present, but converges towards it, intersecting it at a point. According to Cimatti, this diagram demonstrates how the biological function of memory is that of becoming action, and, in this becoming action, oblivion comes into play: "The theme of oblivion concerns the difficult balance between action and memory, between evocation and mnestic trace, between real and virtual" [Cimatti 2020, p. 165]. The memory of pure recollection is an ideal memory that has nothing to do with the memory of living bodies. In their vital flow, oblivion goes with memory towards the future.
In this perspective, the architectural project can try to outline devices to expand the corporeal condition of memory, materializing its behavior in space. In this regard, Peter Eisenman writes: "In 'Matter and Memory' Bergson suggests a different communication way for architecture that has not to do with the projection of images. Bergson faces the concept of virtual as something that contains the memory of the past as a dynamic condition of the present [...]. The concept of virtual in Bergson represents an alternative to the current 'virtual reality'. He suggests that architecture, instead of presenting images, could present the memory of its own condition of existence, the memory of the process of its becoming" [Eisenman 1996, p. 110]. So, the purpose of these design devices is not to convey messages or meanings from the past but to make memory a moving condition of experience, suspended between past and oblivion. Transcribing a memory understood in this way means producing "spectres", images without figures, not representable in their full presence. A spectrum, as Derrida states, "is at the same time visible and invisible, phenomenal and non-phenomenal: a trace that marks the present of its absence in advance" [Derrida, Stiegler, p. 132].
The living singularity of every form of existence is for Derrida inscribed within a different relationship of spectral traces that mark in the present something that took place in the past and which is then reworked and projected to the future. A spectrography, therefore, "would be the irreducible condition of human living singularity, a remote recording and transmission device, something like a writing; it would be the irreducible condition of the experience through which something like a subject, a conscience, an ego in general is constituted [...] The experience would in itself be ghostly. This spectrography would be able of pushing to foundations what has been determined in terms of Experience, Subject, Consciousness in the order of a 'presence', constant, autonomous, master of itself, absolute, unconditional" [Vitale 2008, pp. 10-11].
For Derrida "ghost" is not a spiritualization, but it has to do with life: "in order to have a ghost we need a return to the body, but a more abstract body than ever. Once idea or thought is detached from its substrate, ghosts are generated, giving them body. Not by returning to the living body from which ideas or thoughts are torn, but by embodying them in another artificial body, a prosthetic body" [Derrida 1994, p. 160].
To hypothesize a form of spectrography, architecture could try to look at cinema, the main "science of spectrum", as defined by Derrida himself on several occasions. The latter, despite never having written essays specifically dedicated to the topic, outlines an idea of cinema as "the art of evoking ghosts" [Bertetto 2016, p. 9] as the film constitutes a fundamental element of repetition and removal of presence. According to Davide Persico, the main assumption of Derrida's theory applied to cinema consists in the fact that it produces: "not only different images of the world and different visual forms in conflict with each other, but a deconstructed gaze which activates different models of staging, different configurations of the visible which imply a multiplication of the image and the elements inscribed within it" [Persico 2016, p. 83]. What returns to the screen is a deconstructed material that imples a space-time linearity, while making it apparently normal in the spectator eyes.
From this perspective, cinema presents itself as the most innovative art, if not the most important, which "reflects on the 'text' because it combines visual and sound component with the more merely symbolic and narrative component of its structures and statute; an audiovisual structure able of configuring and reconfiguring itself continuously in the opening of the 'text' itself" [Persico 2016, pp. 86-76]. In this constant opening and variation of the narrative text, films are conceived as "heterogeneous and multi-significant wholes capable of activating multiple processes of disintegration and self-disintegration of their own formal structures" [Persico 2016, p. 98]. Through its deconstructed gaze, cinema constitutes a very specific narrative device, which operates a concatenation of images, meanings, elements and signs, of traces and fragments, of scenes and pauses and is inscribed in an articulated texture through which the text is defined: "this concatenation ensures that each element is constituted starting from the trace present in it of the other elements of the chain and of the system. Now this concatenation, this texture, is the 'text', which is not produced except in the transformation into another 'text'" [Persico 2016, p. 93].
The deconstructed gaze and the constant opening of the narrative text, typical of cinema, are

tools of great interest for investigating the relationship between body, memory and architecture, since they help to decompose, to segment the "memory plots" and then to recompose them in new forms of spectrography.
Starting from these considerations, the contribution wants to examine these forms through three design interpretation keys deduced from cinematographic techniques, which intertwine body and memory: outcrops, which through a mental *decoupagè*, is based on the permanence of mnemic traces and on the possibility of recomposing them into a new *montage* that recalls them in a new narrative dimension; abyss, which through a *mise en abyme*, involves the insertion of "stories within stories", with the reduplication, relocation or adaptation of sequences of memories; anatomical mixing, which through video compositing, mixes the shapes through the fit between the parts. With these architectural-cinematographic operations it seems possible to try to define a "spectral chemistry" that, according to Timothy Morton consideration on spectrality as "the flavor of the symbiotic, for which everything is what it is, but nothing coincides exactly with himself. [...] Spectrality is non-humans, including the "non-human" aspects that concern us" [Morton 2022, pp. 75-85], can outline a new conceptual dimension where to rethink human outside of anthropocentrism.

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Andrea Crudeli
The University of Pisa, DESTeC
andrea.crudeli@phd.unipi.it

The corporeal imagination of tactility.
The methodology of Harquitectes

Key Words
Tactility, Critical regionalism, Kenneth Frampton, Harquitectes

In 1983, when he released for the first time the theory of Critical Regionalism, Kenneth Frampton extensively explored the tension between the "visual and tactile experience" [Frampton 1983, 89], highlighting the loss of architecture's multi-sensorial dimension of the Modern Movement. Frampton argued that the architectural experience should engage the body beyond sight, encompassing light variations, material sounds, temperature, and other physical interactions, an idea encapsulated in Gianbattista Vico's concept of "corporeal imagination" [Vico 1744, 56]: the capacity of a human being to experience the environment through his body. In Frampton's studies, this expression can be considered a core concept for exploring the material surfaces' expressive capacity and the design attitude of cultivating a tactile expression to amplify the connection between the human being and his constructions. In this sense, Frampton precisely defined tactility as the experiential properties of matter that converge into the transmission of an atmospheric capacity of a space. Frampton's discourse explored the dichotomy between the "tactile" and the "visual": the visual is understood as a sort of virtual experience, a design intention oriented to emphasize the image. The British historian criticized this phenomenon as an architecture of pure scenography, where the photogenic quality of perspectives, tailored for advertising aesthetics, becomes a tool for persuasion. This spectacle-focused approach causes a shift away from tactile interaction with materials, with a preference for digital observation, towards what Jean Baudrillard interpreted as "reducing buildings to mere simulacra" [Baudrillard 1981, 25].
Focusing on the building industry's contemporary scenario, each material goes in the direction of adhering to a logic of standardization, functioning as items in a catalogue with a set price. The journey towards maximizing sales also involves a commercial issue, as the material's appeal should persuade potential clients through advertisements. As a result, the creation of materials and their physical presence are increasingly challenging topics in public architectural

discourse, gradually overshadowed by materials that offer visually reassuring qualities and products that are easily marketable. Over the last decades, this emphasis on visuality, as the primary means of architectural interpretation, led to what Heidegger described as the "loss of nearness" [Heidegger 1951, 8]. Furthermore, the recent digital revolution, especially with the rise of social media, has further entrenched the dominance of the image in societal communication, reducing architectural physicality into a two-dimensional representation. Other thematic reflections can be opened if these concepts are re-read through the phenomenological key proposed by Gaston Bachelard, where material imagination intersects with the body and opens the space for a reverie of corporeality.

This paper explores the possibilities of those contemporary architectural firms that perform an act of resistance, which intellectually oppose the idea of architecture as a corporeal experience, against the globalized market that pushes towards a virtual reduction of the experience of built space. In this sense, the topic of tactility, as it was enunciated by Kenneth Frampton, represents the theoretical frame of the investigation. In fact, pretextually considering the creative design as pure material manipulation [Frampton 1985], it is possible to explore the material choice's inherent potential, with particular attention to the expressive power of the surface. Material manipulation can be also anthropologically investigated as civilization substance, an expression of a cultural material sensitivity and the technological development of a particular historical period. From a purely material perspective, Frampton defines architecture as the assembly of matter necessary to provide shelter for humans. In this context, the construction process is a performative act, where manipulating materials goes beyond mere functionality: historically, natural materials have been the first substances shaped by humans to create construction elements, building structures piece by piece based on abstract designs. Even today, natural materials continue to embody a connection with the basic need for shelter, enriching the genuine experience of inhabiting a space. Additionally, when material modification is driven by thoughtful reflection, the construction process takes on an anthropological dimension. This thoughtful approach to design and material choice signifies not just a building technique, but also a critical intervention reflecting a particular time and level of civilization, thus gaining historical importance, with the philosopher Gianno Vattimo words "edification has two principal meanings: to build and to be morally uplifting" [Vattimo 1989, 56]

The case study chosen to represent an architectural firm that embraces this form of resistance, placing the tactile dimension of matter at the center of their creative and expressive process, is the Spanish studio HArquitectes. Recently published with a monograph volume on El Croquis, HArquitectes was established in 2000 and based in Sabadell, Barcelona, and it is managed by four partners: David Lorente Ibáñez [Granollers 1972], Josep Ricart Ulldemolins [Cerdanyola del Vallès 1973], Xavier Ros Majó [Sabadell 1972] and Roger Tudó Galí [Terrassa 1973]. The paper is enriched by an exclusive conversation with the Catalan studio, with whom the theme of tactility as a central moment in their design philosophy was addressed. HArquitectes has gained significant recognition in the architectural community for their work. They have been shortlisted and awarded in various prestigious competitions and awards. Their work has been featured in various architectural publications, highlighting their innovative approach to design and architecture, and demonstrating their ability to fuse contemporary design with historical elements and the surrounding environment. The issue of materiality emerges clearly from the work of the studio. This working group, in fact, has transformed the tactile presence of materials into the expressive language that has encoded an anonymous and intelligible authorial language. The projects that address the issue of a body-experience in a more paradigmatic way are those concerning the designs of a reuse, where a layering of different stories serves to enhance the individual capacity of each material, ultimately creating a new and unified material concert. The principals of the firm elucidate that the corporeal engagement with a space is significantly enhanced through their deliberate choice to present their projects with an "unfinished" aesthetic, thereby elevating them to the status of "transhistorical artifacts". This distinctive architectural methodology, situated within the historical context of what is termed 'architecture of the crisis', draws upon the dichotomy between closed and open systems. Unlike industrial processes, which are inherently closed systems characterized by the production of immutable objects, traditional methods involving natural materials represent open systems, offering artisans latitude for modification and adaptation. In alignment with this paradigm, the firm applies a similar philosophy to the entirety of a building's structure. The premise posits that the less defined a material is initially, the greater the freedom afforded to the designer for future modifications and renovations. In addition to an extensive use of brickwork, which characterizes many of their works, the studio has focused a lot on the use of these natural materials to convey a sense of closeness to the human being and accentuate the bodily experience within spaces. These same materials are often used to create spaces, towards an equation that the studio defines as a characteristic trait of their work, structure

equals space. In fact, by coinciding structure with spatial distribution, the bodily experience of space coincides with the tactile experience of the structural materials. The deduction of material choices from pre-existing conditions, whether they are structures to intervene on, as in restorations or renovations, or new constructions, where the choice of materials is derived from the identity of the urban context, the studio always follows a series of methodological principles. The research methodology selects three recovery projects, the Cristalleries Planel, the Civic Centre Lleialt Santasenca, and House 1014, which are chosen based on their redundancy of publications in journals (for example, El Croquis, AV, A+U). These three projects can be considered paradigmatic for the theoretical framework from which they derive. Indeed, the architects have adopted a precise sequence of design operations that can be found in all three works, and which can be elected as a recurring method. The paper attempts to theorize their methodological work within the Framptonian framework, dividing their creative process into three fundamental points, which are addressed through examples of completed works:
1. Intensify: The initial phase involves identifying the expressive characteristics of the existing materials. If they are concealed, they should be uncovered and restored to their authentic expression. The added elements should both protect and highlight this presence, thereby enhancing the tactile and visual experience.
2. Connect: The selected new materials should engage in an active dialogue with the existing elements. Consideration of shades, colors, textures, and porosity is crucial in reflecting the interactive relationship between the old and new components.
3.Distinguish: After analyzing the existing materials and determining the nature of their interaction, the material for the new addition must be visibly distinct in its physical attributes. This distinction is essential to clearly differentiate between the two historical periods. In conclusion, the juxtaposition carries the critical responsibility of both preserving the past and expressing modernity. This approach creates a new unity in the restored structure, particularly in terms of tactile experience.

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FIGURES

Fig. 1 - Harquitectes, Gallery of Cristalleries Planell Civic Center, 2016, Barcelona. (Photo: Adrià Goula).

Pablo Berzal Cruz
Independent researcher
info@pabloberzal.net

Performing space.
An approach to architecture through performance

Key Words
Performance space, Spatial performativity, Boy and space

Throughout history, human beings have transformed the environment in their struggle for survival. The processes of transformation have always been guided by a phenomenon that we only became aware of two centuries ago: ritual. By imprinting certain patterns on our body-mind, ritual humanises us, prepares us to be part of society, guides us through the various transitions of life, connects us to our space and to the cosmos, but also transforms the environment. The ritualisation of the environment is a circular process in which ritual activity transforms the environment through the impression of directionality, hierarchy, symbolism, etc. in space, and at the same time the ritualised environment ritualises the individual [Bell 1992, pp. 98-99]. The main characteristic of ritual is that it is a performative activity; that is, all rituals are performances, activities that we carry out with the intention of influencing "others" [Goffman 1956, pp. 8-9]. Ritual also "influences" the environment by transforming it, but the ritualised environment also "influences" individuals. We can call this influence that the environment exerts on us "spatial performativity" [Berzal 2023, pp. 74-79]. Spatial performativity is present in the natural environment and predates the ritualisation of the environment; it lies at the basis of the formation of an architectural language developed over millennia. In our built environment, spatial performativity acts unconsciously on the occupants of any given space, mainly through various architectural ritualisation mechanisms developed over millennia or newly developed, but also through spatial qualities; form, light, texture, acoustics or aromas that are culturally interpreted.
Although several authors have drawn attention to these processes in recent decades, they have been little studied because they require an interdisciplinary study that includes the evolution of human cognition, social and cultural transformations, architectural history, etc. However, the urgency to understand and manage the transformation of our cognitive processes due to the disembodiment caused by digitalisation is leading to a renewed interest in body-space relations

in various fields, as the theme chosen for this year's EURAU demonstrates. Within architecture, some authors [1] have approached the perception of space from a phenomenological or neuroscientific point of view, taking into account the sensory stimuli emitted by the built environment and the effects they have on its inhabitants. However, in order to understand how spatial performativity affects us and how we can use it in the construction of our environment, we need to include an essential tool in the study: performance. As the anthropologist Victor Turner (1982) has warned, in order to understand the cognitive processes that take place in the interaction between space and the body, it is necessary "to become performers ourselves, and bring to human, existential fulfillment what have hitherto been only mentalistic protocols". (p. 101). In this sense, we have been working for years in various contexts to introduce performance into architectural education and research.

Since 2011, the Masters in Ephemeral Architecture at the Universidad Politécnica de Madrid has included a workshop dedicated to performance, in which participants are invited to use performance as a tool for understanding and analysing space. In this Master's degree, dedicated to the study of contemporary architectural alternatives that can accommodate current activities in a more sustainable and contemporary way, the need to include the embodiment of space in the programme was understood very early on. There is no possibility of offering new alternatives to the construction of our environment if we do not become aware of our body and its relationship with space.

The method used in the workshop is essentially as follows: 1. a small training of the participants in the techniques of focused attention, in order to be able to observe the reactions of the body-mind to the performativity of the space they are in. 2. they are shown examples of how artists have used performance to reflect on space. 3. they are asked to create a site-specific performance that will help them to better understand a particular space and its dynamics. 4. they are asked to describe and document the experience, the results and their conclusions. Certain dynamics recur in the proposals of the participants, such as the use of the body as part of the space, the recontextualisation or decontextualisation of the space, the sensory exploration or the emotional exploration of the space, etc.

The use of the body as part of the space is a dynamic that has usually been carried out by participants who have developed different body techniques –dance, theatre, sport, etc.– and has been presented in many different ways, such as measuring the space with the body, linking the plasticity of the body to certain architectural elements, etc. The re/de-contextualisation of space is one of the most popular approaches among the participants. The dynamic of recontextualisation consists in introducing a series of sensory stimuli and/or a specific action that transforms the space and transports the occupants to another place. Decontextualisation consists of introducing an activity into a space that is completely different from the usual use of that space. The sensory or emotional exploration of space has been a dynamic that has been repeated in many different ways. Through an action, sensory exploration focuses on certain spatial qualities, such as the light or acoustics of a space, while emotional exploration focuses on the emotions associated with or evoked by a place. The results of the workshop so far have been truly excellent, with participants enthusiastically discovering our ability to embody space, to understand on a much deeper level its qualities, its dynamics and the spatial performativity that operates within it.

Another context in which we were able to introduce performance as a working tool was in the second and third years of Architectural Design, also at the Universidad Politécnica de Madrid, between 2014 and 2023. In this case, due to the greater rigidity of the teaching programme, performance was used more as a tool to embody space in the spatial analysis and less to understand spatial performativity. Basically, the dynamics of the body were used as part of the space, in most cases using the whole group of students to form lines –or circles for certain architecture– to measure the space. Spaces in archaeological sites were also recomposed by using the bodies to restore lost architectural elements. Unfortunately, the rigidity of the educational system makes it very difficult to introduce new methodologies in undergraduate studies that help to recover something as essential and fundamental for architects as the embodiment of space or spatial performativity. Nevertheless, the results of the experience have been more than satisfactory, considering that it has meant something truly extraordinary for the new generations of architecture students, whose approach to space is almost exclusively digital.

But the urgency of compensating for the disembodiment produced by digitalisation is not just a task for architecture, it is also an issue for anthropology, sociology, psychology, cognitive studies and neuroscience. It is a multidisciplinary issue and should be treated as such. In this sense, we have been working in a very different context, a project that we have called "Performing Space", that is structured around an international conference and a workshop open to all disciplines working on space. The aim is to create a forum where academics and practitioners

from fields as diverse as performing and visual arts, architecture, social sciences, etc. can share and discuss their research and experiences. In addition, the workshops associated with the conference make it possible to discover the usefulness of techniques commonly used in the performing arts for the embodiment of space or the study of spatial performativity, and vice versa, allow practitioners and scholars of the performing arts to find new perspectives on which to work.
The third edition of Performing Space will take place next July 2024 and will feature numerous participants from multiple disciplines willing to experiment on the reconnection of the body with space. An event from which we hope to emerge the foundations of a new multidisciplinary vision of the construction of space in which the relationships between body-mind and space are central.

ENDNOTES

[1] With a phenomenological approach, e.g. Juhani Pallasmaa (2005, 2011). With a neuroscientific approach, e.g. Harry Francis Mallgrave (2010, 2013).

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FIGURES

Fig. 1 - Environmental perception exercises with a group of students from the Escuela Técnica Superior de Arquitectura de Madrid in the Heraion of Argos, Greece, 2023. Photo by the author.

Melike Nur Şahin
Alanya University, Department of Architecture
melikenur.sahin@alanyauniversity.edu.tr ; sahinm19@itu.edu.tr

Transformation of the objective-subjective dialectic in the body-space relationship throughout architectural periods

Key Words
Body and space, Architectural periods, Objectivity and subjectivity

In the period of modernism, when rationality took over, the body was excluded from space. However, space and body are not separate but inextricably related concepts [Heidegger 1971]. The human body is the ground of experience, perception and thus existence in the world. The body mutually informs and defines each other through its interaction with the environment [Pallasma 2005]. The body-space relationship, which exists relationally in architecture, has undergone various transformations from the Cartesian understanding to the present day. Following these transformations through architectural periods offers a panoramic perspective on the diversity of the body's role in the use and production of space. Framing architecture, which covers a wide range of interdisciplinary fields, into a defined framework may require excluding some fields. However, in the most general framework where transformations in the ways of thinking, construction, representation and production of architecture are quite evident, three main periods can be mentioned as modern, post-modern and contemporary.
Industrialization, which is the most specific characteristic of the modern period, and the mechanization it brings, transforms everyday life by covering a large part of it. Mechanical production permeates a wide range of spaces, from household items to motorways in the object dimension; from the interior to the urban space in the spatial dimension [Banham 1980]. The Frankfurt kitchen style and design of the modern period is an example of the reflection of mechanization on space. In the design of kitchens based on the logic of mass production, metric dimensions are 1.90 m wide and 3.44 m long. All bodily needs in the space, such as the storage area under the window according to climatic conditions and the furniture produced from concrete for cleaning purposes, are designed rationally and objectively. It offers a functional solution to the living needs of a working family with children [Finnan, 2006]. As seen in the example of kitchen design, the body is standardized as an objective data provider in

terms of metric measurements, movement and use in the spatial construction of the modern period. The multiple possibilities brought by the subjective preferences and judgements of the body are ignored and a functional understanding is developed with a single model.
The objectivity of the body in space interacts with the subject in postmodernism. Postmodernism is an umbrella concept that covers paradigms in the pluralist period such as semiotics, structuralism, phenomenology, which are the fields of interaction of architecture with other disciplines [Nesbitt, 1996]. Born as a critique of modernism with the influence of Marxist critical theory and post-structuralism, this movement adopts a way of thinking that can be "speculative, questioning and sometimes utopian" against functional and universal design [Skyes 2010, p. 17]. One of the foundations of this way of thinking and bringing the subjectivity of the body into space is Husserl's philosophy of phenomenology. According to phenomenology, the essence of objects is related to the state of mind. Experience includes everything that is perceived by the senses and can be the object of thought such as desire and mood. Heideger follows Husserl, who focuses on experience, and according to him, the participation and involvement of the body makes existence possible [Flew, 1984]. The existence of an object differs depending on the subject's thought and perception. This subjective perspective fed by philosophy transforms and multiplies the field of thinking of architecture. Manifestos such as deconstructivism, which is fed by post-structuralism, is an understanding of the multiplicity of meaning that is reflected in architecture in the practical field. In deconstructivism, the independent existence of space allows the individual to interpret it differently each time [Dinler, 2007]. Bernard Tschumi's Parc de le Villete Project is a practical example of this understanding. The red volumes in the project, which is a public park design, do not have any function. Functionally undefined spaces are experienced and transformed by the needs and movements of the individual, revealing a spatial diversity. Space as an object with defined physical boundaries has a flexibility for the needs of the body. The body and the interaction between bodies offer subjective and social data to space. Although the boundaries of space are predefined, its use is realized simultaneously with the body and gains meaning.
In the spaces of the modern period, the body is only an objective entity that provides rational and mathematical data. In the postmodern period, however, a subjective understanding is embraced in spatial experiences through the perception and signification of the body. The designed space and the perception of the body are interactive, objectivity and subjectivity are related. In the post-theoretical era, the body assumes the role of simultaneous constructor as the data of space. This is a period in which the subjective is objectified while preserving its subjectivity.

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Martina Carandente [1], Annunziata Ambrosino [2]
[1] Università degli studi di Napoli, Federico II, DIARC | Dipartimento di Architettura degli Interni e Allestimento
[2] Università degli studi di Napoli, Federico II, DSU | Dipartimento Studi Umanistici
[1] marti.carandente@gmail.com, [2] annunziata.ambrosino@unina.it

Space and rhythm.
The cult of the body

Key Words
Rhythm, Movement, Interaction

In the attempt to define the notion of "space", we would probably talk about a rather vague and immaterial physical reality, an aeriform material state in which we are immersed [Ottolini 1997].
We would definitely refer to a "place" in which actions are performed, to the "void" given by the distance between bodies or perhaps to the "fullness" filled by their relationship.
Bruno Zevi explains that: you cannot talk about architecture without taking up the concept of space perceived as interior, as a place concretely usable by the human body in its singularity or as a *collective body* [Ottolini 1997].
The "interior" is not what is circumscribed by closed and limiting walls, rather it extends its own spatial experience "in the city, in streets and squares, in alleys and parks, in stadiums and gardens, wherever the work of man has limited 'voids', creating enclosed spaces" [Zevi 1948, p. 22].
Therefore the project manifests itself as the result of the relations between space, material and immaterial, and the body, which by moving and inhabiting "creates, shall we say, the fourth dimension and gives to the space its own integral reality [...]" [Zevi 1948, p. 23], characterizing it and producing itself places of connection.
Furthermore, it's interesting to deepen the attention given to the body structure, to its relationships and its ability to establish "habitable" places, namely suitable for its living and defined by its being in motion.
Investigations on the body and its connections to the design dimension have been performed since the beginning of the last century. The Bauhaus school, since its foundation in 1919 in Weimar, reveals a certain inclination to explore phenomena relating to shape and space, giving particular emphasis to the theatre as an "internal" place of expression of this relationship, as claimed by Walter Gropius, founder of the German school: "we study the individual issues of

space, body, movement, shape, light and sound" [Wingler 1981, p. 70-71]. Among the most significant exponents of the Bauhaus stands out the painter and sculptor Oskar Schlemmer, who was elected in 1923 as head of the school's theatre workshop. His work is set in a futurist context and seems to follow the trail of Fortunato Depero's Plastic theatre, Sergei Pavlovič Diaghilev's Russian Ballets or even the work of the scenographer Adolphe Appia, allowing himself to be inspired by Pablo Picasso's cubist painting and Giorgio De Chirico's metaphysical art.
Schlemmer's artistic value lies in his interpretation of space: he experiences it as "not simply through the normal visual faculty, but with the whole body" [Moholy-Nagy, Molnàr, Schlemmer 1981, p. 84], showing the relationships of the human organism and the movement of this within it. The emblem of such conceptions is the so-called *Triadic Ballet* (Triadische Ballett), a pantomime in which the presence of man is cardinal, as his figure is assigned the fundamental task of scanning space through movement [Moholy-nagy, Molnàr. Schlemmer 1981, pp. 91-96] In this performance Schlemmer, through "spatial-plastic" costumes, conceptualizes the human organism as a structure capable of overcoming its own naturalistic limits, working on the establishment of the relationship between the bodily dimension and the spatial one.
By setting up the body, it and its movements are decomposed according to anatomical, metaphysical or prismatic laws, and rewrite the space "having geometry as an aid" [Moholy-Nagy, Molnàr, Schlemmer 1981, p. 97].
The body is itself a design element: the costume pursues the aim of "forcing" it to new movements, often causing *a constrictive accentuation of the gesture* [Muselli 2019, p. 23.] and, allowing man interact with the laws of three-dimensional space.
During the performance "nothing is casually placed; every physical element [...] is purposeful. The body is always a plastic form, a 'space shaper' " [Trimingham 2011, p. 83].
Space and body turn out to be entangled in a system of relationship that makes them dependent on each other, therefore: "man is woven into a network of visible lines or radiated by invisible, imaginary lines [...] he is the central sun and his irradiations have the power to create form and space" [Bistolfi 1982, p.181].
There is a direct correlation between architectural space and performance space for Schlemmer: as M. Trimingham points out, for Schlemmer "Architecture, like the stage, is plastic form carving out, articulating, making visible the space, and Schlemmer would have us remember it is a space surrounding us as much as a space we look at and into" [Trimingham 2011, p. 115].
For Schlemmer the body generates and modifies space through movement, the bond between these two factors in their interaction is certainly "rhythm".
A concept explored particularly by the musicologist Émile Jaques-Dalcroze, inventor of an innovative gymnastics, called *Eurhythmics*, based precisely on the relationship between these three variables described above, capable of structuring the "empty" environment of the project. In the years of the Weimar Republic and during the most active period of the *Deutscher Werkbund*, he was commissioned by Wolf Dohrn to practise his teaching in the new garden-city of Hellerau, an urban planning project primarily desired by the industrialist Karl Schmidt, with the intention of integrating artistic and musical practice into the daily life of the inhabitants [Boesch 2003, pp.143-155] and to shape and educate a new community. An idea that became visible with the Institute J. Dalcroze project, developed by Heinrich Tessenow within this complex. The architect's design perfectly depicts Dalcroze's artistic goals, revealing a building that appears as a place of celebration of the body and its connections with the space: a theatre that turns into a proper temple, respecting the cult professed within it.
The project represents an exception within Tessenow's works by detaching itself, in its compositional canons, from analogous works. The main characteristics of the project are geometry, symmetry, modularity and in particular monumentality, achieved through the use of canons typical of sacred architecture: the wide front portico articulated by columns surmounted by a tympanum, the disposition of the rooms around a cruciform plan and the construction of a large central hall, with strong verticalism accentuated by a pitched roof. The "reduction" to a minimum of all ornamentation shapes "an essentially pure space, practically elusive in its very purity and almost ethereal spatiality" [Garcia Roig 1997, p. 99], such that it evokes a "musical atmosphere" [Garcia Roig 1997, p. 94].
The entire architecture is, in fact, conceived as a large scenic machine that flows into the stage area where stairs, pillars and platforms become scenographic elements, influencing the performance and embracing the spectators. In this context, these structural elements come into action through lights and shadows, giving shape to those *Espaces Rythmiques* that Appia had designed for Dalcroze with the intention of representing the rhythmic evolutions of bodies in space [Michelis 1991, pp. 13-37.]: "the pillars oppose their inertia to that of the moving bodies to emphasise their vitality" [Appia 1921, p. 42].

Turns out to be significant Bianchetti assertion: "designing the relationship between body and space means touching the body with the project" [Bianchetti 2021, p. 133] in considering a system that alludes not only to engaging with the corporeal dimension of the individual but also with the incorporeal one.
It is interesting, therefore, to consider Tessenow's architecture as an emblematic case study to delve into the issues related to the relationship between space and body. It embodies a project solution strongly tied to its function: it is an architecture based on action and relation, where formal experiments converse with innovation in the technological, pedagogical, and performing arts fields.

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Fulya Selçuk, *"The exhibition wall as a critical cartography: The trajectories of our bodies are intertwined, we are intertwined"*, 2023, Photocollage.

Fulya Selçuk [1], **Ferhat Hacıalibeyoğlu** [2]
[1 2] Dokuz Eylül University,
Department of Architecture
[1] fulya.selcuk@deu.edu.tr

From me/my body to margin.
Discovering the minor spatialities of daily life through subjective trajectories

Key Words
Body, Multitude, Minor, Critical mapping

The body relates to "the other" on a daily basis, continuously and discontinuously, in the short term and long term, directly and indirectly. These relational practices of bodies are materialized and can be recorded in space as they emerge. This research aims to explore and conceptualize the spatialities of body-body relations (bodies diverse as human, non-human, animate, inanimate from the new materialist perspective) with "the multitude", through the subjective trajectories of individuals that center the body and extend to the margins. There are two main research questions in line with this aim: How and where do the bodies relate to other, foreign, familiar bodies, to non-human animate and inanimate actors? The question of "how" refers to the practices; the question of "where" refers to the spaces and spatialities in which these practices take place. It is argued that investigating these questions by centering on bodily relations would enable producing material and spatial knowledge of the social.
The research was carried out with "the multitude". The multitude is the form of social and political existence, consist of a network of individuals and singular differences that cannot be reduced to a unity [Spinoza 2021; Hardt and Negri 2004; Virno 2004]. In the context of the research, the multitude consists of the bodies of the architecture students. The spatial knowledge of the individuals of the multitude, which is embedded in subjective trajectories, is fluid, embodied, dynamic, political and situated [Haraway 1988]. Embodied experiences, subjective and situated knowledges, which have been ignored in scientific research until 1980's critical thinking debates with the concern of criteria such as objectivity, universality and falsifiability, have been included in this research on feminist epistemological ground.
The spatial knowledge of the multitude is conceptualized as "minor spatialities" [Deleuze and Guattari 1986; Bloomer 1993; Stoner 2012]. The minor is a metaphorical concept related to escape, transformation, "becoming", referring to the small, the minority. Although it appears

to be in opposition to the major, it establishes a relationship with the major "from within". "Minor actions form assemblages of space; they disassemble binary oppositions of inside and outside, public and private, sanctioned and subversive, large and small. They reframe the definition of architecture from the making of buildings with materials of nature to the making of spaces within the already built" [Stoner 2012, p.16]. By rejecting binary oppositions, the concept of the minor has the potential to open a critical, political and collective perspective from within the major.

The research began at the scale of the body and expanded through the body's relationships with other bodies, focusing on the relationships through which the body constructs itself and the other, and the spaces-spatialities of these relationships. Students were asked: "What routes do you use in your daily life?", "How and where do you relate to other, foreign, familiar bodies, non-human animate and inanimate actors on these (subjective) routes? In the first workshop [1], ten students worked on their subjective and daily trajectories, which were conceptualized as "minor trajectories" from their homes to the design studio at Dokuz Eylül University in İzmir. Considering that the architectural design studio itself is a community with different subjectivities, it can be said that the knowledge of each student's and academician's minor trajectories acknowledges the diversity of this community. In the second workshop [2], twelve students worked together in the city center. In this workshop, the students were asked to "dérive" [Debord 1958] on the periphery of the Culture Park [3] and to spatially record their bodily relations.

In terms of methodology, both workshops have the same two phases: deterritorialization and reterritorialization. In the deterritorialization phase, students recorded their daily trajectories by photographs, videos, narratives and drawings. The act of drawing becomes a minor practice when it is instrumentalized not for architectural projects, but for analyzing the complexity of the space [Sellar 2012]. The coding and mapping of minor spatialities is the phase of "reterritorialization". The extracted spaces-spatialities were collectively mapped and critical cartographies were produced. On the basis of these critical cartographies, which were conceptualized as "minor cartographies", the possibilities of togetherness, communication, acquaintance, dialogue, confrontation, mediation and reconciliation were revealed through spatial, material and social dimensions.

At the end of the first workshop sixty-five drawings and sixty-five photographs with short texts written for each record were obtained in the deterritorialization phase. In the reterritorialization phase, the students produced two maps. For the first map, they first grouped spaces with physical spatial references (bus stop, bus, house, entrances). Then they created a network between these spaces through the relationship between seeing and being seen. The node of this network was "reflection". "Reflection" refers to the fact that the relationships in this spatial network are realized indirectly rather than directly. The second map was created by associating spaces according to sensory experience. It was discussed how sensory experiences of spaces trigger emotional experiences and how emotional experiences positively or negatively affect the construction of the multitude.

At the end of the second workshop, sixty-five drawings and sixty-five photographs with short texts written for each record were obtained in the deterritorialization phase. In the reterritorialization phase, all these data were collectively and critically mapped. The themes that emerged were: periphery, threshold (threshold of voice, threshold of intimacy, threshold of language, socio-cultural threshold), border, texture, touching, appropriating, in haste, crossing the roof, conflict, turning the corner, blurring, overflowing, leaning on.

The outcomes of two workshops were exhibited at the Atlas Pavilion in the Culture Park as part of 'The Good Design 8' event. The exhibition wall itself became a critical cartography. In addition, the same research question was posed to the visitors. The subjective urban trajectories of the students were connected to the subjective urban trajectories of the exhibition visitors, and the spatial network of the multitude grew rhizomatically. Instead of being a static object, the exhibited critical cartography had become a site of encounter, dialogue and reconciliation.

In the conclusion, threshold spaces (entrance halls, hallways, door thresholds), spaces where practices of daily needs take place (ground floor commercial uses), transport spaces (bus, metro, bus stops), and street connections where the bodies encounter with others are conceptualized as "minor spatialities". These "minor spatialities" embedded in minor trajectories of bodies are suggested as critical fields for bodily understanding of space and social understanding of architecture. In addition, the research process itself represents a critical pedagogy and a state of becoming at the intersection of theory, research, design and education. It is argued that the research community transformed into a collective subject by preserving their own subjectivity in the dialogue environment based on interaction, collaboration and co-production they created. This environment became public through the exhibition and enriched the potential of becoming "the multitude".

ENDNOTES

[1] The process of this workshop was shared as a situated pedagogical experience in the international workshop "Stories of Situated Pedagogies in Architecture and ..."organized in İstanbul on 3-4 October 2023.
[2] The second workshop was entitled "From Me/My Body to the Margin" and was held on 2-3-5-6 December 2023, as part of the international event "The Good Design 8", which was organized by İzmir Mediterranean Academy under the theme of "reconciliation". The title of the study was inspired by bell hooks' book "Feminist Theory: From Margin to Center". The axis of the workshop was set toward the margin with the body at the center.
[3] The Culture Park is one of the most important public green spaces in Izmir. Located between the archaeological site, the historic city center, the port area, the commercial and residential districts and the newly developing city center, it intersects many different fragments of the city.

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FIGURES

Fig. 1 - The exhibition wall as a critical cartography: The trajectories of our bodies are intertwined, we are intertwined", 2023, Photocollage ©Fulya Selçuk.

Demet Satı[1], **Pelin Dursun Çebi**[2]
[1, 2]Istanbul Technical University, Faculty of Architecture - Architecture
[1]sati22@itu.edu.tr

Rethinking the body-space dynamic: Space as a body.
A comprehensive investigation through phenomenology and language

Key Words
Spatial narratives, Bodily experiences, Narrator-space practice

The body that creates the space is also subject to certain restrictions by the boundaries of the space, and shapes its movements according to the space it is in. Uysal talks about the paradoxical relationship that the search for space emphasizes an order, a containment, and that the body, even in its most motionless state, threatens this order [Uysal 2008, p. 120]. But this space is not always solid and stable. It is the place that is always stable. Space, on the other hand, is open to reinterpretation and transformation into new spaces by the perceiver. In this context, what will be examined in this article is whether it is possible to reverse-read this relationship of state of being active and passive between the body and space from a different perspective, looking at the active position of the body on space from the perspective of space. One of the most important tools for transferring experiences is narrative, which is a powerful form of expression. Every experience is shaped and differentiated by coincidences, memory and perception. These differences show themselves most in the narratives. Their capability of containing both the space and the traces left by the actions by bodies and experiences that surround the place, literary texts have a significant role in this research. Based on the potential of narratives, Kafka's story, The Bridge, was examined in order to investigate this relationship through the text.
The phenomenological approach asserts that space would have no direction without the presence of the subject, emphasizing the necessity of the subject for the existence of space [Merleau-Ponty 2020, p. 280]. Heidegger contends that the river's condition of being a place depends on the construction of the bridge and can only be designated as a 'place' after the bridge is built [Heidegger 1971, p. 151-153]. The presence of the body in any time period is what enables the transformation from 'space' to 'place'. The existence of space in the body, which is its founder, is related to its reflexive relationship with the body and how it is perceived and experienced in the body.

Perception, in short, is the knowledge of the present and sensations. But these sensations are not reducible to isolated points. "I do not perceive," says Merleau-Ponty, "perception happens to me" [Merleau-Ponty 2020, p. 295]. What gives meaning to the place is its construction by the body and its perception by the body. As Deleuze states, the knowledge that reaches the senses exists only through the perception of the body and is only as much as the body perceives [1] [Deleuze 2020, p. 342]. This knowledge is not only unique for each person, but also unique for each moment. Merleau-Ponty explains this situation with the following example: "As soon as I find the rabbit in the puzzle, the puzzle will change completely for me." [Merleau-Ponty 2020, p. 45]. As the figure and ground change, the relationship established between things changes too. The moment the details of the doors on the street are noticed, a new street and a new experience unfold. The variability of these sensations and experiences that constitute the space is also related to the body. The body is nomadic; with every step, with every look, it defines and reconstructs the space. The body's construction of the 'place' is instantaneous: here, there is a bridge. Place indicates a situation, place exists. The construction of space occurs through action: walking there, sitting here. In this continuity of actions, the place is the same place, but the space does not remain the same, it changes with the movement: it gets closer, farther away, becomes blurred, becomes more detailed. So can the actions of space construct the body?

In one of his speeches, Pallasma mentions that life does not work chronologically [2], that there is a bidirectional relationship between the past and the future, and that addressing the impact of the future on the past is eye-opening [AURA Istanbul 2021]. The common attitude is to read the space through the body's actions, perhaps as a reflection of the body's role as a space creator. The readings that constitute the counter-reading of these works develop as the effects of space on the body. But those are not exactly reverse readings. Looking at the body-space relationship from the opposite end requires looking at the constitutive role of space on the body and how the body is perceived by space. The tool that will be selected to examine this role must be able to allow these different experiments and potentials. Narrative is an important tool for the transfer of experiences and the multiplication of these experiences. Yet, the importance of narrative is not only in this transfer of experiences. While Heidegger stated that the truth can only be revealed through poetry, he saw a potential in poetry that philosophy cannot reach [Heidegger 1971, p. 69-70]. Deleuze argues that it is the language, which stabilizes the boundaries and goes beyond the boundaries and takes them to the infinity of a boundaryless becoming [Deleuze 2020, p. 19]. Based on the comprehensive potentials of the narratives, this relationship was tried to be deciphered through the text, and Kafka's The Bridge text was examined [Kafka 1946, p. 120].

This narrator-space practice, which we rarely encounter, opens a new door by inviting the writer and reader to look at the existence of the body through the eyes of the space. In the short story, the narrator is a bridge waiting to become a bridge. It is aware that in order to become a bridge, it must be passed over by a body, but once he is passed, he cannot stop being a bridge again [3]. Conscious of its stasis, it awaits the act of passing that will change its state of being. [4]. When it notices the body approaching, it speaks to itself: "Straighten yourself, bridge, to hold up the passenger entrusted to you". In this part, the bridge perceives the body that will stand on it as a potential 'user'. Welcoming the user upon itself imposes a responsibility on him: it must have the solidity to allow the action of the body. It continues speaking: "If he stumbles, show what you are made of and hurl him across to land", it will change its own actions according to the user's action. Then the body steps into the bridge. It gains the meaning of bridge and the body becomes the user. The fact that the passenger is looking around is perceived by the bridge as his presence being forgotten [5]. When it wonders who the passenger standing on it is, turns to see him and it begins to fall [6] [Kafka 1946, p. 120].

This exploration of the body-space relationship has challenged the traditional perspective of the body as the sole creator and occupant of space. By drawing on phenomenological, literary, and linguistic sources, it has suggested a reciprocal understanding where space also holds agency in shaping the body and its experiences. Examining Kafka's "The Bridge" through the narrator as the space itself reveals a new dimension to the dynamic between body and space. As the body moves through and interacts with spaces and the space moves around the body, both the body and space are continuously transformed. Instead of simply observing the movement of bodies within its borders, the bridge anticipates, welcomes, and adapts to the passage of its user. Starting from this perspective, it becomes possible to consider the space as a body and reinterpret its relationship with the other bodies it contains. Repositioning the narrator-object, narrative-space relationships in literary texts and looking at how these new relationships give rise to new narratives has the potential to open the way for new questions. Could spaces hold memories in the same way bodies do? Can spatial narratives offer alternative perspectives on human experiences? Examining the body-space relationship from different angles, including

the voice of space itself, promises a richer understanding of our embodied existence and the dynamic interplay between us and the world we inhabit.

ENDNOTES

[1] "Light becomes an eye and can no longer exist as light: it is now no more than a stimulation of the retina. Smell becomes a nose and the world itself is revealed to be odorless. We can no longer speak of the music of the wind in the gum trees: it is now no more than a vibration of the eardrum. [...] My eye is the cadaver of light, color. My nose is all that remains of odors after they have been proven to be unreal. My hand rots the existence of the thing it holds" [Deleuze 2020, p. 342].
[2] "The mistake we usually make in our thinking is, we believe in chronologies in the psychological world and in the artistic world. Chronologies are for historians, in real life, they mean nothing. There is interaction and influence in both directions". His friend is being asked to give a lecture about Giotto's influence on Cezanne. He refuses to do so and gives a lecture on Cezanne's influence on Giotto". [AURA Istanbul 2021].
[3] "No bridge, once spanned, can cease to be a bridge" [Kafka 1946, p. 120].
[4] "So I lay and waited; I could only wait" [Kafka, 1946, p. 120].
[5] "He plunged the point of his stick into my bushy hair and let it lie there for a long time, forgetting me no doubt while he wildly gazed around him" [Kafka, 1946, p.120].
[6] "Who was it? A child? A dream? A wayfarer? A suicide? A tempter? A destroyer? And I turned so as to see him. A bridge to turn around! I had not yet turned quite around when I already began to fall" [Kafka 1946, p. 120].

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Marius Voica[1], Maria Tîlvescu-Nicula[2], Maria-Cristina Clenciu[3]
[1, 2, 3] "Ion Mincu" University of Architecture and Urbanism Bucharest,
Synthesis of Architectural
[1] mvoika@yahoo.com

Unique experiencies in the approach of architectural education

Key Words
Empathetic design, Emotional intelligence, Educational process, (r)Evolution, Interdisciplinarity

The present era is a time of congruences, interdisciplinarity and technologycal (digital) (r) evolution [Brozovsky et al. 2024]. Stepping into this new era implies a contemporary methodology for the activity of the architecture studios, reflected on all fields of study: research, theory, architectural design and education. Simply relying on the traditional teaching approaches may no longer suffice in the face of the advancing technology, educators having to incorporate more effective teaching methods to address the evolving needs of the 21st century learners.

Methodology rooted in the tradition, oriented towards the future
Our studio's main interest in applying new methodologies was to reinforce the importance of the traditional skills and values, while getting coherently synchronized with the new ways of the profession's practices. A thorough knowledge of the architecture and art`s history, the ability to express ideas through complex hand drawings and sketches or building conceptual architectural models are skills that must be preserved, fructified and sharpened.
The teaching method employed in our architecture studio can be summarized as follows:

- Integration of both the Traditional and the Modern Techniques: The teaching method emphasizes the importance of preserving the traditional architectural skills and values while integrating them with modern methodologies and technological advancements. This approach allows students to develop a comprehensive skill set that blends traditional craftsmanship with contemporary tools and techniques.
- Experiential Learning and Site Engagement: Students are actively engaged in experiential learning through site visits, surveys, and hands-on projects. By immersing themselves in real-world contexts, the students gain practical experience and develop a deeper understanding of the architectural principles and practices.
- Interdisciplinary Collaboration: The teaching method encourages interdisciplinary

collaboration by inviting specialists from adjacent fields to contribute to the learning process. This collaborative approach enriches students' learning experiences and equips them with a wide set of skills and perspectives.
- Community Engagement and Feedback: Students are encouraged to engage with local communities and stakeholders to gather feedback and insights that inform their design processes. This participatory approach ensures that students' proposals are grounded in the needs and realities of the communities they serve.
- Emphasis on Presentation and Communication Skills: The teaching method emphasizes the importance of effective communication and presentation skills in architecture. Students are encouraged to articulate their ideas clearly and persuasively, both verbally and visually, through presentations, exhibitions, and public events.

Overall, the teaching method focuses on providing students with a holistic architectural education that integrates both theory and practice, tradition and innovation and individual creativity with collaborative problem-solving. It fosters critical thinking, creativity, and adaptability, preparing the students to become versatile and well-rounded architects capable of addressing complex challenges in the built environment.
This blend of "old" and "new" learning tools was already successfully tested in our studio in previous projects and international experiments, proving its validity and setting the premises for its future development. The studio's activities have merged *traditional survey techniques* with digital tools such as *drone* and *telemetry tools for large scale surveying*, translated into photogrammetry and a 3D of the area, the students being encouraged to experiment with A.I. as well [Voica et al. n.d.].

The ongoing project
Building on the experience so far, we propose similar strategies for the ongoing project – which challenges the students to come up with a pertinent answer for a covered, open, all season market place. The project focuses on the smart use of special structures and technologies, emphasizing on adaptability and spatial generosity, together with an in depth understanding of sustainability requirements, fit for possible future scenarios of the space.
In addition to the studio`s tutors feedback, the students had the opportunity to discuss their ideas on-site and to receive valuable insights from different guests: the president of Prahova county`s Territorial Branch of the Romanian Order of Architects and two former student architects who have presented their own visions on the site through their Diploma projects. Everything was meant to support and inspire possible solutions in order to reactivate and revitalize the market area.
As tutors and practicing professionals, we are completely aware that opposing or militating against the use of A.I. tools is unrealistic and even naive. At the same time, we realize that these new tools come not only with benefits [Ploennigs et al. 2023], but also raise certain difficulties. Therefore, by accompanying the students in their first dives into the A.I. world we can prepare them more efficiently to face the challenges that they will encounter, not only in terms of skills and performance, but also regarding the ethics and integrity.

Elocution or the artistry of a good speech
The art of persuasion is as old as civilization. With Aristotle's theories on rhetoric, the importance of a good speech was raised to the rank of art and it is, up to this day, fructified by professionals from all fields. Philosopher and encyclopedist, M.J. Adler explained the importance and actuality of the Aristotelian pillars (ethos, pathos and logos) [Adler 1997] – still valid and firmly employed in the contemporary interaction.
The A.I. is already capable of taking up a lot of the specific architects` tasks, except for a few. One of these irreplaceable skills is the *persuasive speech*. This is why we considered it is essential to prepare the students not only in keeping up with the new "wonders" of technology, but also to give them valuable strategies of expressing and presenting their work in an effective way.
The impossibility of a total and general agreement will always keep alive the necessity of mitigation, negotiation and persuasion. Presenting your idea can be developed to the point of artistry [Braca & Dondio 2023] and for a practicing professional can make the difference between a succesful and a failed presentation, and, by consequence, a good or a failed project. In the quest of delivering a message, no matter the amount and depth of the datas and the objective informations or the thruths presented, succes almost always depends on the ability to make the interlocutor have an emotional response [Fedoriv 2016] – in other words: *the ability to make the audience feel*. Put differently, it is not enough for the young architect to tell the client that a project or an idea is feasable, they have to show how its implementation will impact the lives of those interested.

In order to emphasize the need of a holistic approach in the process of expressing an idea, during the urban analysis phase of the last project, besides architects and stakeholders, an invited actor from Odeon Theater in Bucharest came and challanged the students to present their general strategy for the area, encouraging eye contact and, thus, giving/obtaining constant feedback from the audience. The actor shared with the students valuable lessons on public speaking and delivering professional presentations as a trustworthy speaker, for this phase of the project requires a high synthesis capacity and a clear delivery.

E.I.
Innovation thrives in an environment where special care was given to the field of emotional intelligence [Septiana et al. 2024]. Another objective for our studio was to fathom new ways of improving the performance related to the emotional intelligence. Controlling emotional responses and mastering excellent time and resources management skills [Baloch et al. n.d.] are crucial for today`s architects.
Rated often as the most stressful college major [1], architecture is one of the most complex and multi-dimensional fields. The students are required to excel both at exact and humanistic subjects, demanding being visionary and creative, while having a down to earth approach and a sharp mind. In this context, one of the goals was to help future architects to develop a mindset through which they can handle high levels of stress.
For an effective student – tutor dialogue, the students are encouraged to give feedback at the end of the studio`s proposed exercise.

ENDNOTES

[1] https://globalscholarships.com/hardest-college-majors/

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FIGURES

Fig. 1 - Photo by the author.

Lingzheng Zhu
University of Cambridge, The Department of Architecture
lz407@cam.ac.uk

Writing as cosmogenesis. A Chinese genealogy of bodily traces in digitally augmented spaces

Key Words
Bodily writing, Chinese art, Cosmogenesis, Remediation, Digitally augmented space

In Chinese mythology, writing is conceived as having an impact on cosmogenesis [1]. "[T]o write is not simply to deliver communicative meaning but also to ponder about the relation between the human and the cosmos", as the philosopher Yuk Hui [Hui 2020, p. 28] remarks. This notion has long been inscribed in the Chinese aesthetics of calligraphy, which can be construed as an occurrent art of space [2]. Space, in this regard, does not pre-exist writing but is generated through the process as body-worlding, with the living traces of this generation left by brushstrokes in the configuration of pictograms. This bodily creative process is not only present in the *technê* of writing but also in other forms of Chinese art, particularly that of dance. Although the similarities between the two art forms were not articulated until the early 20th century, philosophical discussions about the relationship between calligraphy and bodily movement had appeared centuries earlier [Schwan 2020, p. 61]. Through the agency of the body, both writing and dancing enable the actualisation of invisible matter into tangible forms. Viewing writing as a choreographed process, it is not surprising that the Tang calligrapher (675-759) Zhang Xu could draw inspiration from a sword dance, and for the contemporary artist Lalan (1921-1995) to integrate calligraphy and dance into her painting [Bergen 2021, pp. 15-30]. The act of bodily writing, in these cases, evokes the highest ideal of Chinese art – with the artist in attunement with the universal processes of the cosmos, they are believed to fully realise Dao. Not placed in another intelligible world, *Dao* entails an infigurable immanence understood as enfolded in the body, and unfolded through it in the breath of life.
It is argued that human experience resembles dancing more than digestion, which unfolds in the world and with others [Noë 2009, pp. xii-xiii]. The mode of perception featured in Chinese writing reflects this mechanism of enaction found in distributed cognition. Writing constitutes a feedback loop between the body, the brush, the paper, and the environment, situating them

in a recurrent sensorium pattern of perception and action. Aesthetic events take form with the ink traces cueing the becoming of space-time in bodily movement. The calligraphic traces are simultaneously traces of life that bridge meaning and experience (In Chinese, the character for 'life' or 'living' (生) is the same as that used for 'genesis'). As Zong notes, Chinese characters are in themselves organic bodies of life and brushstrokes are for expressing life's movement [3]. The *technê* of writing, in these regards, entails a bodily approach to unfolding spatial experience and cannot be reduced to merely visual representations.

Chinese landscape painting, believed to share the same origin with writing [Y. Zhang 2009, p. 4], involves a similar approach. Construing painting as bodily writing of space, the pictorial space is no longer the two-dimensional representation; rather, it is given form through bodily movement when germinated from the primeval chaos. This cosmogenesis movement is two-fold: on one hand, it concerns life's immediacy as realised in brushstrokes; on the other hand, it vitalises the bodily memory of space, navigating through its scattered elements with a vague intentionality. This poetic understanding is encapsulated in the Chinese language as *xie yi*, meaning to 'write the intentionality'. Painting thereby illuminates the possibility of understanding writing as rendering a relational notion of space, which, through the bodily unfolding of the 'about-ness' of space situated within fields of life, transcends the confines of language.

In reviewing these interrelated fields of pre-digital art, including calligraphy, dance and painting, the paper posits that Chinese writing – by tracing the genesis of things within nature – enables a cultural approach that conceives of spatial experience as relational and unfolding through a choreographic process. The *technê* of writing can thereby be established as a fundamental plane for articulating the body-space relationship in Chinese art. This offers a perspective for reflecting on how this relationship has been remediated in contemporary digital scenes, enabling a reinterpretation of the bodily experience of digitally augmented spaces from a cosmogenesis perspective. In this paper, this reflection is unfolded through a genealogical investigation, centred specifically on two interrelated questions: firstly, is the digital remediation of Chinese writing in contemporary spatial practices able to capture the essence of the *technê*, given that it entails a trembling and mystical force permeating between the human and cosmos? Secondly, is it possible for digitally augmented spaces to penetrate and interconnect fields of life with innovated forms of bodily writing, thereby addressing the relational notion of space as featured in pre-digital arts? These questions will be examined mainly through five case studies that generate bodily traces in both real and virtual spaces. In these cases, the feedback loop established by bodily writing, which involves the interaction between bodily movement and material traces imbued with semantic meanings, is reshaped by digital feedback loops with different methodologies.

1 _ *A Motion-sculpture of Bodily Traces*: the digital screen installation by teamLab and Sisyu, *Cold Life on the Water's Surface*, showcases calligraphic movements by creating a motion-sculpture of the Chinese pictogram for 'life' and 'genesis'. The character then morphs into a tree, with various forms of life emerging from and disappearing into its branches over time, symbolising the Buddha nature dwelling in all things [4]. Without bodily presence, writing ceases to act as the agency of cosmogenesis in this project. However, as suggested by the semantic implications of the pictogram, the concept of calligraphic movement as cosmogenesis is reimagined in cinematic and architectural languages.

2 _ *Algorithmic generation of pictograms using bodily data*: in *Cangjie's Poetry*, a camera captures the audience and surroundings, transforming them into an ever-evolving cluster of new symbols in real-time using a neural network trained on over 9000 Chinese characters. These symbols, intertwined with captured imagery, create a dynamic, abstract, pixelated landscape through algorithmic visualisation [W. Zhang et al. 2021]. The installation deconstructs the technê of writing, with algorithmic processes intervening between bodily movement and the genesis of pictograms, as well as neutralising semantic connotations. In doing so, it enables a mystical experience of space by creating mythograms which derive their magical power from technology rather than from nature.

3 _ *Digitally augmented body traces*: the project *Cave Dance* renders the ancient Dunhuang dance as flowing clouds, dispersing smoke, and wind flames, showcasing the magnificent medieval imagination of the dance between heaven and humans [5]. Utilising data from static mural drawings and motion capture of professional dancers, it trains a machine-learning model that generates a collaborative human-computer choreography. The mechanism of

calligraphic writing provides a perspective to understand the aesthetics of digitally augmented body traces in this work [6].

4 _ *Bodies in a digital landscape*: *Nanjing Blue, the Poetry of Bodies* is a choreographic practice set in a immersive landscape made with digital projections. In the performance, dancers improvise with the body to interact with digital mountains and waters, drawing inspiration from poems that capture the ambiguous temperaments of their bodies. The experimentation blurs the boundary between dance, calligraphy, and painting, thereby creating a relational architecture that unfolds an experience of space through the co-movement of bodies and their digital traces. Utilising digital feedback loops, it remediates the body-space relationship inherent in the *technê* of writing, which, in turn, opens up new possibilities for cosmogenesis.

5 _ *Digital calligraphy as writing to place:* The final case study presents a practical experiment conducted by the author, set in a natural landscape located in Cambridge. In this project, participants are invited to experience a real space augmented with AI-generated images. Their voices are recorded and used as data to generate digital calligraphic traces. These traces morph based on a semantic sentiment analysis of the recorded speeches, establishing a multi-strata feedback loop between humans and nature in the mixed environment. This approach allows the project to delve into the relational aspects of writing by collecting empirical data from the audience through unstructured interviews, visual recordings, and note-making, and by using the algorithm as the recording device itself. It suggests that the *technê* of writing constitutes an approach to creating an atmospheric experience through a vital process of cosmogenesis that connects various fields of life across the real and virtual spaces.

These projects, encompassing various practices of digital writing, illustrate how technology has created alien situations for the body. Viewed from a genealogical standpoint, the creation of bodily traces in these contexts does not follow the same principle of traditional writing as the process of cosmogenesis. It is therefore natural to ask where the traces of life are in these scenes and whether cosmogenesis remains a possibility for digitally augmented spaces. These questions call for a new understanding of the relationship between body, writing, and space, and the differences between the technical fields of the presented cases and pre-digital arts. With an in-depth analysis of these newly emerged fields, I hope to reveal the conditions for them to facilitate cosmogenesis. This potential is particularly evidenced in the last three projects, which experiment with bodily traces to generate spaces infused with choreographic or relational concepts. The concept of writing, through these methods, is expanded while retaining its potential for cosmogenesis in linking various fields of life, albeit in varied ways.

ENDNOTES

[1] There are various versions of myths surrounding the invention of Chinese pictograms by Cang Jie. Each version of the myth mentions the significant impact this invention had on the cosmos: Welch, 2013.
[2] For the definition of occurent art, see: Langer 1953, p.121.
[3] Zong 2015, pp.199-209.
[4] https://www.teamlab.art/ew/coldlife/ (accessed 15 Jan 2024).
[5] https://mp.weixin.qq.com/s/JbVOVw5EZHYRr3hx6GgEOg (accessed 25 March 2024).
[6] https://camlab.fas.harvard.edu/project/cave-dance/ (accessed 25 March 2024).

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Simona Capaldo
University of Naples Federico II, Department of Architecture
capaldosimona@gmail.com

The transitional project for disused buildings.
An alternative to the vulnerability of bodies and spaces for another way of doing architecture

Key Words
Vulnerability, Anterior future, Minority, Habitability, Anti-capitalism

Contemporary architecture's lack of interest in the countless disused buildings in Italy and Europe is comparable to the indifference towards certain social minorities who, for emergency, cultural and economic reasons, are constantly searching for a habitable space in which to feel welcome. What is the economic, social, political, cultural, environmental impact that empty spaces, even those that do not arouse the interest of public administrations, have on the territory? Could a possible reuse perspective for these spaces meet the housing demand of certain minorities? Resolving the vulnerability of bodies and spaces, if possible, as opposed to indifference, seems necessary, even dutiful, if we aspire to a more sustainable city model and a more inclusive and minority-friendly society. There are innumerable concrete cases of reuse, iconic projects, in which there is great aesthetic-formal and technological-innovative research but little attention to the temporal and process dimension, which takes into account even the less visible needs of citizens, capable of bringing together social, economic and environmental issues with the themes of living, and thus truly capable of interpreting the ontological uncertainty that invests contemporaneity. In this perspective, some pioneering French examples are of extreme interest, in which experimentation with transitional uses has given the possibility not only to abandoned architectures to be reactivated, but to vulnerable communities to find spaces in which they can feel like inhabitants. Leading these projects are interdisciplinary collectives (of architects, urban planners, programmers, artists, etc.) working in the field of research and experimentation on the theme of transitional uses, whose interscalar and interdisciplinary design work unites different uses and users, shares heterogeneous visions, and generates social value.
Among the many, *Les Grands Voisins* is one of the most virtuous examples, a project begun in 2012 for the *Saint-Vincent-de-Paul* site, in the heart of the *14th arrondissement* of Paris, between Denfert-Rochereau, the Cartier Foundation and Port-Royal. The area is made up of

some twenty buildings constructed in different temporal phases from its foundation in 1650 until its closure in 2012 as a hospital complex. While awaiting the implementation of a major project to transform it into a new district, open to the city, the *Assistance Publique - Hôpitaux de Paris* (APHP) ceded the premises of the *Saint-Vincent-de-Paul* maternity ward to the *Aurore* association, which opened two initial emergency reception centres in the hospital's old rooms. In 2014, the city of Paris, the next owner of the site, proposed to the Aurore association to occupy the entire area, so the latter sought to diversify the occupation of the buildings, with the conviction that the hybridisation of different uses and social realities could feed the project. Hence the involvement of the *Plateau Urbain* cooperative, which supports the formalisation of an economic model to cover the running costs of the site, offering spaces to associations, small businesses, artisans, artists, in exchange for a contribution to expenses, and the *Yes We Camp* association, which proposes cultural programming that welcomes Parisians and local residents. The joint work of such diverse groups succeeds in overturning the imagery of the site, which turns from an abandoned hospital into an inhabited neighbourhood. The promotion of social diversity, the creation of common goods and the formation of new models of resilience for the city are the shared project goals.
In 2015, the year in which this shared experience took the name *Les Grands Voisins*, several types of social groups came to experiment with living together: residents of reception centres, occupants of commercial premises, visitors, campers, activists, until between 2016 and 2018, more than 250 associative and entrepreneurial structures were involved, a thousand people hosted and up to 5,000 visitors a day welcomed. The last phase of this experimentation, between 2018 and 2020, brings together the forces of those responsible for the operational start-up of the renovation project in the *Saint-Vincent-de-Paul* neighbourhood with the operators of *Les Grands Voisins* to write a joint project of cohabitation between the construction site and the pre-existing reality that will inspire and prefigure the future design of the neighbourhood.
The brief account of this experience demonstrates how an architectural project of reuse can concretely function in the long term, if thought of in a different way that is, in function of the evolutive dimension of time and therefore of space in relation to time, in which transitory uses serve as a trigger and prefiguration, between a *before* and an *after*, for such projects.
In this perspective, the project is therefore understood as a process, involving civil society and extremely heterogeneous professional figures, in which the architectural sign adds and orients new perspectives, favouring their future implementation. In fact, except in a few rare cases, architecture is still not conceived as a collective practice, more heteronomous than autonomous, more attentive to the minor and therefore to differences, than to the major, detached from the processes of commodification and capitalisation that too often underlie its production.
To frame the extremely complex theme, it seems interesting to quote some excerpts from a reflection by Giorgio Agamben:

> "Ma che significa 'abitare'? (...) Abitare – questa è la definizione che vorrei provvisoriamente proporvi – significa creare, conservare e intensificare abiti e abitudini, cioè modi di essere. L'uomo è un essere 'abitante', perché esiste sul modo dell'avere. (...) Per questo l'uomo ha bisogno non solo di una tana o di un nido, ma di una casa, cioè di un luogo dove 'abitare', dove costruire, conoscere e esercitare intensamente i suoi 'abiti'. Costruire, che è l'oggetto dell'architettura, presuppone o ha costitutivamente a che fare con l'abitazione, la facoltà di abitare. La rottura del nesso fra costruzione e abitazione implica allora per l'architettura una crisi radicale, con la quale chi pratica seriamente quest'arte non può fare a meno di misurarsi"[1].

Is this not the problem of the commercialisation and crisis of architecture? Designing the uninhabitable?!
Countless scholars, including Marco Biraghi, have highlighted the crisis of architecture and thus of the figure of the architect, now too bent to capitalist logic, incapable of finding the right balance between concrete thinking and critical action, which, according to the scholar, can be rediscovered if we conceive of the project as a philosophy of praxis, which does not merely juxtapose knowledge and action but thinks about their intrinsic relationship, their mutual implication.
But if at the basis of correct action, there must be correct knowledge, then what does it really mean to know? I believe that in such a complex and articulated contemporary reality, knowing means critically accepting contradiction (of uses, of practices, of visions), which is why acting (through design) does not mean planning on a *tabula rasa* or towards a defined future, to be prescribed. Rather, designing means, as Gabriele Pasqui states, imagining an *earlier future*, that is, actions that are projected into the future, but with the awareness that they can take

place before others. In fact,

> "Il fare progettuale minore non è una teoria dei margini ma un modo diverso di lavorare con il materiale a rottura: una tensione fuori dalla quale potrebbe accadere qualcos'altro. (...) È una ri-affermazione critica, una riflessione aperta continua, irrisolta tra il progetto e la sua capacità di stare dentro ciò che sfugge, dentro il 'negativo', capace di sentire il reale"[Boano 2020 pp. 59-73].

On the basis of these considerations, is it possible to recognise operational models in which space is conceived as a function of a time *endogenous* to the project and one *exogenous* to the project, in which architecture returns to having a political vocation, understood as an art that has to do with the city, with the common good, with the needs of citizens in its heterogeneity? The design experimentation of *Les Grands Voisins* shows us that there are other, certainly minor, ways of doing architecture, in which the project can be understood, beyond authorship and aesthetic-formal outcomes, as an orientation towards action, as experimentation of a vision open to the odd, non-linear and univocal times that characterise the ontological uncertainty of contemporaneity, in which space is designed so that it does not assume the inconsistency of emptiness, but rather is an expression of uses in time.

ENDNOTES

[1] The text is part of a lecture given at the Department of Architecture of the Università di Roma La Sapienza on 7 December 2018 taken from Agamben, G. (2018). *Abitare e costruire*. Macerata: Quodlibet.

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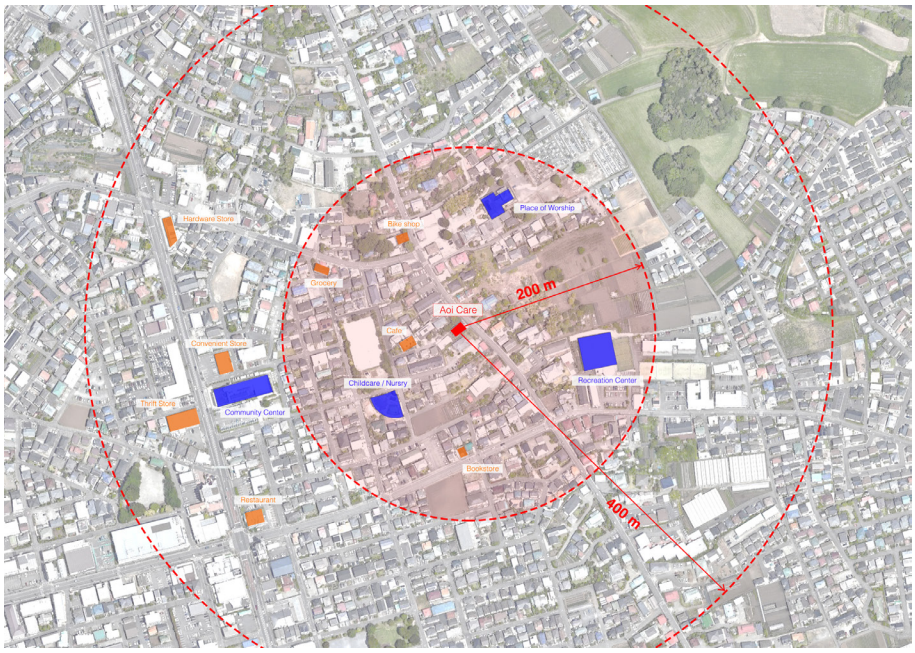
Hardware Store
Grocery
Convenient Store
Thrift Store
Community Center
Restaurant
Bike shop
Cafe
Childcare / Nursry
Bookstore
Place of Worship
Aoi Care
Recreation Center
200 m
400 m

Tianqin Chen[1], António Carvalho[2]
[1, 2] Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
[1] tianqin.chen@polimi.it

Integration of aesthetics and accessibility.
Enhancing living spaces for ageing communities

Key Words
Aesthetics, Accessibility, Active ageing, Inclusive environment, Age-friendly

Introduction
The global demographic shifts towards an ageing trend, necessitate a reassessment of our urban planning and design approaches. The integration of aesthetics and accessibility is crucial for enhancing living spaces for ageing communities. This article explores the significance of age-friendly placemaking in creating inclusive environments, promoting healthy ageing, and improving individuals' overall life quality as they age.

1. Age-friendly Placemaking for Inclusive Environments
Placemaking is an approach to urban design that prioritizes people over infrastructure. Aiming to create public spaces that are not just functional, but places that inspire and promote social interaction and cultural exchange [Project for Public Spaces 2007]. Designing living spaces to meet diverse resident needs is a powerful tool for promoting inclusivity in ageing communities [Freeman et al. 2019], considering various abilities and challenges individuals may face as they age.
By incorporating universal design elements, urban planners and designers can create environments for people of all ages regardless of abilities [Shkliar & Shushliakova 2023]. It goes beyond compliance with accessibility standards by anticipating changing needs and creating adaptable spaces [King 2020]. This approach extends beyond physical accessibility to ensure social integration of older adults.
The advantage of inclusive boundaries, where the limits between spaces for different uses or age groups are created by subtle pavement transitions, in total visual transparency, thereby promoting the global public life [Hauderowicz & Serena 2020, pp. 174-177] is visible at Kanegi Park (2018), in Tokyo, or two Copenhagen schools Guldberg Byplads (2011) and Tove Ditlevsens (2016), whose schoolyards have been extended into the public space where children can play

while parents and older people can sit on the bordering public benches while passers-by cross in between, bringing life back to the streets.

2. Age-Friendly Built Environments

Creating environments suitable for older adults is crucial for positive ageing and maximizing independent living. A truly age-friendly city is not focused on just one generation, but includes and embraces all generations, which is also reflected in design principles including the universal design concept [Mustaquim 2015]. This shift involves reassessing housing, public spaces and buildings, and transportation, creating a seamless, accessible urban environment [Chau & Jamei 2021].

Consideration of age-friendly environments extends beyond the physical aspects. It involves fostering community awareness and social inclusivity. When facing challenges like isolation, well-designed built environments can provide opportunities for social interaction and engagement, provide older adults a suitable environment for ageing actively.

A remarkable illustration of this can be the small-scale multifunctional Aoi Care Home, or *takurosho*, in an ordinary suburb of Tokyo, where the first statement was the demolition of its stone boundaries, opening the buildings' yards to the public space, inviting neighbours and strangers to cross the private spaces and interact with the older residents. The community around Aoi Care grew over time [Hauderowicz & Serena 2020, pp. 130-137] and includes older residents, schoolchildren, local families, visitors and friends. It is now simultaneously a local community, a home for older people, a public shortcut, and a garden. Unfortunaly, centres like Aoi Care are the exception rather than the common phenomenon. It is hoped that the positive attention that Aoi Care has received can inspire other communities, as well as local and national governments, to support similar ventures that reposition older persons as citizens in the centre of their neighbourhood, alongside others of all ages.

2.1. Age-Friendly Housing

Housing is fundamental for older adults. Age-friendly housing goes beyond ramps and handrails, it involves a comprehensive design considering the changing needs of individuals as they age. Features such as wider doorways, non-slip surfaces, and lever-style handles all contribute to creating safer and more comfortable living spaces. Roll-in showers and accessible kitchens enable independent living. Balconies and lower windowsills offer better visual connections to the outside, even for wheelchair users. Seamlessly integrating these elements into overall design maintains aesthetics while prioritising accessibility.

Additionally, age-friendly housing should consider "ageing in place" in spaces adaptable to changing health conditions. Combining good space design, smart home devices and remote healthcare monitoring technologies can provide the support some older adults need to maintain independence [Dermody et al. 2021; Dong et al. 2023]. Besides, promoting new accessible apartments is economically and socially beneficial compared to retrofitting existing ones [Malik & Mikołajczak 2019].

Two distinct buildings, from different architects and times can illustrate this. We're thinking of De Drie Hoven (1971) in Amsterdam, designed by Herman Hertzberger, whose clever use of half-doors, low walls, seating areas, niches, places for plants and furniture generated real human-scale and community life for its older residents and staff inside a remarkable brutalist setting. On a different scale and context, Peter Zumthor would also build in Chur, Switzerland, his Homes for Senior Citizens (1993) where he provided total privacy in the individual apartments while promoting intense social interaction in the shared corridor-living-room, fully glazed to the mountain view, that they must cross to enter each apartment. The width and proportions of this space immediately promoted its appropriation by each household who set their own individual furniture pieces in front of each housing unit, showcasing individuality within a communal space. The downside of both is their exclusive age group option, creating a generational segregation. More recent interventions such as Kraftwerk (2015), in Zurich, Switzerland, by Adrian Streich show a multigenerational approach, thus creating a truly inclusive housing community.

2.2. Age-Friendly Outdoor Spaces and Public Buildings

Access to outdoor spaces is crucial for the well-being of the ageing population, given their preferences for social and recreational activities, community amenities and services, social networks, and a clean and pleasant environment [Yung et al. 2016]. Designing outdoor spaces suitable for older adults involves integrating facilities like benches, shade structures, and well-maintained paths to facilitate safe locomotion and activities. The integration of greenery, enhances the environment and aesthetic appeal of public areas, ensuring older adults can use and enjoy these spaces.

The city of Lisbon, Portugal, can easily illustrate this, for its long tradition of incorporating public benches shaded by trees where anyone can sit to rest or just observe the city life, especially on busy commercial streets. Dealing with the issue of slippery traditional stone pavements, the municipality has been testing new solutions such as the mix of granite with traditional limestone cubes to increase friction without destroying urban atmosphere. In wider sidewalks, the use of fully porous concrete paths (in limestone colour) provides a safer and smoother walkway that everybody appreciates, especially older citizens.
Furthermore, age-friendly outdoor spaces should offer various activities catering to different interests. Community gardens, outdoor exercise equipment, and social gathering spaces create a vibrant outdoor environment, supported by public toilets. Recognizing the therapeutic benefits of nature [Engemann et al. 2019], integrating nature into older people's lives improves their well-being by reducing depression and stress, and helping them find self-worth through plant care, adding vitality in old age [Chalfont & Walker 2013]. The built environment and urban spaces also influence the emotions and behaviours of older adults with mental health conditions, emphasizing the need for interactive and age-friendly spaces [Wu 2020].
Public buildings, including community centres and healthcare facilities, should be designed to meet diverse users' needs. Multi-functional complexes provide spaces for gatherings and intergenerational interactions, fostering healthy social relationships between older and younger individuals [Munteanu & Andronovici 2022]. Therefore, design elements considering the sensory preferences of older adults, such as good wayfinding, suitable lighting, glare-free surfaces and acoustic considerations, can promote a pleasant use of these spaces.

2.3. Age-Friendly Transportation
Accessible travel options and infrastructure can support convenient travel for older adults, avoiding them be geographically separated by society. The design of sidewalks, crosswalks, and public transit systems considers older adults' needs, with adequate bus-stop locations. By making transportation universally available, ageing communities can foster independence and good connections to the surroundings.
Many older residents actively engage in physical exercise through walking and cycling, or public transportation for daily needs, socializing, entertainment, and exercise. Therefore, thoughtful urban transportation planning can better meet their needs and lifestyles, encouraging active ageing. In addition to understanding how the built environment can be influential on older people's displacements, universal design principles should also be applied to the design of transportation infrastructure to benefit all users regardless of abilities [Zhang et al. 2023]. To that purpose, cities such as Antwerp, Belgium, are rising the pavement of waiting platforms for the tram network to provide levelled access and exit for universal use.

3. The Role of Urban Planners and Architects
Urban planners and architects should implement age-friendly communities by increasing awareness of the needs and potential of the ageing population, changing attitudes towards ageism, promoting accessibility and prioritizing aesthetics in policies, to create inclusive environments for older adults.
The Aoi Care Home [Hauderowicz & Serena 2020, pp. 130-137] can also teach us the "power of simple things": breaking the wall boundaries (literally) and offering a useful urban shortcut brought different people into contact with the senior residents, thereby avoiding age segregation. Besides, the presence of a candy shop corner in one of the senior residences is a way of promoting intergenerational contact and awareness. Similarly, in senior facilities with an embedded restaurant, café, or other facility open to the public [Schittich 2007; 2012], can offer service to the global community and broaden the contacts in a natural way, avoiding ageism.
Activities promoting awareness can be powerful tools in influencing public opinion and garnering support for age-friendly plans. Architects can collaborate with community organizations, healthcare professionals, and local governments to develop comprehensive strategies for implementing age-friendly designs. Through ongoing dialogue with older individuals, architects can gain a deep understanding of their unique needs and preferences, ensuring that designs meet real-world requirements.
Challenging the university students who will become future architects and urban designers, on how to design inclusive spaces for older people, as well as delving into it in academic research are also useful ways of spreading awareness to the theme, that can translate into fruitful results to society in the future.

Conclusion

In conclusion, integrating aesthetics, comfort and accessibility is fundamental for improving living environments for older adults. Through placemaking and a commitment to universal design principles, architects can create suitable built environments, promoting healthy and active ageing and enhancing the overall life quality for senior citizens. Addressing housing, outdoor spaces, public buildings, and transportation can foster positive ageing and independence, ensuring inclusive cities for all ages and abilities.

However, the process of achieving truly age-friendly communities requires overcoming challenges, such as retrofitting existing infrastructure, resolving complex regulatory issues and gaining stakeholder support. It requires sustained commitment, innovation, and a shared vision for the future – one where the built environment supports the dignity, independence, and well-being of all residents, namely the most fragile.

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FIGURES

Fig. 1 - Walkability of the Aoi Care neighbourhood and easy access to surrounding facilities, Fujisawa, Japan. Redraw by author. Chen, Tianqin, (2024). Walkability of the Aoi Care neighbourhood and easy access to surrounding facilities, Fujisawa, Japan.

Paola Buccaro
Università degli Studi di Napoli Federico II, Dipartimento di Architettura DiARC.
buccaro.paola@gmail.com

Beyond the threshold:
The effects of the dematerialisation on the relationship between city and home

Key Words
Rituality, Domesticity, Technology, Sensitivity

In the novel *Hisoyaka na Kessho* (in English *The Memory Police*), the author Yoko Ogawa imagins an Orwellian dystopia in whih a totalitarian regime banishes things and memories. The story takes place on an island where material culture is endangered: objects and memories they hold disappear from reality, and the Memory Police ensures that this collective amnesia is respected [Ogawa, 2020]. The novel presents numerous analogies with contemporary conditions of technological progress, which lead to sudden and irreversible changes. The bodily experience of the world through the physical relationship with objects and spaces, which has characterised the entire course of progress in human history, is challenged by new technologies that propose an incorporeal and intangible lifestyle. In fact, according to Korean philosopher Byung-Chul Han's critical reading of the Japanese novel, it is the "*domain of information*" that causes the same process of dematerialisation in contemporary society:

> "In Ogawa's dystopia, the world empties out until it disappears altogether. [...] Even body parts disappear, and in the end only disembodied, wandering, aimless voices remain. [...] Nowadays the world empties out, reducing itself to information as ghostly as those disembodied voices. Digitalisation derealises, disembodies the world" [Han 2022, p.5] .

In the eternal presence of the Internet, therefore, memory gradually dissolves together with the relationship between the body and the world, in a gradual "*passage from the era of things to the era of non-things*" [Han 2020, p.6]. In this sense, the progressive consumption of resources and primary goods also translates into a 'consumption' of the architectural envelope and objects, which tend increasingly towards dematerialisation.
For these reasons, the retrospective analysis of some contributions in the architectural field by radical personalities is particularly relevant for the prophetic value of their reflections. Analysing how their utopian projects have become an integral part of our everyday life and

domesticity underlines the topicality of the theme and the need for further predictions.
In 1972, during the exhibition "*Italy: the New Domestic Landscape*" at MoMA, Ugo La Pietra presented the project known as "*The Telematic House – Living Cel*", through which the architect investigated the use of new technologies in the domestic space. La Pietra's research envisaged what subsequently occurred in a macroscopic way, such as the addiction to the technological devices in a constant exchange of information between the individual in private space and the community in public space. It was a triangular-shaped micro-architecture, equipped with a multitude of latest-generation technological devices projected by the architect as the household appliances of the future, such as the '*Ciceronelectronic*' (comparable to today's Google Maps) and the '*Videocommunicator*' (prophetically useful in times of pandemic). These devices were conceived for establishing the relationship with the outside society by renouncing the corporeal experience of the world [La Pietra, 1983]. La Pietra's project aimed to explore the potential impact of engineering and technology on everyday life, conceiving the home as an individual space with virtual social moments. His vision particularly proved prophetic: this new conception of domestic space will eventually lead to a loss of the boundary between public and private where boundaries will become virtual, blurred and no longer tangible. Inevitably, once intimate domestic rituals will be transformed into live, real-time events.
Later, in 1986, Andrea Branzi took the concept of interaction between technology and domesticity to the extreme, proposing the "Remote-controlled House: living in an armchair" at the Milan Triennale in the exhibition "*The Domestic Project*"[2]. In Branzi's vision, in the house of the future, it is not the body that moves in space and interacts with objects, but the user controls them without physical effort from a stationary position: by sitting in his armchair in the centre of the house. The only movement envisaged is the pressure of his finger on the remote control, the last bastion of physical contact with the world (which in the contemporary era is already replaced by voice command).
The consequence of this ongoing process is the decreasing of the tactile experiences of spaces, which means to totally cut off at least one of the five senses. These phenomena thus undermine a series of mechanisms related to living, the essential element of which is habit. This is not only a physical relationship with objects and materiality, but also a series of unconscious gestures aimed at "absorbing the surrounding space, teeming with objects, images, sensations, in the mobile chessboard of memories and consciousness, which is only possible through the silent and skilfull filter of habit" [Vitta 2020, p.113]: the home is an expansion of oneself and one's interiority, and habit can be likened to a veritable ritual that is cyclically repeated with an almost sacred rhythm. The progressive dematerialisation of architecture thus contributes to the disappearance of this rites, that is of those "*symbolic techniques of habitation: they transform being-in-the-world in being-at-home*" [Han 2021, p.13]. Among these, we refer in particular to the rites of passage, such as those rituals that help to exorcise the succession of the different phases of life and that find space in the architectural element of the threshold, the main filter of the inside-outside relationship and the body-space one:

> "The rites of passage, 'rites de passage', structure life like the seasons. [...] Thresholds, like passages, rhythmic, articulate and narrate space and time itself. [...] It is the thresholds, the temporally intense passages, that are now being demolished in favour of accelerated communication and production. [...] The global is being erected through an inexorable dismantling of thresholds and passages [Han 2021, p. 48-49].

In a time in which the key words are fluidity and transition, it is clear that it is necessary to investigate the new relationships established between opposing spheres (such as city and home), no longer filtered by architectural elements. In the urban structure, the integration of city and domesticity has always manifested itself as a synergy of elements that integrate private life with the surrounding urban context. This fusion not only reflects the evolution of domestic needs, but also embodies architecture's ability to shape and adapt to the complex dynamics of modern life. The profound connection between the urban environment and domestic life is thus a key element in the evolution of both global metropolises and local communities. Architecture itself, in its ability to shape the human experience, plays a crucial role in building the synergy between these two interconnected worlds. This phenomenon not only opens up a study of physical structures, but above all a profound reflection on the very essence of domesticity today and the complex interactions that develop in contemporary society, increasingly characterised by dematerialisation. Indeed, post-covid everyday life is progressively forcing us to introject the city and public life into the domestic sphere, which makes it necessary to investigate, through architectural research, the new potential gradients of contemporary thresholds.
In fact, it is no coincidence that Marina Abramovic and Ulay chose a threshold in 1977 to realise the artistic performance entitled "*Imponderabilia*" at the Galleria Comunale d'Arte Moderna in Bologna. On this occasion, Abramovic and Ulay stand naked in the thickness of a narrow

doorway, forcing the public to pass between them to enter the gallery. Viewers wishing to visit the museum have to choose which artist to turn to, as passing through that threshold requires contact with the body of one of them. Such an episode raises questions of personal space, intimacy and physical contact between individuals, questioning the boundaries between self and world. Furthermore, the work explores the theme of crossing physical and emotional borders, both on an individual and societal level.
Marina Abramovic and Ulay's performance thus seems to perfectly embody the admonition Gio Ponti gives in his book *"Love Architecture": "always let the ARCHITECT (the artist) imagine for a door a person who walks through"* [Ponti, 1957]. The invitation is aimed at inducing architects to design spaces always respecting the human dimension. This, in fact, does not only refer to the measurements and dimensions of an inert body, but also and above all to its interiority and sensitivity, conceived as the capacity to experience the world through senses. On the future scenario of architectural research, therefore, there is a need to design a new domesticity that certainly avails itself of the possibilities offered by new technologies, without, however, renouncing a specific human, perceptive and sensitive point of view.

ENDNOTES

[1] The translations of the quotes in the text are all by Paola Buccaro.
[2] https://www.domusweb.it/en/from-the-archive/gallery/2022/03/25/andrea-branzi-and-domus-from-the-destruction-of-culture-to-interiors-as-critical-landscapes.html

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Francesco Tosetto
Sapienza Università di Roma, Dipartimento.di Architetura e Progetto
francesco.tosetto@uniroma1.it

Natural tension.
Myth, shape, body

Key Words
Myth, Shape, Body, Natural landscape, Mountain

Premise
Myth, form, and body – these are three elements that have characterized the relationship between man and mountain; a tension towards nature that has manifested through the intermingling of these entities. The proposed speculation aims to outline models that describe them and the ways in which these essences take shape. These three elements can be read separately, or in the sequence of their appearance or randomness. The hypothesis is that precisely in the semantic gap that arises between them, one can attempt to synthesize the relationship between man and mountain: between body and natural environment.

Myth
The quest for the unknown, the desire to unveil what is concealed from the eye, and the fascination with the inaccessible have, since time immemorial, driven human beings to venture into "other" places, those that are extreme and external to what is conventionally considered domesticated or tamable space. Inspired by the Platonic tension to discover what lies beyond the cave, humanity has tirelessly pursued the exploration of the extreme, the most distant realms, those etymologically "outside" the realm of knowledge, seeking direct experience of the unknown. [Foucault 2011, p. 27]. The towering walls, converging to reach their peaks, stand as remarkable expressions of the natural landscape, embodying the epistemological magnetism concentrated in their rugged harshness. Mountains, epitomes of inaccessibility and extreme limits, also serve as the preferred sites for cosmogonic acts across numerous religions, from Mount Olympus to Kailash. This illustrates how the act of ascending embodies a divinatory action, as noted: "From the moment man began to question his own origins and that of the world around him, his reflections also extended to the peaks and mountain ranges". Mountains further symbolize "the link between the Earth and the Sky", their taut forms culminating in

the "top", the singular point where the earth's surface "touches the world of eternity". Their "base branches into multiple buttresses in the world of mortals", which epistemologically can be summarized as the world of the known, of everyday life. Consequently, the knowledge and experience of myth serve as "the way through which man can rise to divinity, and divinity reveals itself to man" [Messner, Martin 2022, p. 9; Daumal 1991, p. 15].

Shape

In its maximum abstraction, the prominence – the mountain – serves as the backdrop for the existentialist ritual punishment inflicted by Zeus on Sisyphus, becoming a focal point in the quest for knowledge. Simultaneously, it holds the status of a forbidden place, a site of punishment for mankind – from its inception – an abstract representation of a ritual, "mythological" mountaineering [Eliade, 1975, p. 32]. Mountains emerge as privileged locations for divinatory events in nearly all terrestrial religions, spanning geographical and cultural distances. Examples include the significance in Judaism, as observed in the Bible, and in the sacred texts of Tibetan Buddhism. Ascending these sacred peaks introduces a profound question about experiential value. The "divine and chosen nature of these very ancient 'monuments" has often led them to be regarded as "places where good and bad divinities manifested themselves", positioning "the mountain at the center, an image of man's metaphysical fear faced with the end and simultaneously an image of his Hybris". This dynamic introduces a tension between experience, humanity, and the dimension of the natural landscape that surpasses the mere act of ascending. This metaphysical experience is rooted in the inherent dichotomy of mountains, encompassing the mythological, divinatory, and cosmogonic components hidden within the rugged formations that adorn the terrestrial landscape. The desire to bring forth the experience of the divine dwelling within these peaks further accentuates the profound nature of the metaphysical journey undertaken by those who ascend [Messner, Martin 2022, p. 9] Erri De Luca, in Sottosopra. Le Alture dell'Antico e del Nuovo Testamento, contends that the "geography" of these distinct locations "belongs to the landscape of a revelation". Their divinatory experience "insists on a soil and on a small department of humanity by changing its connotations", with De Luca specifying how "sacred writing upsets that geography at least as much as the existences involved" [De Luca, Matino 2012, p. 9]. This transformative change, stemming directly from the experience of the natural mountain landscape, prompts a crucial exploration into the reasons and implications of the relationship between the body and the landscape. It also delves into the sensorial repercussions of overcoming what geographers term the "plastic resistance of the relief", impacting the perception of the landscape itself. Since ancient times, this interaction has been employed to shape myth, attempting to partially exorcise the Hybris described above through knowledge. Mountains, according to De Luca, "resemble sacred crystals that lose their splendor and their magic if we touch them" [Messner, Martin 2022, p. 85].

Body

The relationship between man and landscape, and between man and the divine, is articulated by Reinhold Messner, focusing specifically on the world's highest mountains, the Himalayas. He observes that "seen from the south and the north, these mountains are so distant, so isolated from the world of humans that they seem to be inhabited only by gods", and the experience of the divine unfolds through a direct connection with the landscape, with the body serving as the medium [Messner, Martin 2022, p. 85]. Tensed to the landscape to experience the myth:

> "The True, identical to the divine, never lets itself be known directly about us; we contemplate it only in the reflection, in the example, in the symbol, in isolated and related phenomena; we perceive it as an incomprehensible life, and we cannot give up the desire to understand it anyway" [Goethe in Messner, Martin 2022, p. 90].

Goethe's words masterfully summarize what this relationship expresses. For Tibetan Buddhists, "somewhere in the center of the earth stands a mountain which represents the earth's axis", embodying "a pole of stability in the eternal rotation" and symbolizing the daily revolution of an intimate and personal cosmogony: "a place of silence, of the passage from one world to another" [Messner, Martin 2022, p. 91]. Mount Kailash, described by Messner as "a mighty pyramid of rock and ice, a crystal temple, often hidden by clouds, far from any profane contamination", is a place where ascension is strictly prohibited for any human being. Rigorous believers perform a ritual path on all fours with their hands, feet, and knees protected by wooden bars to measure the circumference with the size of their body in a "pilgrimage lasting at least 14 days" [Messner, Martin 2022, p. 104].
In this ritual, where the body takes center stage in the landscape, near certain stones, "they

perform particular rituals: they lick the ice, they place their hands on mysterious footprints, or they scrape with small stones inside the cavities of the rock that they find along the way" [Messner, Martin 2022, p. 99]. The experience of the sacred thus converges with the experience of the landscape, where "everything and only movement", and man becomes abstracted, and nature becomes a measure, as "the rhythm of the slow walk leads to the elaboration of sensations. Like poems". "Emptiness, abandonment, overcoming earthly suffering" transcend the nihilistic will, as "pilgrimage is never theory but rather practice; it can transform every form of experience into knowledge". [Messner, Martin 2022, p. 100]. Messner articulates his personal pilgrimage as a meandering through the natural landscape:

> "Without a precise purpose, without a mission, without a destination. Each step I took was more tiring than the last and yet identical to the previous one. So, at every step, it becomes realization, and this path of immanence, of being-totally-here, leads to nothingness. The first step counts as much as the last; each one is the beginning and the end at the same time. The action is no longer aimed at tomorrow, at the future. There is no longer an achievable goal in the future, also because there is no longer even the past. Life becomes present. Kailash is the center; its holiness is its reality in empty space. It is the pilgrim's amazement that makes this space visible, transparent, unique. Fills it with light. Man, and nature become one" [Messner, Martin 2022, p. 95].

The body disappears and simultaneously returns to the center of reasoning as the sole means of verifying space, nature, and the sense of the divine that dwells there, generating a ritual neo-existentialism; "only man walks on the borders of that which has no borders; he knows how to see the mystery, listen to the silence, experience the infinite" [Tomatis 2005, p. 25].
The rhythm that propels man is therefore dictated by the shape of the landscape, and its purpose is purely speculative and meditative.
In fact, Milarepa clearly expressed it this way:

> "If you fail to practice meditation, your life, however long it may be, loses meaning and becomes just an accumulation of negative actions. Therefore, practice zealously in the solitude of the mountains and raise the banner of enlightenment. Go to Tise, Kailash, the great snow mountain prophesied by the Buddha, and meditate". [Milarepa in Messner, Martin 2022, p. 107]

Hybris eludes "the miracle that saves you when every logical concatenation of facts has the only consequence of condemnation. Now that irrational conclusion that overturns logic can happen once". Encountering the myth, when landscape and inner self merge through the body, questions arise, answering the query posed by Daumal in The Analogous Mountain: "What is a mountain?"[Daumal 1991, p. 136; Dalla Porta-Xydias 2019, p. 52].
To answer, even if partially, Daumal's question, "as if our disposition were intertwined with the disposition of the earth: the Kailash symbol of the cosmic nature of man, its peak removed from conquest, accessible only to respect". [Messner, Martin 2022, p. 95].

Conclusion

In conclusion, these three passages, these three elements, do not aim to summarize or synthesize the experience of ascending, but rather to explore the errors, the glitches, they evoke in the reader. The body, in its relationship with space, transfers scars into the mind in the form of memories that resurface randomly, without following the structure of linear thought. Memory, reminiscence, no longer occur according to a precise scheme – and that is what this brief passage seeks to evoke – just as the direct experience that the body undergoes in natural space, governed by the entropic aegis of nature.

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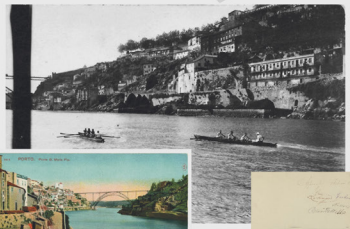
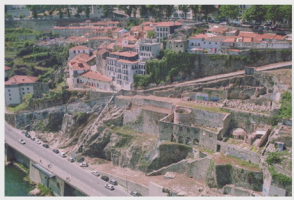
Industrial housing

Jesuit Chapel
and
Industrial housing additions

Factory buildings

House and chapel
and
1st Factory addition





Leonor de Sá Reis [1], Carla Garrido de Oliveira [2], Filipa de Castro Guerreiro [3]
[1] Faculdade de Arquitectura da Universidade do Porto, Faculdade de Engenharia da Universidade do Porto
[2, 3] Faculdade de Arquitectura da Universidade do Porto, CEAU - Centro de Estudos de Arquitectura e Urbanismo
[1] leonordesareis@gmail.com, [2] coliveira@arq.up.pt, [3] guerreiro@arq.up

Fragmented narratives: Drawing memory and time in the scarp of Fontainhas

Key Words
Porto, Fontainhas, City, Metamorphosis, Memory

Introduction
Urban composition is an art that draws upon time, yet unlike other art forms such as music, it cannot rely upon controlled and limited sequences. Depending on circumstances and people, sequences within a city are subject to reversal, interruption, abandonment, and abbreviation, as noted by Lynch [Mendes 2000, p.20]. The ways in which we inhabit a space are instrumental in shaping its evolution.
This work seeks to provoke a reflection on the metamorphosis of space and architecture: understanding transformation and superposition as methods, buildings as living organisms, and the diverse dynamics that contribute to a space, the energy that drives its development. In addressing this concern, the scarp of Fontainhas in Porto emerges as a place through which to explore the interplay between city development and human interaction with space.
Fontainhas' steep and unstable terrain belies its historical significance – a place where for centuries, a balance existed between the hard granite, the flowing river, the bustling city and its inhabitants. This harmonious relationship, seemingly intuitive, unfolded through the occupation of the space, shaping the scarp with housing, industrial buildings, pathways, public spaces, railways, as well as gardens and fountains, thus fostering a vibrant coexistence.
However, over time, this equilibrium eroded. Interventions driven by differing priorities deemed the space uninhabitable, leading to its desolation and decay. Yet amidst emptiness and ruin, glimmers of hope emerge. Several initiatives have sparked new uses of the space, spontaneously cultivating a new sense of community. This revitalization emphasizes the essential role of human presence in Fontainhas.

Place
The scarp of Fontainhas is characterized by its nature, primarily consisting of granite with numerous water springs, and it's located between the lower level of the city (Douro River waterfront) and the high level (Passeio das Fontainhas). The scarp's profile has two prominent railway lines in the sense that they divide it, on its vertical axis, roughly into three sections. The scarp's dimensions and connection with the river varies along its length, with the west near Guindais being wider, allowing for greater building density, while the east is steeper and narrower, making it more difficult to build. The most direct connection between both levels is established diagonally by Calçada of Carquejeiras, which now still exhibits the linearity of a military design, but initially was a winding path that connected isolated buildings on the scarp.

Memory
This part of the city results from countless interventions, alterations, superpositions and demolitions over the last five centuries of development. Prior to the 16th century, the only knowledge about this scarp is that there was a fountain and that the land near it was acquired by the Jesuit priests who had recently arrived in Porto. At this time, the land beyond the city walls was divided into large plots that served as countryside villas [Costa, 1789, p.37]. Like other religious orders in the city, the priests acquired various plots and formed what they called Quinta da Fraga [Martins, 1986, p.81], the boundaries are indefinite, while the name is related to the scarp's granite composition. It is documented that the Jesuits carried out several activities, which in turn led to the construction of buildings. The chapel with a prominent place in the scarp may have been built by the priests, given its nature and orientation. Prior to the Jesuit's expulsion form Portugal and the subsequent land division and sale, a couple purchased a plot by the river, and in 1717 built a house with another chapel [Ferreira,1963, p.178]. During the military Siege of Porto (1832-1833), this house served as navy barracks due to its proximity to the river. Later, around 1840, during a growth in the industrial presence in this part of the city, a ceramics company - Fábrica de Cerâmica do Carvalhinho - acquired this land and renovated the buildings [Machado,1988, p.206]. Over time, as the factory gained recognition, it also grew. More workshop buildings were constructed in proximity to the Calçada and the railways, that, by this time, were important commercial links for the city. Furthermore, industrial housing expanded because of the factory's presence. In 1945 during the Douro River avenue's redesign, the house, chapel, and several factory buildings were demolished. This also included the removal of the former pier, which once established a connection to the water, and, along with the Calçada, formed a continuous path towards the river.

Present
Fontainhas have been progressively abandoned. The public spaces lack maintenance, there are empty dilapidated buildings, undefined and disjointed spaces, houses in poor condition with records of instability, with no solutions planned. The activities that brought people together have been dispersed or moved to other parts of the city, fostering a sense of detachment and indifference. Furthermore, the relationship and care of the natural watersprings is lost, this leads to destructive and dangerous disasters whenever there is heavy rain. Projects and interventions starting from the mid-20th century have ignored previously established expansion intentions, notably, Ponte do Infante, which created a visual and physical barrier, that also disconnected the few pedestrian paths that still existed. This has caused significant ruptures in the earlier condition of spatial continuity resulting in the loss of the dynamic life that was once existed.
The Jesuit presence on the scarp is now encapsulated solely in the remnants of a chapel, repurposed in the late 19th century into industrial housing. Left untouched since its dismantling in the 2002, the ruins stood, until 2023 when heavy rain led to the final demolition, as a testament of the aspirations of the past, now lost in time. Similarly, echoes of the ceramic factory persist through scattered remnants and carved platforms, once bustling with industrial activity, now mere vestiges of a bygone era.
Despite this, an increasing number of initiatives of resistance seek to revitalize the area, remarkably the Urban Garden Project, which began spontaneously with a small group of people, now one of the largest in the city, fostering community and a new sense of place by presence.

Intentions
This memory and the history of this place are revealed through the presence of the ruins, small fragments of walls, and pathways, offering a glimpse of another time. Today, the scarp is characterized by these scattered disjointed elements: the Calçada, remnants of a chapel, an old ceramic factory, two railway lines – one deactivated, and four pillars of a bridge. However,

little has been done to change the circumstance of this place shadowed by the bridge, most of the recent interventions aim only to stabilize it, which in turn seem to make it increasingly more inaccessible. Nonetheless, this place and the people that inhabit it, create a context rich in particularities and potentialities that create enthusiasm for the possibility of its reactivation.

Method
This analysis starts from the realization that the city is built by the successive superposition of layers of transformation, by the crossing, which then occurs, of various attitudes towards development and growth of the urban form, and by the balance between restoration and the incorporation of new elements. In the case of the scarp of Fontainhas, because it is structured by reference points, it was necessary to draw the different times and layers to articulate them and trace the relationships between them. This method has not only clarified the results of the transformations that have occurred and how the past and its memory have been transmitted but also deepened our belief of the pivotal role of embodied presence in the scarp.

Conclusions
The action of isolating the different moments and overlapping them enabled a greater understanding of the fragmentary condition of the ruins, as they form part of a structure and of an idea of space. The image presented seeks to communicate this idea and these discoveries. It aims to be a visual palimpsest of the different times, intertwining layers of history and memory, to illustrate and show, that the nature of the space is not to be disjointed, but to be a place of life and energy. The drawing represents an almost real but still idyllic portrayal of the scarp, it combines the historical documents, the accounts of people, the movies, and the photographs to create a virtual moment where all the buildings and the memories are in that place at the same time.
This research allowed to see beyond the existing, not only by analysing and studying the past of Fontainhas, but also because of the frequent visits to this area of the city it has been made clear that it is a space of constant change and that it is through the various ways in which people utilize it today that it is still alive.

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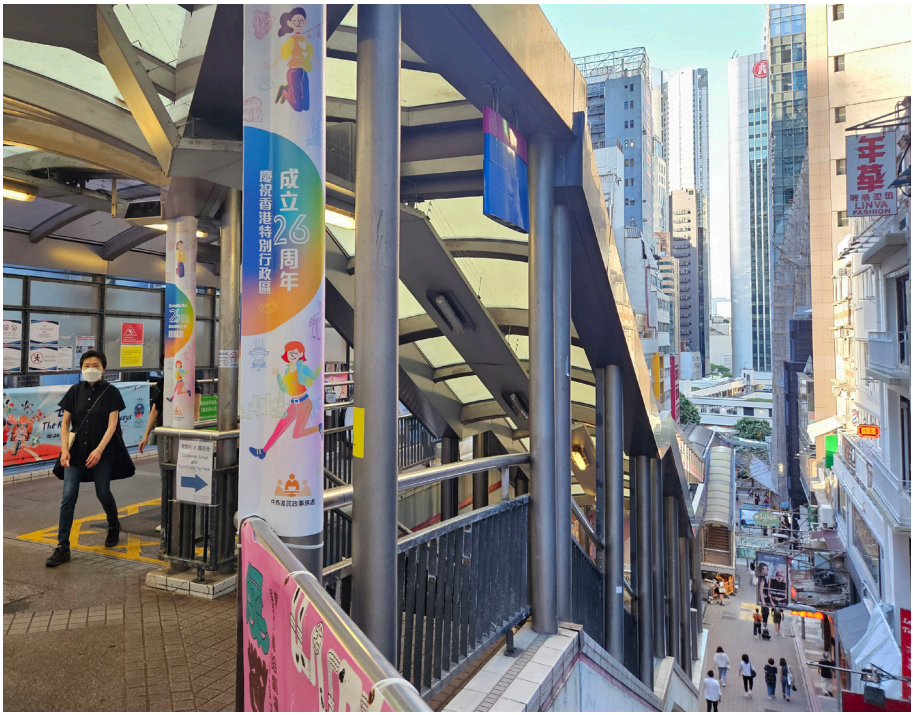
FIGURES

Fig. 1 - Leonor Reis, *Fragments and memory: a moment of the scarp of Fontainhas*, 2024, Axonometric drawing and photo collage, 160mmx240mm, Porto - Fontainhas.


慶祝香港特別行政區
成立26周年
年華
LINVA
FASHION

Esther Lorenz
School of Architecture, University of Virginia
e.lorenz@virginia.edu

The Augmented Kinesthetic City.
Embodied experience of Hong Kong's urban morphology

Key Words
Urban density, Mechanization, Pedestrian movement, Embodied experience, Spatial conditioning

Around mid-twentieth century, the proliferation of the car triggered substantial transformations and new scales and forms of urban expansions in most American and European urban aggregations. This tendency carried through in the rapid urbanization processes of Chinese cities in the late twentieth and early twenty-first century, with Beijing and its system of multiple concentric highway rings presenting a prime example.
Kinesthetic experience is the sense of body position, muscle movement and weight as felt through nerve endings. A passive body has very little to no kinesthetic experience. In the car, minimal movements of the body are translated into the fast movement of the car that the driver experiences primarily in visual terms. The car creates its own environment: air, temperature, smell, and sound. It leads to a detachment of the body from the environment its traverses and in the process, produces a technically mediated experience of it.
For a variety of reasons, Hong Kong has taken a different path of urban evolution, instead of one of bodily detachment, it has produced an urban environment that fosters and amplifies bodily engagement. Here pedestrian movement has played a similarly potent role in the production of urban spaces and advancement of architectural typologies as the car has exerted in most other cities. Hong Kong does not only conform with the principles of small-scale mixed-use and short distances, characteristics of historic, pre-car cities, it reinvents and furthers that model through three forms of augmentation, which I identified and the discussion of which will form the core of this paper: Densification, Mechanization, Conditioning.

Densification
Hong Kong's unique spatial characteristics result primarily from its extreme density. Rather than the result of a grand masterplan or vision, Hong Kong's structure and organization there

are a series of factors that contributed to the morphology and performance of the city as we know it today. An 1878 chart of Hong Kong illustrates that Hong Kong Island, as ceded to the British, was essentially a mountain surrounded by water with only a narrow band of flat terrain along the northern shore that the British used for their initial settlement, forming the heart of today's Central district. The map had been drawn at a time when Kowloon was already under British rule but had not started to be developed yet. Also note the shape of the land, which later underwent massive transformation through successive land reclamation.
Hence the dealing with restricted land resources is deeply embedded in Hong Kong's genetic code from the very beginning. Hong Kong evolved from a tight street grid, that subsequently expanded further up the hill, and into the water through land reclamation. Urban development in Kowloon began in the early 20th century, based on a regular urban grid as well.
Over time, with development in technology and fire regulations and through resulting typological transformation, the urban fabric on Hong Kong Island and Kowloon begun to successively expand vertically. The extreme compactness enabled Hong Kong to evolve as a predominantly pedestrian city. The spatial compression together with the density of pedestrian movement created the need for efficient structures for human flows, which offer clear orientation and accelerated transport of walking citizens. The urban space as experienced on foot is comprised of a complex network of walking paths, interior and exterior, that emerge in the fascinating intersection between pedestrian infrastructure, public transport systems, and architecture.

Mechanization
Simultaneously, the city has successively been developing its public transport system, which today consists of an efficient interplay of rail-based and motorized transport networks across the entire city. Walking in Hong Kong, as a proper motion of the body, often takes place in alternation or in the transitions between different forms of mechanized people movers. These systems not only create a large amount of public and semi-public spaces of mobility, which form a characteristic and significant part of Hong Kong's urban space, they also coalesce with the built environment in a way as to provide seamless transitions between spaces of transport, commerce, work, and living. The total integration of transport terminals with the built environment, the use of mechanically enabled pedestrian movement systems, and the interconnecting elements such as lobbies, elevated walkways and corridors, not only reinvents pedestrian movement in urban space but also determines the morphological, functional, visual, and social dimensions of its organization, which fundamentally diverges from traditional western models of the city.
Tim Dant talks about the combination of human being and car as the "driver car" that should be seen "neither as a thing nor as a person; it is an assembled social being that takes on properties of both and cannot exist without both" [Dant, 2004]. This assemblage produces a range of social actions associated with the car such as driving, transporting, parking, polluting, killing, communicating, and so on. While Dant sees this assemblage as one that is not permanent and that can be dissolved anytime that we leave the car, the driver-car nevertheless has a permanent impact on the environment through its spatial needs, as well as on the performed social space on the road. The dominance of the driver-car creates a very different kind of city from the one that we can witness in contemporary Hong Kong. Mechanization does play a role in Hong Kong's pedestrian infrastructures, but while engaging with them, the body stays autonomous, it does not enter an assemblage with them as is the case with the driver-car, and the mechanized devices form part of the urban landscape that is traveled through. The strong degree of mechanization of pedestrian movement as prevalent in Hong Kong, rather than replacing or compromising the body, supports and augments it. The increasing use of mechanization since the 1980s expands the distances traveled, boosts the number of moving people, and supports pedestrian endurance in Hong Kong's subtropical climate.

Conditioning
Furthermore, Hong Kong has developed elaborate strategies of spatial conditioning to create an environment that is comfortable to the human body and to produce atmospheres that enhance the perception of spatial characteristics and functions. These strategies may be visual, acoustic, haptic, and even olfactory, and may serve various goals, from human wellbeing, to orientation, to commercial manipulation. The rise of shopping malls in Hong Kong was a significant driver for the emergence of conditioned space. Malls, always part of a programmatic hybrid, form an integral part of the pedestrian system and the public domain in Hong Kong; many of the large malls have passages that offer public access 24/7, and their impeccable cleanliness, curated soundscape, and most importantly conditioned air offer relief from the noisy, polluted, and steamy climate outside. Within the realm of private residential developments, narrative conditioning is closely tied with value creation in real estate speculation, while at the same

time providing a variety of atmospheres for the body to inhabit [Lorenz, 2013]. As a city that is predominantly pedestrian, Hong Kong displays a multitude and extreme intensity of these stimuli that directly act on the human body.
Against this background, Hong Kong may be suggestive of a different kind of future city that is rooted in the very basic corporeal function of walking, despite its large size, number of people, and complexity. Underlying this conceptual framework are the cognitive and cultural dimensions of the direct bodily engagement with urban space as an augmented, albeit unmediated, kinesthetic experience of the city.

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FIGURES

Fig. 1 - Esther Lorenz, Central Mid-Level Escalator, 2023, photograph, Hong Kong

Segah Sak
D. Bilkent University, Department of Architecture
segah@bilkent.edu.tr

Ankara train station as a locus of conflicts

Key Words
Transition, Mobility, Ankara train station, Conflict

Urban metabolisms function through mobility which enables flows, intersections, and encounters. There, stations have strong impact on the city's entity, experience, and genius loci. This study focuses on the somber journey of Ankara Train Station (*Ankara Gari*) through time elaborating on the significance of spaces of transition as representations of all that pass by.
Transition is a problematic of the relation of human to time and space, of the relation between the infrastructure of the power to the public. Transition may be physical or mental. Transition presupposes separation and connection either chronic or spatial. The uncanniness of transition reflects upon the station.
Ankara was declared to be the Capital of the Turkish Republic in 1923 depending on its central location and position on the existing railway infrastructure. Railways was the fundamental means of transport and expansion of the railway network was one of the ideals of the new Republic. *Ankara Gari* was built in 1937 as the "modern" entrance of the new capital. The building, as a door, facilitated access to the city for the new incomers, to other places for the residents and to the contemporary life and spaces for all [Sak & Basa 2012]. Eventually, in line with the doors of Simmel [1997], it separated the newly constructed modern capital from the rest of the country, while also connecting it to the world.
In decades, both the country and the city witnessed various ideological, political, social, and spatial changes along with global cultural transformations. In 2008, despite the oppositions by planners and architects, the eristic municipality built an underpass for the vehicles on the previously humane Station Road, which could easily be considered by Jacobs [1961] as one of the "most vital organs" of the city. Rooted on this new highway, now many off-scale constructions are realized.

Here, one must also remember that "transport is at the heart of the State apparatus" [Virilio 1995, p. 57]. In 2015, the Station witnessed the country's most deadly bomb attack that caused death of more than 100 people who were attending the "Peace Meeting" organized by various NGO's. The discourse of the state regarding this tragedy raised multiple questions about the country's factional and tense context.
Just a year later than the bombing, the new train station building serving the high-speed trains was opened. Designed in a universal style by one of the mostly employed architectural offices for commercial spaces, the new station swallowed the genius loci of the site, allowing for further constructions that feed the oppressive government and its apparatus. Across A*nkara Gari*, now the new station stands oscillating between a non-place [Augé 1995] and all-place [Wood 2005].
Regarding its journey in time, here, the Station is handled as a locus of socio-political contestations and tensions that constantly re-make the urban landscape of Ankara and re-create its genius loci. The analysis is built upon what has passed by the Station, upon multiple transpositions amidst dichotomies such as mobility-stillness, life-death, peace-battle, connection-separation, continuity-rupture, and social-commercial.

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Ai Cheng[1], Wu Yue[2], Filippo Orsini[3]
[1,2,3] Politecnico di Milano, Department of Architecture and Urban Studies
[1] ai.cheng@polimi.it

The interplay of action art and architectural spatial practice.
A Case Study of Chengdu

Key Words
Action art, Architectural spatial practice, Chengdu, Avant-garde, Urban dynamics

This research delves into the interconnected associations between action art and architectural spatial practice, casts a spotlight on the intricate microcosm of art within the urban environment, employing Chengdu as a significant locus for investigation due to its unique historical, cultural, and social landscape that nourishes its categorization as an "action art ecosystem". The research engages in a comprehensive analysis of the historical evolution, avant-garde underpinnings, and contemporary implications of action art within Chengdu's urban fabric. A succinct illustration of this concept can be found in the "Living Water Garden" project, a compelling testament to transformative power of cultural expression.

Introduction
In the diverse field of urban dynamics, the exploration of action art in conjunction with architectural spatial practices provides an opportunity to delve into a phenomenon brimming with cultural richness and spatial innovation. Chengdu, a city renowned for its openness and rich historical depth, forms the cornerstone of our research. Its geographical position, situated at a significant distance from the political epicenter, allows for cultural liberation, nurturing an environment receptive to unconventional expressions of art and architecture.
Action art, an integral medium within the realm of conceptual art, encapsulates the materialization of ideas through performative actions [Krauss 1986]. It serves as a creative interface inclusive of art history, sociocultural 'alienation,' conceptual imperatives, and inherently political attitudes. Furthermore, it ventures to disrupt conventional aesthetics, instead positioning the human body as a powerful tool for artists to question societal norms.

Chengdu's rich history and diverse culture offer a unique backdrop for this exploration. The harmony existing between art and architectural practices in public spaces sets the stage for a transformative spatial dialog.
Our study is founded on the central premise - the interaction between action art and architectural spatial practices. The objective of this study is to unravel the interplay between architectural spatial practices and action art, using Chengdu as a focal point. By understanding how these two domains function together in a city known for championing cultural inclusivity, we aim to unveil new perspectives on urban planning and socio-cultural development.

Literature review
Action art, serving as an optimal medium within the realm of conceptual art, places emphasis on conveying ideas through performance acts. This art form strays from the pursuit of conventional aesthetic gratification. Instead, it projects outwardly, engaging with issues significant to art history or sociocultural 'alienation,' conceptual imperatives, and inherently political attitudes ([Wang Jiehong 2012]. In this context, the body ceases to be a bridge between reality and fabrication; instead, it constitutes an assertive tool for artists challenging societal norms [Rosalind Krauss 1986].
China's action art experienced a boom in the mid-to-late 20th century, with a significant increase in the number of works produced and individuals becoming full-time action artists[Lv Peng 2000]. Beijing and Chengdu emerged as significant representatives of China's action art, reflecting the complexities and multitudes of Chinese social realities.
Action art made its debut in Chengdu in 1995, symbolized by the 'Eight Eccentrics of Sichuan', whose performances in urban public spaces attracted widespread media coverage. By 1997, the Central Television Station was filming action art activities in Chengdu for its 'Art Star Sky' series. Themes explored within Chengdu's action art were diverse, ranging from identity and displacement amid the urbanization process to consumer ethics and individual experiences in a market economy [Wang Lin 2007].
Regarded as the 'representative of avant-garde art,' this controversial art category demonstrated a spirit of rebellion and adventure from its inception. Action art, unrestricted by medium, material, form, discipline, or space, exhibits versatility, making its presence felt in various urban settings such as markets, bookstores, riverbanks, commercial streets, abandoned factories, shop windows, and streets. The body is a central element in performance art, serving as a living artwork and a means of creative communication [Intili 2015].
Focusing on public space within action art not only implicates urban citizens and art but also pioneers the notion of cultural democracy in contemporary social contexts. The practice of displaying live artworks in public spaces departs significantly from exhibiting material art objects like installations, sculptures, and films. The transience and experimental nature of these displays involve the broader urban community [Li Jiansheng 2017].
Chengdu's rapid economic development has positioned it as a core city of southwestern China. Its openness facilitates the free occurrence of action art within the urban milieu. Indeed, the proliferation of action art has contributed to the improved ecological environment within the city. With bodies intervening in urban spaces, action art, which predominantly uses the body as an artistic medium, creates temporary public spaces. Its progressive nature often brings a critical perspective, influencing the emergence of public consciousness. Interactions of these elements with urban spaces occur at both physical and spiritual levels.

Research framework
Building on the theoretical foundation established in the introduction, this research dissects the nuances of the relationship between action art and architectural spatial practice, unfolding in Chengdu as follows:
Addressing the challenges faced by action art with public attributes due to impediments in avant-garde ideologies and drawing connections between these challenges and the capacity of the body to alter urban spaces through performance.

Case study: "Living Water Garden" project
To exemplify the theoretical complex dynamics between action art and urban space development, the seminal "Living Water Garden" project in Chengdu is examined. Initiated in 1995 by artist Gao Minglu, this project wielded art as a transformative force on the fate of Chengdu's mother river, the Fu Nan River. Gao, wielding a banner proclaiming "Water Guardian," traversed the streets adjacent to the Fu Nan River, sparking a transformative movement.
In the broader global context, the 1990s witnessed the emergence of large-scale environmental conservation initiatives. Pertinently, in 1995, Patsy Damon, founder of the American "Water Guardian" association, collaborated with artists from Chengdu, Tibet, Beijing, and beyond.

Their mission was to establish the world's first urban ecological environmental park themed around "water protection" along the banks of the Fu Nan River. The participatory involvement of artists from diverse geographical backgrounds injected a global perspective into this local initiative. Under public scrutiny, media attention, and governmental cooperation, the "Water Guardian" art project not only reshaped the destiny of Chengdu's mother river but also became the cornerstone of the Fu Nan River governance project, culminating in the creation of the "Living Water Park" in 1999, now situated on Hua Xing Road in the Jinjiang District. This project garnered international acclaim, including the 1998 "United Nations Habitat Award," marking it as the world's first urban ecological park centered around water.
Significantly, the success of the "Living Water Garden" project exemplifies the wide acceptance of action art utilizing the "body" as a primary artistic medium within Chengdu's urban governance framework. The unconventional approach employed by the artists not only raised awareness but actively engaged the public and prompted transformative changes in urban planning and development.

Action art as an intermediary of urban dynamics
In elucidating the interplay between action art and urban dynamics, the paper delves into the motivations underpinning this avant-garde art form. As embodied by artists like He Liping, whose 2015 piece "As Long as There Is Sand, Anywhere Is the Maldives" sought to evoke a recalibration of Chengdu's inherent optimism amid the encroaching disorder of urban life. He Liping's subsequent work, "Life Square" in 2020, documented the plight of old neighborhoods in Chengdu, emphasizing the migratory shift of the younger population towards the south due to rapid urbanization. Although these artworks utilizing the "body" as a primary medium engage public attention and discourse, their direct impact on urban architecture remains limited, serving primarily as catalysts for public awareness and discussion.

Conclusion
In conclusion, this research endeavors to unravel the intricate relationship between action art and architectural spatial practice within the urban fabric of Chengdu by incorporating theoretical propositions with the practical implications of this study.
The juxtaposition of traditional public art forms with avant-garde action art serves as a lens through which to scrutinize the dialectics inherent in the urbanization process, human-city relations, and the perennial tension between environmental concerns and urban development.

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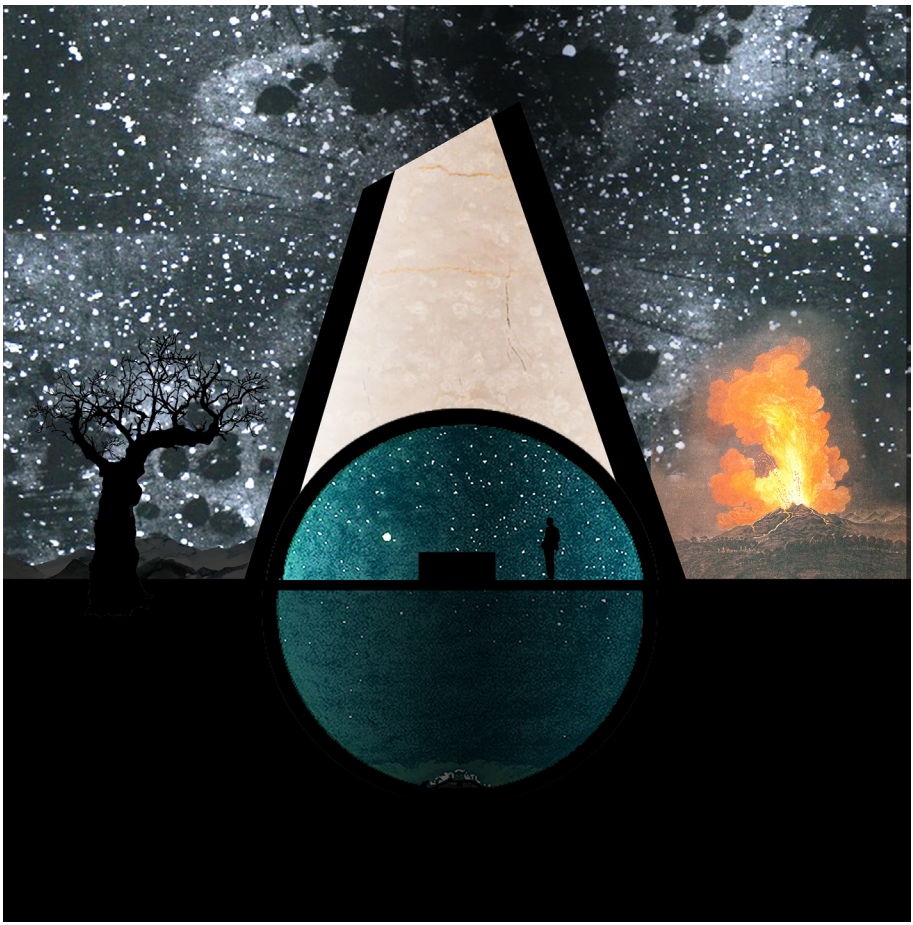
FIGURES

Fig. 1 - Fig. Action art projects in Chengdu, from left to right: Water Defenders, Bird view of Living Water Park, As long as there is sand, anywhere is the Maldives, Life square,1995-2020 © Betsy Damon(US), UP-ON, ZhangYinchuan, https://www.margieruddick.com/living-water-park,He Liping, Ai Cheng



Angelo Ganazzoli
Politecnico di Bari, DICATECh - Dipartimento di Ingegneria Civile, Ambientale, del Territorio, Edile e di Chimica
a.ganazzoli@phd.poliba.it

The tomb as an architectural garrison in the era of virtualization.
The recovery of the sacred dimension of architecture

Key Words
Architettura funeraria, Tholos, Virtualizzazione, Corpo

In the last century, human civilization lived an era of progressive de-materialization of its own poietic expressions, both in terms of the tools it uses, both in experiential. The pressing transition from analog to digital that has affected our lives has involved the elaboration and remodulation of practices and effects of life in man: refer to the social, relational and emotional dimensions. Furthermore, pandemic period has led to the confinement of human beings in homes, where they have lived and carried out, as well as the act of dwelling, also all the events of their daily life: from work events to work and leisure events. Once the pandemic crisis has been overcome, it seems that society is asking itself what direction to take in the event of an ongoing change. Whether it is preferable to persist with the digital experience, never experienced more profoundly and simultaneously on the globe as in this era, or to backtrack on what seems to be more inherent to the existence of man since the time of his appearance on earth. In this question reminiscent of Hamlet, the same debate seems to affect the spaces of architecture. What are the places that nevertheless require corporeity?
In the following discussion, we want to outline the dynamics of the virtualization of spatial experiences in the contemporary era and the relative de-materialization of architectural spaces, with the exception of places of memory, which seem to escape this logic (starting from those intended for the cult of dead). To do this, we resort to a multidisciplinary methodology that brings together anthropological, philosophical and architectural characteristics for an overall and transversal reading of the topic.
The process of virtualization of experiences, which appears characteristic of this era, actually constitutes an ongoing process since the birth of Civilization. At the basis of this process is the invention of writing, ideograms and pictograms, or the abstraction of the object according to its concept, which can be traced back to by means of a symbol, which often does not coincide with its formal representation - this is the case of the rock paintings of the caves of Lascaux, like

the hieroglyphs in the tomb of Tutankhamon, of cuneiform and alphabetic writing, of Magritte's pipe which is not the object itself, but its representation. Digitalization connotes the human being as a being of culture, as well as nature.
In Heidegger's vision, man's existence is expressed by his condition of being thrown towards death. In this existential process, however, especially in the contemporary era, man is dominated by the unawareness of his mortal dimension, which he can almost only foresee. In reality, man cannot help but deal with death, but he forgets it, voluntarily. In this dimension, any other effort that man would make would be in vain, and he finds as an expedient the occupation of things and not of being (*dasein*), especially through technology: man is transformed into a being in search of knowledge, directly aimed at the possession and use of technology, in which man exorcises his condition and reifies it, generating products.
In this process of transformation, architecture is also affected. Starting from the 20th century, products exist only to be useful, and architectures are increasingly designed to be functional, both from a conceptual and procedural point of view, to the point of being consumed, as claims Jean Baudrillard , mainly on the level of image, preferring its configuration to constructive sincerity, working on aesthetic appeal to increase marketability, especially virtual, and renouncing those intrinsic and extrinsic reasons of "order", measure and adequacy.
The German language makes a distinction in the terms that refer to architecture, distinguishing *baukunst* and *architektur*, the art of building (even in a pleasant form) and the pure formal representation of a constructive idea, capable of provoking a powerful crisis in one's quiet state. It is the same anxiety that Loos talks about:

> "If in a forest we find a mound, six feet long and three feet wide, arranged with the shovel in the shape of a pyramid, we become serious and something says inside us: someone is buried here. This is architecture".

The tomb, in fact, in the era of de-materialization, in which it is possible to spatially experience invented and non-existent places in the material world, constitutes the only physical place in which the logical and ontological correspondence between the body and architecture persists. In an era that calls into question the quality and consistency of architecture - usable even from behind a screen - it is the only place, real and virtual, objectified and symbolic, that exists regardless, because it contains our bodies and allows us to go there to attempt communication or contact with the bodies of those who are no longer there. It is the place that overcomes the paradox between the tendency of reification and its total abstraction: that place where being and nothingness coincide and we realize our finiteness, and then desperately work to overcome our completeness; that place which gives rise to our sudden seriousness in a moment of carefreeness and which is capable of provoking a phenomenon of collective identification: because the reconquest of being occurs in the very act of death, or rather its denial. Building a tomb means making nothingness become a thing . It is possible to affirm that the process of desacralization of architecture does not occur in funeral places, due to the historical roots that originally linked it to the sacred, to the cult of the dead and to the meaning of being alive. As René Girard argues , it is precisely from the practice of inhumation of bodies and the invention of the tomb that Civilization and, consequently, the City are defined.
The tomb, more than any other artifact, distinguishes man within the animal kingdom: if it is normal practice for them to build a den or a shelter to live, act or rest, only for man is it important to deliver imperishable home to the dead. In this sense, from the Egyptian pyramids to the tholoi of Greek civilization, the tomb is an indispensable means of "eternating" the life of the dead, in an appropriately conceived home (the place to contain the bones of the deceased or the ashes of cremation). Furthermore, the act of taking the deceased underground and returning them to the soil from which they came, ideally leads back to the act of returning to the maternal womb in an exceptional space in which matter, light and water merge together, in which the chthonic and celestial deities, who can interact by operating through the walls in contact with the earth and the summit oculus.It is clear then that the essence of architecture is not to be useful: but to materialize the memory of man regardless of his destiny and the way in which he lives. Architecture is, and must return to being, the desperate work of resistance against the finiteness and dissolution of the transience of man's existence. Architecture, more than any human artifact, must free itself from the process of reification, and therefore of cancellation, to which it is abandoning itself, renouncing the characteristic of being a usable product: in its being a symbol, it must maintain the connection with being, dispelling the risk is that the symbol has a life of its own and that communication is a transmission without essence, idea and therefore without reason for being. It is not enough for a gesture to be free from a functional purpose to survive the loss of meaning, but at the same time it is necessary that it is not limited to the satisfaction of a need in order to access it.

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FIGURES

Fig. 1 - Angelo Ganazzoli, Tomb for C., 2024; unpublished drawing by the author.

Tiago Ascensão
Minho University, Lab2PT Landscapes, Heritage and Territory Laboratory (R&D Unity), EAAD School of Architecture, Art and Design
ascensao.tiago@gmail.com

Ready-made architectural processes: Re-signification of reality as a solution

Key Words
Ready-made, Reality, I would prefer not to, Not building, Discipline

This research explores an architectural practice that looks for processes that build the space using exclusively the already existing physical space, answering the different requests through a process of space re-signification. It is looking for the development of an architecture that is not based on exploiting resources, whether material, energetic, or even human, considering that a possible alternative to the infinite development model can not be to over-exploit the territory and to produce unnecessary elements. Based on a transdisciplinary methodology, it explores how the idea of ready-made from conceptual art can be one of the answers to future architecture. It is a reaction towards the sustainable targets' achievement since it is based on the no exploration of any material: the reality is in itself the resource. Antagonistically radical "to the business as usual" attitude, it is proposed that the architecture project rethinks the space and attributes it a new meaning, and by doing so, solves the requested new necessities. The project happens in the combination of reality and the look over it, emphasizing the potentiality of reality. Instead of the design as the base ground for architecture, in this methodology, the act of choice is the architectural practice. This intellectual process of critical reflection is an architectural act since the discipline has the tools and the expertise to decide in a legitim way. This approach emphasizes the emergency for a fundamental change of attitude in our culture, in our society, and towards our built environment, by legitimizing the possibility of the architectonic proposal being only the use of what is here and now.
On the one hand, we are living in an environmental emergency and climate crisis, and on the other hand there is a scarcity of resources. These are the two main ideas on which this essay is grounded. What is explored is how to think in built environment with these two ideas in mind, projecting as a design proposal the possibility of using the existing space as the only resource and material to answer a necessity. This apparently simple action goes against the established system of necessity-answer, where the answers are capitalized, and needs are created in order

to capitalize the answer to those new needs. This system allows to be reinvented, and using the existing design in itself is a suggestion to do that. In doing so, it avoids being an agent of depletion.
More than proposing a measure, it looks for the introduction of a possibility in the practice, so that any strategy can include this as a possibility.
Until recently we have built our world, physically and metaphorically, with no concern for the future end of history. It can't be forgotten that a large part of the planet was urbanized and used not only through the construction surface but also with all the territory we need to survive, with a continuously extractive attitude, whether of materials to build or for industry, energy, or food. Actually, we built this path to destruction that has brought us to today's environmental crisis.
The path of the world's development has brought progress, but at the same time, it has increased the speed at which we are quickly approaching world depletion, through its continuous destruction.
In an unparalleled global environmental and climate crisis (not just a climate change, but an actual crisis), how far are we willing to move forward on the modus operandi that brought us this situation?
The possible alternative won't be over-exploiting the territory and producing unnecessary elements. To maintain, to use reality in a sustainable way, keeping everything, including its qualities, without any kind of demolition, is the action that solves the problems and the future needs, exclusively with what already exists.
This research is based on the idea of tabula scripta, as opposed to the tabula rasa, from the modernists. We live in a world already built, where the solutions can be found in the existing built space. The production of the built environment, is fed with materials and resources that are being extracted from somewhere else (in most cases, their provenience is ignored or obliterated).
Is it possible to practice architecture, urbanism, or work in an urban environment without material resources or exploitation? It is, therefore, necessary to focus on non-demolition and most of all on maintenance as the key to solving the problem. The research works with a shift in the actual paradigms: building the world, with the existing building stock. This alternative to the physical construction is not based on a general denying, on the negative, on saying no to everything, but on the contrary. It is based on the acceptance of the challenge of solving the needs, giving the answer exclusively with what already exists. And, of course, to give a specific no: to construction, to extractivism, to exploitation. When facing a problem, have as a first thought, that every existing situation is competent.
With a transdisciplinary approach, it is possible to create a bridge between the idea of ready-made from conceptual art, and its application in architecture, as an answer. So, transfer and apply the principles and operative procedures from ready-made art movement into spatial practices conceptions.
In ready-made artistic practices, an everyday object is re-signified as an artwork. Without changing its materiality, but through a set of artistic operations, the object gains a new meaning. Through architecture and its process, it is possible to answer the challenges, through the attribution of new meanings to a space without changing its physicality, but by changing the way it is seen, perceived, and eventually used. The existing space is the only physical resource. Architecture design processes of ready-made are re-signification designs, allowing that reality, in itself, answer the questions, the program, the problems, designing the built environment through conceptual operations.
It is simultaneously a process of analysis and a process of design since it aims to solve a new need by using a preexisting space, that existed even before the process began. It is a propositional approach where analysis is understood as a tool of the design.
Through the inclusion of operative processes from conceptual art in architecture - to find (rendezvous), to choose, to appropriate, to establish an authorship, to assist, to recontext, to validate, to legitimize or even to theorize - it enlarges the possibilities of architecture. These operations are not just a way of producing, but also of analysing processes already executed. These operations can be understood through a comparative analysis of case studies such Tempelhof former airport in Berlin, Germany; El Camí de Cavalls; Menorca, Spain; squatting movements; caves dwelling; or more clearly with Place Léon Aucoc, Bordeaux, France authored by the office Lacaton & Vassal; for name a few.Instead of the production-oriented design as the base ground for urban environment design, in this methodology, the act of choice is the architectural practice. This intellectual process of critical reflection is an action. It is in the specificity of this act with a purpose that the goal is achieved.

To find the answer in reality is a possibility of action. It is a proposal that, apparently, focuses on preservation since the existing space is kept as it is. Therefore, more that its qualification as heritage, it is important its competence to answers a need, based on the results of architectonic analysis. It includes a complete change of the significance of the space, transforming its meaning, in order to fulfill the existing need. So, it is a proposal that fits between the preservation of the physical space, and the transformation of its meaning. It is a work of change the physicality through its perceptions.
This stance is supported by the ideas of reuse, retrofit, rehabilitation, repair, maintenance, architecture of care, as found, negation and inactivity. It distinguishes itself in the radicality of finding exactly in the reality the solution for the problem, and it doesn't need anything else to design than the physical reality in itself, linking to conceptual art. It's a radical proposal, that doesn't deny the problem or the search for a solution but finds in reality the solution to the problem. This research focuses on the enlargement of the design processes, through the inclusion on it of space re-signification operations.
This research intends to contribute to a critical reflection on architecture as a discipline. Questioning the need, the request, the briefing, and the program can be in itself the answer, acting critically. It is, as well, a reaction to the sustainable targets, that avoid material exploitation since the reality is in itself the resource.

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FIGURES

Fig. 1 - Tiago Ascensão, Collage based on the project image Place Léon Aucoc (Bordeaux, France) by Lacaton & Vassal (1996), 2023, collage. Image source of the image for the collage: retrieved June, 22, 2023 from www.lacatonvassal.com

Sara Galante De Cal
ETSA, Universidad Politécnica Madrid, Departamento de Proyectos
sara.gdc@gmail.com

From 'common place' to a 'place in common' through architectural design

Key Words
Supermodernity, Place, Civic body, Performativity, Architecture design

From the middle of the last century, a new generation of architects/architecture began to emerge. It did not fit in with the assumed precepts of the Modern Movement and its functionalism (e.g. the proclaimed 'death of the CIAMs' in 1959). This 'modern' architecture would be framed within a Cartesian vision of the world, stable, 'universal', in which dichotomous opposites sustain its equilibrium. Subject/object or interior/exterior are perfectly separate concepts.
The present condition, however, has surpassed this stability and 'modern' univocity has definitely been broken. We would now speak of 'supermodernity', in the sense given by Augé [Augé 2000 p. 42], where the superimposition of spaces (physical, virtual or even fictional) is constantly expanding. Supermodernity is defined not only by the deployment of spaces, but also by the superabundance of events due to the immediacy of information and the individualisation of references. Echoing those disruptive voices of the 60's, a major figure in contemporary architecture, Toyo Ito, recently stated: "The concept of 'function' seems to be the 20th century term that is no longer relevant" [Ito 2021]. And he is not alone, other diverse voices are also making this visible through their practices.
But if we are beyond function and its assumed objectivity or universality, where are we now?
Complexity must arise through a performative understanding to overcome the "Cartesian habit of mind" (Barad, 2003, p. 192) as a "definition of identities not submitted to closed models and a definition of situations of coexistence constantly exposed to negotiation" [Sánchez 2010, p. 45]. Within this expanded model, the article explores the connotations of the modern 'common place' and the search for a 'place in common' through contemporary architectural design. Shifting the act of design from determinism to catalysing a diachronic process that opens up to the singularity of inhabiting [Galante De Cal 2023].

User and the *vita contemplativa*: the 'common place'

As early as the 1970s, Matta-Clark reflected on the effects of functionalism: "(...) a kind of visual vocabulary on which they can moralise about unavoidable necessities. The morality rooted in such a design mentality is valid, and they chose the functional (...). At the time it was a valid stance, but for how long?" [Matta-Clark 2020, p. 50]. It is precisely this 'moral' relationship of the inhabitant and architecture that will give rise to the term 'user', now so widespread. This is not an anecdotal term, since it homogenises the 'human' parameter under an abstraction that transforms inhabiting into a unidirectional relationship. The user, by its own definition, is only allowed to use the spaces as conceived by the architect. Providing them a meaning only within the proposed framework, limiting their intervention as passive agents, as delimited consumers.
This is framed in the spirit of modern individuality and the comfort of contemplative experience, where the image, as an 'exteriority' sense, overrides the rest of our senses. As Sennet explains: "The attempt was directed towards the configuration of pleasure, in the form of comfort, at first to counteract fatigue and relieve the burden of work. But this potentiality, which allowed the body to rest, also came to relieve its sensory weight, suspending it in an increasingly passive relationship with its environment."[Sennett 1997, p. 400]. By removing an 'embodied' experience of architecture, any possible involvement becomes a prudent distance. Therefore, the concept is more closely linked to the 'user' as an idea than to its own living materiality. In the modern design process, the 'user' is the abstraction of the average inhabitant, which allow us to predict their virtual actions, their relationships or the way they move in space. In the same sense, 'architecture' is associated to space (abstract, geometric,) and dissociated from place (anthropological, relational, of superimpositions).
This is how the 'common place' represents modern design here, through an architecture that articulates recognisable spaces that are naturalised by the user. The actions that can/should be performed in them are also recognisable: one should read in the reading room of a library, be in sports clothes in a gym, or move somewhere in a corridor. The body of the 'user' is directly affected by these 'contractual' actions resulting from the use of architectural spaces, linked to their "moral" or culturally accepted function: "By passing through the most visible, established and recognised signs of the social order, it simultaneously demarcates the place and thus defines it as a common place" [Augé 2000, p. 57]. The 'common place' does not incite to transformation but to perpetuate what is apprehended by the body in other places that resemble them. So, the user can mechanise the experience of this architecture without getting involved.

Inhabitant and the *vita activa*: a 'place in common'
Contrary to the 'vita coontemplativa' of modern design, the *vita activa* considers the complexity of the human condition in its environment. Hannah Arendt stated: "It is in the human condition that contemplation remains dependent on all kinds of activities (...) and it needs action in order to organise life in common" [Arendt 2008, p. 89]. So, contemplation must be part of action and action involves the other, dissolving the modern dichotomy contemplation/ action and merging it through a performative approach. In this same way, complexity through performativity collapses other asummed modern dichotomies: real/ virtual or subject/object, among others, opening the threshold between them.
Under this 'performative turn', increasingly taking part in our ways of doing/ formulating/ designing nowadays, we can work through complexity over the Cartesian 'simplification'. Engaging with the currently gradual shift of science and culture from the hegemony of fixation to a growing attention to the complex dynamics of action/ agency. Considering things as active presences in which architecture and space is not only an external object or experience: "Things are actants that induce human action. Both reciprocally shape each other (...) buildings, streets (...) are actants making an offering" [Latour 2008]. Modern space, as an abstract construct, yields the way towards the notion of 'spatiality' as a non-pre-xisting autonomous form without the presence of the inhabitant [Fischer-Lichte 2017, p. 220]. As Grosz implies: "The barrier between inside and outside, in the case of the human subject (...) is always permeable, permeated not only by objects or devices, but by spatiality itself" [Grosz 2001].
In this extended conception, we would be able to design within the flows of the multiplicity of supermodernity and the inhabitants. The inhabitant, no longer just the 'user', and architecture become catalytic co-presences constructing each other. In this sense, we are forced to abandon the comfortable *vita contemplativa* of modernity and immerse ourselves in the v*ita activa*.
This *vita activa* implies no longer a 'body' but an 'embodied mind', an active state of the inhabitant through its corporeality. A participating "civic body" [Sennett, 1997] that experiences architectural space as an unstable social place, seeking the other to find its own identity through

action, creating a 'place in common'. This place is capable of fostering active life and being an operational vehicle for the construction of the collective as a negotiable state. Architecture becomes an unfinished or diachronic process through design. Architectural design becomes a togetherness catalyst, going beyond the abstract idea of modern space, to enter the spatiality of ongoing processes.

A call for

Even though performative terms such as *embodied mind, agency or co-presence* are being incorporated into architectural language, performativity has not been yet incorporated as an operational tool to stimulate design from its awareness.

Liberating the inhabitant from the moral corset of modernity and restoring architectures to their quality of 'places in common', begins in design and must transit a performative approach to be conceived. This reflection exercise, though limited here, aims to unveil the tangible operability of thinking/designing through performative complexity.

Nowadays, there are already architectures, collective works of designing/ inhabiting, being incorporated into contemporary codes, constructing and transforming new realities. It is therefore essential to develop this operational awareness within a performative understanding to welcome and enhance architecture's capacity for transformation. Understanding its strength as a producer, not only of physical effects but also of cultural, social and political affects.

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Giacomo D'Amico[1], Rosa Marina Tornatora[2]
[1] University Mediterranea of Reggio Calabria, Department of Heritage-Architecture-Urbanism
[2] University Mediterranea of Reggio Calabria, Department of Architecture and Territory
[1] giacomo.damico@unirc.it, [2] mtornatora@unirc.it

Designing beyond Earth. An evolution in body-space-architecture paradigm for space design

Key Words
Architecture design, Extreme environment, Future design, Habitability, Space architecture

The concept of space in architecture could be defined as the cognitive substance of the experience of the architectural phenomenon, whether real or virtual. Architectural history theorist Sigfried Giedion describes architecture as a phenomenon-mutation and interprets architectural space as corporeal in Greek architecture, plastically conceived; compact and closed interior space in Roman architecture; organically synthetic in modern and contemporary architecture, the result of the intersection of the first and second concepts of space, open to the outside world [Giedion 1998]. In the future-present, space in architecture could take on a new meaning if (and when) it is related to the concept of space that goes beyond the philosophical, physical, and mathematical language and thus takes on a relative value, i.e. referring to celestial bodies. The study of human space in architecture has always been central to the discipline, and the design of spaces which combine architectural quality with that of habitability is even more relevant in contexts where the host environment presents extreme conditions. The research aims to extend the study of the relationship between body, space, and architecture, to the dimensions of habitability beyond Earth [Häuplik-Meusburger & Bannova, 2016], with a focus on space habitats. Moreover, this work aims to stimulate discussions about the discipline and the practice of space architecture.
The research has been developed through a methodology that investigates the design proposals for space habitats that have been put forward since the birth of the discipline in relation to issues of space and scale, in completely new and partially unknown conditions. The objective of this analytical-comparative study is to identify those invariable paradigms of this design approach, while highlighting those variable characteristics and peculiarities that require unique adaptation depending on factors, such as the environment or the occupants. The work considers both orbital and planetary projects, characterised by the physical conditions of

microgravity [Masali et al. 2011], as well as the different scales of design, from the individual environment to the urban structure of settlements.
To create a case studies reference sample list were consulted conference proceedings, scientific journals, architecture magazines, architecture websites, and architectural firms' portfolios, as well as press releases from international space agencies and digital archives, including dissertation results and call for ideas or design. A preliminary survey was conducted via the bibliographic archive made available by the SpaceArchitect.org organization, which included documents written or recommended by the American Institute of Aeronautics and Astronautics (AIAA) and the Space Architecture Technical Committee (SATC) which promotes research and dialogue about human life in space. Pivotal case studies have been, for orbital architectures, the International Space Station (ISS) and the Lunar Gateway, and for planetary ones, projects such as the Moon Village, Marsha, Lunar Master Plan, and Nüwa Mars City. Considering these projects as representatives of the categories they are fitting into, it has been possible to understand the relationship between body and space in such extreme environments, as well as how the design features evolve and adapt in the different contexts.
Focusing on new spaces and terrains of experimentation, this research aims to highlight issues related to new paradigms of architectural measurement. The emphasis is on the importance of measurement and how the body in space plays a key-role in redefining standards of modularity at multiple scales [Bannova 2021]. For example, from an ergonomic and anthropological point of view [Tiziani 2013], it is important to consider factors of perception and comfort that are often underestimate in terrestrial architecture.
In extreme environments,[1] even the smallest design detail could have a significant impact on physical and mental well-being [Schlacht et al. 2009]. Therefore, it is crucial to consider every aspect of design in such situations, even at the urban level, where the size of objects can have a major impact. Therefore, it is important to consider questions about urban planning and the organization of cities in space. Considerations has been made regarding the inhabiting models to be applied in space, the characteristics of dwellings and terrestrial urban fabrics to be preserved, and the strategies to be implemented, given the unique and extreme conditions of the environment in which they are designed.
In conclusion, this research explores the relationship between inhabiting space and the body-space-architecture paradigm, examining how humans have influenced and been influenced by their environments throughout history and into the future of space exploration. The focus is on the dynamic interplay between humans and their environments, which has evolved in concert with human understanding of the universe and its place within it. It further unveils a bilateral correspondence between Earth and Space. Architectural knowledge gained on Earth has served as a springboard for innovation in space, and conversely, discoveries made in space have fuelled advances on our home planet. This mutual progress highlights the interconnectedness of these seemingly different environments. Finally, one of the purposes is to stimulate a discussion on this paradigm regards in order to move and develop it towards new frontiers.

ENDNOTES

[1] In the sense of "as a habitat characterized by harsh environmental conditions, beyond the optimal range for the development of humans [...]. Basically, all inhospitable conditions for life".

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FIGURES

Fig 1. - D'Amico Giacomo, Mars Settlement - Astronaut's View, 2021, Digital Collage, 16x24 cm. Author's personal collection.

Martina Russo
Università degli Studi di Napoli Federico II , Dipartimento di Architettura.
martina.russo@unina.it

Ludomestic.
Critical perspectives on dwellings, from standardization to Reversible Destiny Lofts by Arakawa+Gins

Key Words
Housing, Dwelling, Standardisation, Play

The reduction of bodily movements within domestic spaces has been, starting from the Frankfurt kitchen, one of the paradigms around which the housing project has been developed. In its increasingly confined dimensions, housing has transformed into a place of atrophic living founded on static comfort. The domestic dimension we have inherited, contracted and numb, compels us to delegate physical and recreational activities to urban spaces in defined times, as if they weren't integral parts of our daily living. Contemporary housing, as demonstrated by the COVID-19 pandemic lockdown measures, remains inevitably incomplete apart from its positioning within the system of public and shared spaces in the city, and this subjugates the design of the domestic to the urban planning, which is based on standardization.
In the 1950s, the post-war reconstruction of European cities had consecrated standardization as an efficient tool to ensure everyone the right to housing. Simultaneously, the economic boom and the acceleration of the capitalist machine found their driving forces in mass production and homologation of needs. However, by the 1980s, the grand housing utopias that had characterized architectural production in the previous decades seemed to demonstrate the failure of a domestic project based solely on standardization. In his essay *Dwelling*, an excerpt from a conference at the Royal Institute of British Architects in York in 1984, the anarchist philosopher Ivan Illich states:

> "The resident has lost much of his power to dwell. The necessity to sleep under a roof for him has been transmogrified into a culturally defined need. The liberty to dwell has become insignificant for him. [...] From commons for dwelling the environment has been redefined as a resource for the production of garages for people, commodities and cars. Housing provides cubicles in which residents are housed. Such housing is planned, built and equipped for them. To be allowed to dwell minimally in one's own housing constitutes

> a special privilege: only the rich may move a door or drive a nail into a wall. Thus, the vernacular space of dwelling is replaced by the homogeneous space of the garage" [Illich 1992, pp. 57-58].

Thirty years later, referring to forms of dwelling in the 20th century, Sloterdijk associates them first with warehouses and later with waiting rooms:

> "With sufficient freedom for abstraction, it becomes clear that initially and mostly, houses are also stations-or, more precisely, waiting rooms in which one spends the time before an event that is anticipated with certainty. [...] Houses are stations for held-up life and offer a place for the irruption of time into space: this statement is the explicatory form for the most remote self-evident truth regarding the sojourn of humans in residential abodes. Because it returns from the most buried, inconspicuous place, it constitutes the deepest insight into the history of reflection on building, dwelling and housed life" [Sloterdijk 2004, pp. 472-474].

The analogy with the waiting room not only immediately brings to mind the image of static boredom but also carries an alienating scenario, triggered by the reference to a standardized and impersonal space which is produced in series. The cause of the increasingly acute sense of scarcity of living space identified by Illich can be found in the use that mass production has made of standardized parameters. Unlike the non-anthropized environment, the built domestic environment seems never to explore the body in its infinite potential, nor does it seem to place it in a position to be the primary instrument of perception and knowledge. Instead, we witness a process of "technical neutralization of the body" [Le Breton 2000], which could be understood as the overcoming of bodily limits through technique referred to by Sloterdijk and which takes away humans from a fundamental cognitive process: the kinesthetic one. However, dwelling should represent a process of mutual knowledge and appropriation between an individual and their surroundings, and for this reason, it is inherently kinesthetic: it finds its root in movement before stasis and in the instrumental use of the environment before rest. Sloterdijk himself cannot help but draw on a lexicon that refers to movement, using words like *fitness* or even *acrobatics* in describing the evolutionary mechanisms that led to human domestication. Dwelling, as mutual knowledge and appropriation between an individual and their surroundings, is inherently kinesthetic. If dwelling is a biunivocal correspondence between individuals and the built environment, movement becomes an essential component. Sacrificing the freedom to dwell on the altar of standardized apartments reduces movement in domestic space to a mere act of crossing functional areas. In a society devoted to productivity, which has permeated every aspect of our existence, comfort has transitioned from being intended as well-being to becoming synonymous with efficiency. Discussing how to de-standardize and de-alienate domestic environments necessitates imagining a domestic environment where ineffectual actions can break free from productivity. Dwelling should become the place of gratuitousness, a space of playful ecstasy in which bodies can move without purpose. Therefore, it is appropriate to explore how to integrate this kind of movement into the design of living spaces and to ask whether a new qualitative standard may reside in playfulness.

In the introduction to the Italian edition of *Homo Ludens* by Johan Huizinga, Umberto Eco emphasizes a linguistic nuance that is essential for understanding the interrelation between play and movement discussed in this abstract. Eco points out that the English language has two distinct terms to address ludic behavior: game and play. The term *game* refers to the set of rules that constitute the structure of a game. The word game strictly indicates a regulated game, representing its structural matrix and the set of constraints that define it. On the other hand, the term play corresponds to an active, dynamic and free behavior, and by extension it is used to refer to all those artistic and creative activities that involve the body, such as acting, dancing and performing music. [cf. Eco, 2002].

The possibilities of expressing playful action, apart from its transposition into the virtual form of gaming, are contemplated almost exclusively as actions [individual or collective] to be carried out in public and relational spaces; actions often relegated to precise moments of the day or integrated into daily routines in the same way as moral or social obligations a spatial and temporal restriction that limits the spontaneous and creative nature of playful behavior. In a society that emphasizes the separation and structuring of spaces and activities, play could become an act of civil resistance. Borrowing concepts from Walter Benjamin's fragment 'Capitalism as Religion', Agamben points out how capitalist religion must be desecrated. In this regard, Agamben will say:

> "To desecrate means: to open up the possibility of a special form of negligence, which ignores separation or, rather, makes special use of it. The passage from the sacred to the profane can, in fact, also take place through an entirely incongruous use [or, rather, reuse] of the sacred. This is play" [Agamben 2005, p. 85].

However, modern man is no longer able to play. Indeed, 'restoring play to its purely profane vocation is a political mission' [Agamben 2005, p.88] because in play, society is saved, redeemed and redeemed. It is worth asking if a proclivity for playful action can translate into a potential paradigmatic feature of a de-standardized domestic environment, and how it can lead to the conception of a *playable* housing project. To shed light on this point, it is necessary to refer to the work of the French linguist Emile Benveniste, who gives perhaps the most exhaustive and complete definition of what play is: "We will call play every regulated activity that has its end in itself and does not aim at a useful modification of reality." [Benveniste 1947, p. 123]. Benveniste concludes that "play escapes all these limitations, as it is above all *form*" [Benveniste 1947, p. 124] and, as such, it has recognizable formal traits. When we talk about "form", we do not refer to its geometric definition but rather understand play as the structure we shape to attribute meaning to the surrounding reality. This is comparable to the ability of abstraction and interpretation, that allows us to perceive the environment as a playing field on which we progressively overlay rules to constantly enrich our interaction with the world, much like children do in the exploratory phases of childhood. The more the environment appears already interpreted and codified, the less it stimulates playful action. Through the overlay of ever-new self-imposed rules, it is possible to traverse and inhabit them, playing them. If we narrow our focus to *Reversible Destiny Lofts*, the residential building designed by Arakawa and Gins in Tokyo (2006), we can recognize that this multiplicity of possible uses is an inherent feature of the structures and surfaces of which the lofts consist of. This absence of predetermined use frees interpretation and, consequently, playability, releasing dwelling from the habit, apathy, and boredom. This continuous reinterpretation triggered by play can lead residents toward a way of living where playful action can be the foundation of playful dwelling, finally freed from metric and quantitative standards.

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Martina Crapolicchio[1], Santiago Gomes[2], Rossella Gugliotta[3]
[1, 2, 3] Politecnico di Torino, DAD - Department of Architecture and Design
[1] martina.crapolicchio@polito.it

Elements of everyday life.
Domestic spaces and actions in a pedagogical experiment

Key Words
Dwelling, Actions, Design, Everyday life

The centrality that, in recent years, the question of the relationship between body and space has acquired in developments of architectural (and urban) research [Bianchetti 2020] highlights how, at least on the level of discourse, trends, approaches, and interpretations that try to distance themselves from the legacies that the twentieth century has left us are emerging. This is a reaction to the developments that sought the legitimacy of disciplinary practice in the articulation between social commitment and autonomy and that, exhausted as early as the 1990s, tried to shift their gaze toward dwelling as the condition and purpose of the theoretical and operational practice of architecture [Bianchetti 2011]. The reference is to the theoretical speculations and formulations that, articulating the existentialist vision and anthropological perspective [Heidegger 1976; Augè 1992], attempted to establish a certain critical distance from the culture of modern design, which had separated the body from the physical dimension of the city, and to claim the importance of dwelling as a constitutive action of the human being [Casanova Berna 2013; Doberti 2008].
In line with this way of understanding the object and the aim of the architectural discipline, this contribution shows the program for the first-year architectural design laboratory of the Bachelor's Degree in Architecture at the Polytechnic University of Turin over the past two years. The aim of developing this topic in a first-year laboratory was to explore how dwelling can lead to the production of user-friendly spaces. Focusing on the relationships between bodies, actions, cultures, and spaces, the main goal of the course was to rethink how architectural practices are related to the context and to the built environment with its materials, memory, principles, and rules that conform the space to the place. To do this, the approach to the architectural project precisely started from the characterisation and study of the activities, actions, and dimensions of dwellers, trying to bring together traditions of study and research in an inclusive transdisciplinary perspective that drew instrumentally, eclectically, and without dogmatism

on diverse disciplinary contributions. The reference went from Alexander Klein [1975] to the Modulor of Le Corbusier [1950, 1955], from Nuno Portas [2004] to Hillier and Hanson [1984] till the study on the domestic activity carried on sections by Katsutoshi Sasaki [2021].
The pedagogical experiment described here concerns constructing a series of exercises to enable first-year architecture students to build a solid interpretative foundation of space and its construction. The main topic concerns dwelling as a primary human need and ergonomic construction of everyday space [Norman 2002].
The first exercise involves listing the "Elements of Everyday Life" to understand their proportions, measurements, and geometry. The elements correspond to furniture and objects that are part of each student's personal and public sphere, such as the bed, the desk, the chair, the toilet, the sofa, etc. Hence, each element was analyzed the same way Enzo Mari [1974] describes his "CNC Chair", using orthogonal projection and indicating measurements.
The topic of dwelling as a research focus allows the development of a methodological path that moves around users, their habits, and their predictable and non-predictable actions. In this sense, the narrative around the possible users of a space to be inhabited starts from their physical (age, gender, ability and/or disability) and circumstantial (aptitudes, work and occupation, special needs such as a hobby or a workspace) characteristics. In addition, the relationships with other inhabitants of the same unit (family, parental ties, presence of children with special needs and abilities, housemates, etc.) are described for each user.
Information on the inhabitants/dwellers/users and their characteristics became the basis for constructing a series of exercises and moments of reflection preparatory to design, which consider the body and the user at the centre of the architectural approach, partly abandoning the functionalist [Bevilacqua 2011] and typological conception.
If, as Georges Perec writes, "daily activities correspond to specific time slots, and each time slot corresponds to one of the rooms in the apartment" [Perec 1989, pp. 38-39],then the list of actions serves as a model for the flows and movements of each user (with their characteristics) within a hypothetical and as yet unidentified domestic space. As a further exercise, visualizing the "List of Actions" through planimetric draws of rooms helps shape each user's required space. The characteristic of the rooms, thus obtained, is not to depict the minimum space necessary for each action but to design the optimal space for living.
The next step in the construction of the dwelling concerns ordering the information gathered by identifying the elements, the actions, and the optimal spaces (rooms) according to the users' definitions. In this sense, the "Sections" are a relational tool to establish connections between spaces, geometries and volumes. The horizontal and vertical sections allow each student to relate the spaces previously identified with each other to draft an early housing project. Thus, the position of spaces, geometry, and volume are articulated and take form throughout the section. Every relation established so far collides with the spatial arrangement and reciprocal spatiality of objects and rooms in the dwelling. Drawing sections, even schematic ones, raise the issue of the link between use, body, movement, space and action again. The sections become an expression of the configuration of domestic space as an ordered succession of the needs of everyday life and the temporality of the body in the space.
As the final step, before the actualisation of a design project, the process leads to an abstraction and synthesis of the dwelling principles. Through its symbolic representation, the drawing of a "Concept" helps to underline the basic idea of the design related to the system of elements, spaces and actions of everyday life. Collecting many themes and issues on dwelling and user behaviors in a conceptual diagram leads and orients the project's development based on the living space.
Through these steps, the design proposal prioritizes dwelling, where the body, its movements, its relations with objects, and its rhythms shape the space (Fig.1).
When Perec talks about space points out the obviousness of living in a space, but at the same time, warns the reader not to take that for granted, especially referring to those who are active in the design process [Perec 1989]. Before Laugier's proposal to find the design in the model of the primitive hut [Vidler 1998], there were no corridors, gardens, courtyards, or other spaces. Still, these spaces nowadays have multiplied, broken up and diversified; they are of every size and every species for every use and every function [Perec 1989].
In conclusion, this contribution highlights a collection of outcomes and an approach to architectural pedagogy (referring to the dwelling topic) that instills design practice awareness. This awareness prioritizes the users, their bodies and their movements in space as the driving force behind a thoughtful design.

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FIGURES

Fig.1 - Collections of design proposals built within the Architecture Design Studio of the Bachelor's Degree in Architecture at the Polytechnic University of Turin, 2023.

Ko Jeonghee[1], Baek Jin[2]
[1, 2] Seoul National University, Department of Architecture and Architectural Engineering
[1] wjdgml758@snu.ac.kr

Reimagining Myeongdong.
An act-oriented approach to urban resilience and adaptation

Key Words
Capitalization of the city, The third place, Body action, Public space

Introduction
In today's rapidly evolving society, characterized by uncertainty and rapid change, this study delves into how existing cities can effectively adapt to these shifts. Myeongdong, once a residential area, has evolved into a bustling hub for culture, finance, tourism, and shopping, reflecting Seoul's rapid development. However, the recent pandemic caused a significant decline in tourist visits and a rise in shop closures, revealing Myeongdong's excessive focus on commercial activities. This overemphasis on 'shopping and tourism' became evident when the pandemic disrupted the flow of commerce, halting other city functions. The pandemic underscores the need for cities to move beyond singular purposes, fostering vibrant and livable spaces that cater to diverse activities. To address these challenges, a paradigm shift in urban design is necessary. Rather than creating fixed, segregated spaces, there is a call for a new approach termed 'making a city of behavior', which focuses on the daily activities in urban spaces.
The area that includes Myeongdong-gil and Jungang-ro, the two main streets of Myeongdong, is defined as the scope of the study, and the buildings within this scope are defined as the scope of the study. Based on previous research on remapping and collage, we define the concepts and examine their architectural roles through relevant examples. Based on the above, we apply remapping and collage techniques to rethink the city as a performance. The map of existing facilities in Myeongdong is redrawn with the act as the centre, and a new layout plan diagram is created by arranging the areas of each act according to the movement of the actors. In addition, images of various situations in Myeongdong are collaged. These are reinterpreted as form elements that trigger actions and designed into three-dimensional basic forms for each action, which are then transformed, repeated, synthesised and incorporated into the existing urban organisation.

Design methodology: re-mapping and collage

Re-mapping in architecture involves more than simply creating maps; it encompasses a strategic process of selecting, translating, organizing, and shaping space. This approach creatively visualizes the relationship between subjects and sites, offering new perspectives that range from the visible to the invisible. Along with Guy Debord's critique of modern society as a "society of spectacle," the concept of "constructing situations" emerged, aiming to revolutionize authentic life by awakening individuals from passive spectatorship [Debord 2014]. Debord's collaboration with Asger Jorn in "The Naked City" illustrates this through "drifting," which reconstructs urban geography based on individual psychology and emotion, detached from conscious control [Zegher 2001]. Also, Constant's New Babylon Project epitomizes this approach, envisioning an urban plan that consciously recreates the human environment in a state of constant evolution. This plan features freely interconnecting and expanding sectors devoid of predefined functions, allowing for the inhabitants' creative practices to shape the environment.

In architecture, collage transcends its origins as a fine art painting technique, serving not only to reproduce existing architectural spaces but also to generate entirely new ones. Bernard Tschumi's "Manhattan Transcript" exemplifies this approach, where he utilizes collage as his primary technique. Tschumi frames scenes to create fragmented images, which he then juxtaposes in a series to form a poetic sequence (Tschumi, 2002). By manipulating these images, he generates new spatial interpretations, combining sequences of eventual programs to create a continuous juxtaposition of scenes that organizes new movements and delivers a unique visual experience [Bong 2005]. Similarly, in "Exodus," Rem Koolhaas employs collage by overlaying planned architectural elements onto existing photographs of the city [Kipnis 2001]. Through this technique, he creates images that depict specific situations, metaphorically describing the programs inherent in the newly proposed architecture. In doing so, Koolhaas offers an alternative vision for the functioning of the city.

Application to Myeongdong

Facilities originally contain actions, but since most spaces in Myeongdong do not actively respond to people's actions, it is necessary to actively look at existing facilities from the perspective of actions. Therefore, the buildings in Myeongdong were categorised into 11 types of facilities and displayed on a map, and the nature of the original behaviour of these facilities was extracted and tabulated, resulting in a total of 10 types of behaviour. This allows us to create a table with facilities on the horizontal axis and behaviours on the vertical axis, which allows us to convert facilities into behaviours. For example, in the case of 'walking', the facilities include shops, restaurants, performances, and places of worship, so the combined area of these facilities becomes the new map of 'walking'. If the above process is repeated for all behaviours, 10 new behaviour maps can be created. In Myeongdong, define a specific design area centred on 'Myeongdong-gil' and 'Jungang-ro', which are the two streets that people pass through the most. Find the areas where people stay the most, create a walking area, or path, that connects the points, and define the rest of the behaviours so that the behaviours can overlap around this path. Through this process, we created a new layout diagram with zones of behaviours.

Myeongdong is a place where the following situations [shopping, eating, work, and cultural life] are happening daily. I selected photographs that represent each of these situations. I extracted the elements that seem to trigger behaviour from these photos and collaged them to create one representative image for each situation. From these images, we created the basic behavioural elements that create new urban environments. For example, in the context of [Eating], street tables, large windows, queues, and stalls were considered to trigger behaviours, while buying and selling was represented by variable shelves and a wall with large openings, and staying was represented by a stepladder and openings.

Similarly, for the work situation, I created the form elements of riding, gathering, and staying, and for the cultural situation, I created the following form elements. As a result, through the collage of the four situations, I was able to create 13 basic form elements for each behaviour.

Conclusion

Spontaneous encounters without a specific purpose do not take place in a complete and independent space, but in a space that permeates the existing buildings and people's daily lives [Oldenburg 2019]. Therefore, the space was planned in a way that leans against the existing buildings and permeates them by combining the act forms created earlier. Three sections were planned in the areas where the acts overlap the most in the previously created layout diagram: 'M-Plaza', 'Noon Square', 'UNESCO Building', and 'Art Nouveau Centre'. The first point is the overlap of meeting, staying, soliciting and walking on the map of behaviours. Therefore, the

opening in the wall that invites the act of meeting, the stepladder form of the act of staying, the rotating wall and stairs of the act of hawking, and the pipe bridge of the act of walking were transformed and combined. The second point is a combination of the forms of buying and selling, gathering and soliciting. The third point was also organised according to the same logic.
Lefebvre introduces the term "appropriated space" in "The Production of Space" [Lefebvre 2011], signifying that a space with physical form is occupied and personalized by individuals through their everyday activities, embedding their daily behaviors and experiences. As this concept, spaces designed can be shaped in response to the diverse daily actions in Myeongdong, allowing it to once again become an area where the everyday life of the city thrives.

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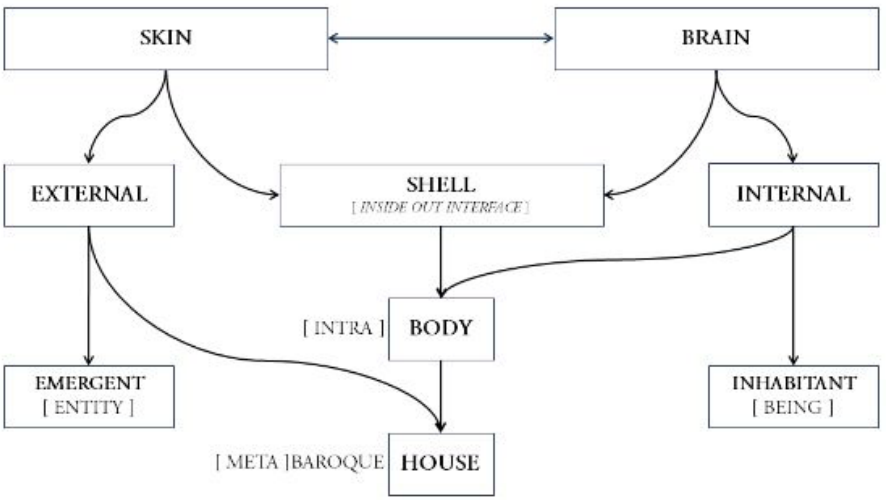
SKIN
BRAIN
EXTERNAL
SHELL
[INSIDE OUT INTERFACE]
INTERNAL
[INTRA]
BODY
EMERGENT
[ENTITY]
INHABITANT
[BEING]
[META]BAROQUE
HOUSE

Luís Carlos Bucha
Lusíada University,
CITAD - Centro de Investigação em Território, Arquitectura e Design, Lisbon
luiscarlosbucha.arch@gmail.com

The shell as spatial emergence: a house for and from the body

Key Words
Shell, Space, [Meta-Baroque] House, [Intra]Body

With this paper, we aim to take part of the depiction of the shell [emphasis added] as an interface between the macro and micro dimensions of our corporeal relationship with space [emphasis added], as an *emergent* [emphasis added] entity. With this in mind, it is worth questioning and clarifying the following: are we referring to the space from which we, that is, the Being emerges [emphasis added], or is space something that emerges from the Being [emphasis added] itself?
Gaston Bachelard (1884-1962) suggests that the shell is an imaginative transposition of the primordial function of the modern human dwelling, mirrored in nature. By focusing on the shell as a symbolic expression of intimacy, it appears to be a unique form of life. This is due to its enclosure in a rigid, rocky structure [Bachelard 2014, p. 155]. When empty and unoccupied by the invertebrate life form that gives it its shape, it evokes the spatial imaginary of refuge and the potential of this dimension to inhabit [emphasis added] (Bachelard 2014, p. 127).
Indeed, given this rich potential of the shell's imagery, Bachelard begins his reflection by drawing on Paul Valéry's (1871-1945) poetic vision [1], which synthesises this same singular and distinctive dimension of the shell and also conveys his absolute fascination with this form of life; or more precisely, this continuous formation of life, as follows: "[...] ´a shell stands out from the usual disorder that characterizes most perceptible things. They are [...] more intelligible for the eye, even though more mysterious for the mind´ [...]" [Valéry 1936, as cited in Bachelard 2014, p. 125].
The mystery lies not in what is expressed by the beauty of its forms, which are guided by a transcendental geometry, but in the slow and continuous process of formation, which starts from a dimension of interiority, whose house [emphasis added] emerges out of itself, intending to protect and shelter this inner substance [Bachelard 2014, pp. 126-127]. To this end, we return to Valéry's poetic observation: "[...] 'the mollusk exudes its shell', it lets the building

material 'seep through', 'distill its marvellous covering as needed.'" [Valéry 1936, as cited in Bachelard 2014, p. 126].

Bachelard believes that the formation and functioning of the human body is based on a process of ontogenesis, supported by a theory [ ] developed by Jean-Baptiste Robinet (1735-1820): each organ forms and develops from within itself, much as a shell forms from within itself, forming the inner substance that is important to protect. This inner substance constitutes the interdimensional reality of each being. It is here that we can claim a clear approximation to an approach that is particularly associated with (architectural) space, or, to be more precise, with the dwelling, as Bachelard says:

> [...] Robinet thinks of form, from the inside out. For him, life originates forms, should create living forms. [...] form is the habitat of life.
> Shells, like fossils, are so many attempts on the part of nature to prepare forms of different parts of the human body; [Bachelard 2014, p. 133]

Once placed within the possibility of considering the body as an entity beyond the fundamental concepts, essentially as an entity "more-than-human" [emphasis added] constituted and living in a body-house-shell *continuum* [emphasis added], the previous observation finally correlates with the vision and understanding of the French archaeologist and historian Louis Charbonneaux-Lassay (1871-1946) in *Le bestiaire du Christ* (1940):

> [...] 'Taken as a whole, with both its hard covering and its sentient organs, the shell, for the Ancients, was the symbol of the human being in its entirety, body and soul. In fact, ancient symbolics used the shell as a symbol for the human body, which encloses the soul in an outside envelope [...].' [Charbonneaux-Lassay 1940, as cited in Bachelard 2014, p. 135]

Certainly, in the context of our reflections, both from Bachelard and his cross-dialogue with Valery, Charbonneaux-Lassay and Ribonet, the shell is duly supported as a synthesis of what we wish to convey, based on all this gathering and interweaving of poetic, allegorical and symbolic perspectives: an entity [body-mind], or, alluding to the diagram presented above, an entity [skin-brain] that includes the [Intra]Body [ ] [emphasis added], that is, and according to the Portuguese architect and researcher Maria João Soares (b. 1964), "[...] a superimposed enrichment of soul, mind and flesh, in succession, or progression, without boundaries, without limits [...] an enhanced version of our bodies." [2018, p. 241]. And, inherently, the [Meta-Baroque] House [3] [emphasis added], which, as Soares suggests, resides, precisely, in "[...] the body, as an *intrabody*, and the architectural object [...] [which] are *forced* together resulting in an architectural apparatus in constant metamorphosis." [2018, p. 242].

In this sense, and returning to the idea and proposal of the [meta-baroque] house as "[...] something close to a living-in-a-living-object - a house in a continuous process of change through reaction to being [emphasis added] [...]" [Soares 2018, pp. 242, 243], it may be possible to conceive of the body-house-shell *continuum* [emphasis added] as a spatial and architectural fact, encoded as the inhabitation of a dynamic inner space, fully interdependent, without rationally imposed limits or boundaries. The body-house-shell *continuum* becomes "[a] *living* machine" [Soares 2018, p. 243] that is permeable and in harmony with the context, with the environment, with the world of which we human beings, as *living* machines, are vital and dynamic engines and gears that function with other living machines. The notion of *Living* machines such as an architectural object, as Soares and Gonçalves demonstrate, is reflected upon the Chapel of Notre-Dame-du-Haut, in Ronchamp, France (1950-1955), by Le Corbusier (1887-1965), which also alludes to the [intra]dimensions of the shell as an allegorical and poetic extrapolation to this particular architectural object:

> And so we have the Ronchamp Chapel. [...] One sees its exterior, but one sees it as a whole body – as an organ. But the interior body feeds off another body, folded in itself – that which is truly interior. The interior of the interior [...]. The Chapel is a Body: a centrifugal force that takes control of its organs, designing its own interiority in interiority. From non-unity as a whole to machinic unity as an engulfing whole. A part object swallowed by an internal organism. (Soares & Gonçalves 2017, pp. 96, 97)

Thus, in this article, by recognising this (intra)dimensionality of architecture and based on the most plural imagistic dimensions of the shell, we propose to question and (re)equate, in an increasingly virtualised world, the current conceptual, theoretical and practical paradigm based on which we think and design space, seeking to discuss the need to (re)anchor this space or habitat on a level of actualisation in a dynamic of flow. We want to discuss the need to (re)anchor this space or habitat in a dynamic of flow, that is, in constant transformation and interaction with our environment, with a world from which we are increasingly disconnected,

as a symptom of a distance from ourselves, as individual beings of such interiority, and yet increasingly governed by an artificial and closed vision and way of being, guided by the body-mind binomial and, externally, by the world, as if we were not part of it.

ACKNOWLEDGEMENTS

This work was supported by FCT - Fundação para a Ciência e Tecnologia, I.P. by project reference UIDB/04026/2020 and DOI identifier 10.54499/UIDB/04026/2020 (https://doi.org/10.54499/UIDB/04026/2020).

ENDNOTES

[1] Referring to the essay *Les coquillages* (1937), written by the 20th-century French poet, essayist, and critic.

[2] Referring to the book *Vues philosophiques de la gradation naturelle des forms de l'être, ou les essais de lanature qui apprend à faire l'homme* (1768), written by the 18th-century French naturalist.

[3] These two concepts refer to the research of the Portuguese architect, professor, and researcher Maria João Soares, whose reflections have been published in numerous articles, some of which were co-authored with the Portuguese architect, professor, and researcher Clara Germana Gonçalves (b. 1969).

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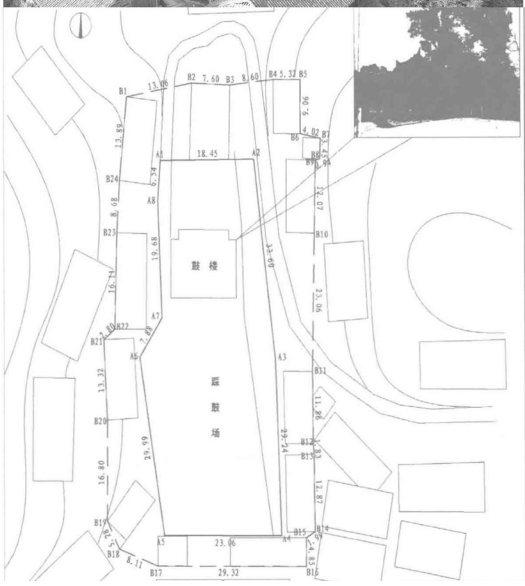
FIGURES

Fig. 1 - Luís Carlos Bucha, *[Intra]dimensionalities of the Body-Mind-Space Continuum*, 2024.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Yidan Liu[1], Marco Bovati[2], Paolo Vincenzo Genovese[3]
[1,2] Politecnico di Milano, Department of Architecture and Urban Studies
[1,3] Zhejiang University, College of Civil Engineering and Architecture
[1] yidan.liu@polimi.it

Cultural narratives in transitional spaces of Miao Villages.
A sase study of Guzang Festival and Jiubai Village

Key Words
Festival activities, Spatial form, Somaesthetic analysis, Typological investigation

Abstract
The Miao people boast a diverse cultural heritage, exemplified by numerous distinctive traditional festivals. Some of these celebrations are intimately tied to specific locales, such as the Sister Festival in Taijiang, the Guzang Festival in Leishan, and the Canoe Dragon Boat Festival in Jianhe, among others. This study delves into the influence of these festival traditions on the spatial dynamics of Miao villages, exploring how village development has altered the nexus between bodily rituals (including dancing, singing, and sacrifices) and the surrounding spaces. Focusing on the Guzang Festival and the traditional village of Jiubai, this research examines the symbiotic relationship between Miao festival culture and village spatial organization through somaesthetic and typological lenses. Employing methodologies like historical inquiry, field surveys, oral history, and somaesthetic analysis, this study lays the groundwork for future investigations into the role of architectural design in the cultural rejuvenation of Miao communities.

Introduction
In the verdant hills of Guizhou, China, the Miao people celebrate a plethora of festivals, each a testament to their vibrant cultural heritage. An ancient adage suggests that among the Miao, major festivals occur approximately every three days, with minor festivities observed daily. Yet, the manner in which these festivals unfold varies markedly across regions, shaped by agricultural cycles and the oral transmission of cultural traditions. This diversity has given rise to the designation of specific villages as "model villages" for particular festivals, prompting in-depth research endeavors. This study embarks on a comprehensive exploration of the Guzang Festival and Jiubai Village, two focal points in the intricate tapestry of Miao culture. By delving into historical archives, conducting extensive field surveys, capturing oral histories,

and employing somaesthetic analysis, this research endeavors to unravel the multifaceted relationship between festival culture and spatial organization within Miao communities.

Body Language and Spatial Typology

The Guzang Festival stands as a beacon of Miao traditional culture, revered and solemnly observed once every twelve years. This grand celebration is replete with specialized dances, melodious music, and intricate rituals, serving as conduits for the transmission of cultural heritage across generations. Through the lens of somaesthetic analysis, this study seeks to delve deep into the intricate choreography of festival performers, deciphering the subtle nuances of bodily movements and their profound influence on spatial perception and utilization. Moreover, by integrating somaesthetic principles into design-driven research tools, such as guidelines and protocols, this research endeavors to capture the nuanced interplay between cultural expressions and spatial configurations within Miao villages.

Jiubai Village, a quintessential example of traditional Miao settlements, boasts a spatial design imbued with rich cultural symbolism. A typological examination reveals a distinctive architectural feature: a single-column drum tower, a rarity among Miao communities in southern Guizhou. This towering edifice, reminiscent of early wooden pagodas in China, serves as the focal point for the Guzang Festival's sacrificial rites, imbuing the village with a profound sense of cultural identity. Additionally, architectural elements such as the central square and the wind and rain corridor provide the backdrop for a myriad of festival activities, fostering communal cohesion and cultural continuity.

Discussion

The Guzang Festival, beyond its role as a cultural extravaganza, exerts a profound influence on the spatial organization of Jiubai Village. The festival, serving as the most crucial collective activity within the village, not only shapes the physical landscape but also molds social interactions and community dynamics. Through meticulous observation and analysis, this study aims to elucidate the intricate relationship between Miao festival culture and village spatial form, providing a solid analytical foundation for future research endeavors. Understanding the subtle nuances of Miao culture not only facilitates tradition preservation but also offers practical insights for the sustainable development of Miao communities.

Conclusion

In conclusion, the Guzang Festival and Jiubai Village serve as emblematic focal points in the intricate tapestry of Miao culture, offering invaluable insights into the profound interplay between festival traditions and spatial dynamics. Through meticulous inquiry and interdisciplinary analysis, this research endeavors to shed light on the complex relationship between cultural expressions and village spatial organization, paving the way for future investigations into the role of architectural design in the cultural revitalization of Miao communities. By fostering cross-cultural understanding and promoting scholarly exchange, this research endeavors to contribute to the preservation and celebration of Miao heritage for generations to come.

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FIGURES

Fig. 1 - Floor plan and surrounding environment survey photos of Drum Tower in Jiubai village.

Carla Collevecchio
Umeå University, Umeå School of Architecture
carla.collevecchio@umu.se

Corporeal landscapes:
Sculpture as a pedagogical device

Key Words
Body in space, Corporeality, Spatial composition, Sculptural spaces, Pedagogical device

Introduction
The intricate relationship between corporeality and architecture is foundational to understanding space from varied perspectives, through practices, cultural interpretations, sensory stimuli, and compositional design. Without body there is no space, nor architecture to be perceived. Architecture cannot be experienced only as a visual construction, space needs to be inhabited, heard, smelled and touched [Rasmussen 1959]. The phenomenon of ocular-centrism has been historically strengthened defining the visual sense as predominant in relation to embodiment [Pallasmaa 2009]. As a result, we have lost the awareness about this inseparable relation between body and space.
The instant act of body movement generates form; intangible geometries expressed and dissolved in space and time. Art allows us to capture phenomena that would otherwise be impossible to materialize [Pentassuglia 2017]. In dance and performative arts, the plasticity of corporeal gestures defines the composition, through choreography space is generated and through performance meaning is produced.
In that sense, the body is interpreted as moving space, and the space is materialized by extending the body structure through an apparatus: costume, garment, artifact, device, or sculpture, merging with space [Blume 2015].
The aim of this contribution is to explore the interplay among body, materiality and space, through an intermediate scale between landscape, architecture, and object, exploring sculpture as a corporeal process of production and reception that operates within an expanded interdisciplinary field [Rendell 2006]. The focus extends to position sculpture as a performative installation with pedagogical focus, and as place and environment for human experience.

Expanded field: pedagogy of space

The active engagement of the human body within spatial experiences raises a fundamental question: how can we deeply explore space through a direct engagement with the body itself? Examining how performative actions shape the experiential qualities of space in connection to the body becomes a crucial inquiry.

When sculpture got liberated from its conventional constraints of monumentality and symbolism, and reconceptualized within an expanded field [Krauss 1979], it transcended the bounded object to become an installation, an environment, a phenomenon - a place. This paradigm shift in sculptural thinking introduced new conventions and categories, such as site-construction, marked sites, and axiomatic structures, enriching the interdisciplinary discourse [Krauss 1979].

Based on this amplified vision, sculpture evolved from representation to the construction of place, purposefully designed to evoke experiences; artworks became artscapes [Garofalo 2007]. As a result, attention shifted towards the perception and interpretation of these spaces, considering construction processes, materiality, and collaborative engagement with the audience.

The act of sculptural place-making redefined the role of corporeality in artistic production, serving as empirical research into space and inhabitation, establishing new relations with individual and collective bodies. The interdisciplinary nature of sculptural place-making presents an opportunity to foster sensory, choreographic, and philosophical interpretations intertwined with bodily experiences. When viewing sculptural artwork as a space for movement, a sensory apparatus, a performative device, and a place for action, it becomes a catalyst for cultivating spatial awareness.

Within this discourse, the central question is: how can sculpture serve as a pedagogical instrument, fostering spatial awareness and enriching architectural knowledge? This contribution navigates through kinetic landscapes, corporeal voids, and metaphorical devices, aiming to unravel techniques for articulating the interplay of moving bodies, material compositions, and choreographic performances, by extrapolating methodologies from sculptural practice into architecture.

Kinetic landscapes

The quasi-corporeal structures crafted by Jesus Soto redefine the traditional perception of art. The deliberate absence of a frame, with geometric rigor and repetitive arrangement of linear elements suspended in space, eradicate the conventional figure/ground relationship. This transformation turns the viewer into an active inhabitant, encouraging movement and oscillation through space [Alberro 2017]. Soto's *Penetrables* transcended the sculptural volume to become a spatial experience. The physical interaction transformed the artwork into a participatory experience where individuals actively shape the space by merging with it. Soto's *Penetrables* generate a tactile encounter that engages the senses, emphasizing the presence of the body in space.

Embracing the idea of bridging the gap between art and functionality, Isamu Noguchi explores sculpture as an aesthetic, cultural and pedagogical tool for stimulating creativity in the design of public space. His playscapes defy established norms by detaching from conventional functionality. Noguchi manipulates topography as a sculptural element, extruding, undulating, and punctuating the surface to introduce ludic components that invite the body to move. These experiments offer an evocative experience, presenting a playful spatial configuration, and providing educational insights about space through body movement.

Material voids

Void and matter are complementary terms: the void is generated by the subtraction of matter, and it is perceived in relationship to its opposite. For Jorge Oteiza the relationship between void and matter is reversed. He goes beyond the conventional solidity of sculpture, focusing on the vacuum as an active element, creating a dynamic interplay between form and emptiness. This approach questions established notions of sculpture as a static object, fostering a reconsideration of spatial experience from the body, transforming sculptures into dynamic artifacts that interact with their surroundings, echoing architectural principles. His work *Construccion Vacia* provokes a reconsideration of the intricate relationship between sculpture and architecture.

Fernanda Fragateiro engages in an immersive exploration of body-space relations through her sculpture *Caixa para guardar vazio*. This structure unfolds in response to a choreographed body, creating a narrative that engages participants in a participatory experience. Acting as a pedagogical tool, it blurs the boundaries between artwork and observer, emphasizing the interdependence of the human body and sculptural space. Her work challenges traditional

notions of sculpture, highlighting the body's role in shaping and experiencing spatial narratives. The choreographed unfolding of the artifact serves as an emancipatory experience, intensifying the connection between body and space.

Expanded field: pedagogy of space

Gianni Colombo's *Spazio Elastico* showcases a three-dimensional cubic grid woven from elastic fluorescent strings that traverse the space. An orthogonal grid pattern of luminous rays within a dark environment prevents the perception of other elements in the room. The emphasis lies on embodiment through movement and interaction, fostering immersive engagement from the body. Participants are encouraged to interact with the delicate and distorted grid, navigating through cubic cells, recording their unique path in an evolving space. This dynamic experience introduces an element of disorientation and instability, creating a deep engagement of body/environment.

Magdalena Fernandez, guided by her geometrical-abstract methodology, employs the body as a tool for both spatial and experiential configuration in her artistic practice. *Pinturas moviles corporales*, initiates with the simplicity of drawing compositions, translated with human bodies as dynamic points in space in time. This approach generates complex configurations that intertwine movement, breathing, and sound, framing intricate narratives associated with society and nature. Fernandez's moving paintings transcend static representations, creating a performative space of relations that offer to the reader a transformative experience deeply rooted in the human body.

Conclusion

The conceptual framework of "useless architecture, useful sculpture" introduced by Isamu Noguchi seeks to emancipate sculpture from the conventional constraints of architecture, transcending mere aesthetic considerations. This vision emphasizes the purposeful integration of sculpture into everyday life, acknowledging the intricate interplay between spatial design and temporal experiences.

Expanding on this concept, the exploration of the relationship between body and space through performative sculptures unveils the fundamental role of the human body in shaping spatial experiences. The interplay of body, materiality, and space positions sculpture as a pedagogical instrument and a performative space for understanding the intricate nexus between body and space.

Deeply rooted in human experience, these sculptures serve as tools for architecture, they demonstrate how sculptural space can interrogate and redefine spatial dynamics, offering a platform to extract

Principles formal, material, or spatial. This novel approach transcends mere functional considerations, embracing dimensions rooted in experience, performance, and human-centric perspectives. The paper extends an invitation to view sculpture beyond its conventional role, recognizing it as a rich source of spatial knowledge for crafting meaningful spaces in architecture.

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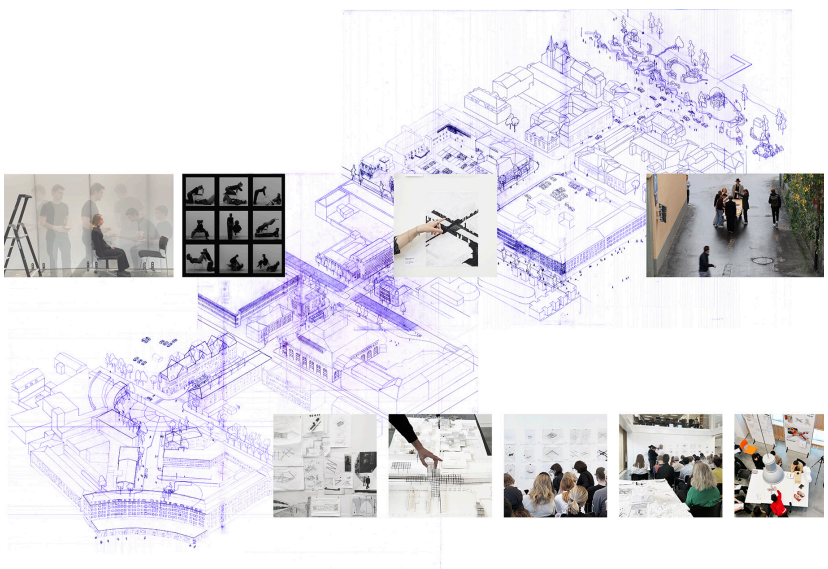
FIGURES

Fig. 1 - Pavilion. *Architectural Follies - Sculptural Spaces*, spatial installations built by UMA1 Students, 2023. As part of Fundamentals Studio conducted by Carla Collevecchio at Umeå School of Architecture, photo by Samuel Pettersson.



Maria Luna Nobile
Umeå University, Umeå School of Architecture
maria.nobile@umu.se

The city as a laboratory.
Investigating body space interactions in the contemporary city

Key Words
Body action, City-space, Performative actions, Re-activation, Perception

Imagine drinking a cup of tea in a rainy day in October: it is cold outside, and we are not in an interior space but in an urban "in between" space in Vasagatan, Umeå, one of the biggest cities in the North of Sweden. It is around 5pm, species of spaces. What if the tea table would be outside in the public space? ... and what if the same table would not be standing in the street but moving around the street as a portable table carried by a group of people? And what if these bodies would not just move around trying to balance the weight, but also enjoying the moment by collectively facing and sharing the same experience? And what if the flow of cars and people in the city would start moving accompanying this flow and consequently testing multiple configurations?
What we can learn from this is that any relationship between the city and its users can have an impact on the way we conceive and think architecture. This is a reflection on the role of architecture at the intermediate scale.
Any relationship between a building and its users is one of violence, for any use means the intrusion of a human body into a given space, the intrusion of one order into another. This intrusion is inherent to the idea of architecture; any reduction of architecture to its spaces at the expense of its events is as simplistic as the reduction of architecture to its facades.
We can argue that any relationship between an architecture and its users is at the same time an act of love - As in the case of the tea table, love for the city - In this sense the "violence" is seen as a metaphor for the intensity of a relationship between individuals and their surrounding space [Tschumi 1994, pp. 121-123]. In his collection of essays "Architecture and Disjunction" Bernard Tschumi deconstruct the notion of program in architecture as traditionally conceived as mere organization of functions in the space. Actions qualify spaces as much as spaces qualify actions. It is in this osmotic relationship between body and space that the definition of

program as a series of actions appears clear.
The notion of Architecture as a performative practice is central to this contribution that reflects on understanding the notion of program in architecture starting from the relationship between body and space. This topic is unpacked and explored based on the research conducted in relation to the theme of reactivation in architecture, focusing in specific on the city of Umeå in the north of Sweden and its recent architectural and urban development. The design of the contemporary city is currently facing many challenges, but it is important to reflect on how different these cities are.

The city as a laboratory
The city of Umeå is facing a constant growth with a consequent change in the urban structure and identity of the space. Every year demolition and new construction are defining new condition this is a common denominator to many of the cities of the north, Skellefteå, Kiruna, Luleå in different ways are facing the necessity of expansion and densification due to the national decision of a new "green" industrialization of the north of the country that will attract according to the prevision almost the double number of new inhabitants [Umeå Kommun 2018]. It is difficult to know if the promise of a real transition will ever happen, but the transformation is already going on and it is evident.
Considering the current condition, it is even more urgent to introduce the notion of reuse of existing buildings and spaces as a topic that is quite recent in the architectural debate in Sweden and in general in the north of Europe. The topic of reuse and reactivation of existing buildings is explored by the research project "Re-use and Re-activate urban voids, a paradigm for the contemporary city" and in parallel in Studio 3 "The city as a laboratory", a research based architectural design studio as part of the Architectural Programme at Umeå School of Architecture developed between the years 2020 and 2024. The studio operates in the North of Sweden, a context in which the urban development is associated to growth and densification, rather than reuse, opening space for reflection.

The *As Found* as a condition
The notion of reuse, reactivation and regeneration have been at the basis of the last 40 years of research in the field of architectural design, starting from the late 80´s when, due to the de-industrialization, new occasion for the architects emerged through international competitions opening a new scenario for the practice and the debate in architecture, opening new possibilities in education as well. In the education of an architect in Italy, Spain, Portugal, France, the notion of costruire nel costruito / building within the existing city [Gregotti 2004], learning from the context, reading the traces of the urban texture, un-layering historical, social, political, and morphological elements, have been at the foundation, as well as the notion of palimpsest [Corboz 2001]. On a more global perspective the notion of habitat and ecology at the centre of the debate of the CIAM in Otterlo [Van Eyeck 1959] became a manifesto willing to introduce a change of perspective in the future of the discipline, that unfortunately didn´t achieve the expected results.
The notion of re-activation implies the reflection on three main themes: the notion of memory as a montage of times and events in the space [Deleuze & Guattari 1996], the identity in relation to the specificity of the place and its human relationships [De Carlo & Buncuga 2014, p. 16] and the obvious claim for a right to the city [Lefebvre 1970], including a wide reflection on the relationship between users and space. These themes are addressed in the studio agenda and explored in its results, considered as experiments [Nobile 2021].
Bodies in the space, Bodies and the commons, Re-activation and Reuse of existing buildings and spaces in the city, are the three main themes explored in this research.

Reading of the city and spatial exploration through performative actions
The course is an architectural design studio based on research, based on a method of exploration though exercises and architectural experiments using the city as a laboratory. In the Fall Term 2023 the object of investigation has been Vasagatan, a street in central Umeå connecting one of the main cultural spaces, Norrlandsoperan, to the riverside. While during the second semester the students mainly focused on Kunsgatan and Saga teatern, an empty theatre and former cinema closed in 2014.
The course proposes to the students to investigate the notion of program as a series of actions and therefore the students work across the scales throughout the year using the body as a way of measuring and reflect on the infinite possibilities of setting a program. This reading of the city brings a personal perspective that students can frame in a local context and globally in the contemporary architectural scene. This has an impact in the way students perceive the role of the architect in the north of Sweden and beyond.

Bodies in the space: the notion of architecture as a performative practice is investigated through fictional exercises testing the relationship between body and space through analogue and digital tools.
The movement of the body in the space is explored through performances, and documented through photographs and videos, the theme is investigating by proposing the students to design a performance in the space based on socio-spatial and material parameters.
After the definition of the theme, through the reading of context, students are asked to investigate one specific action in the space and write a text based on the experience of the body in the space and starting from that reformulate the notion of programme as a series of actions. In this sense the results are not based on a problem – solving approach but requires an act of "translation" (Tschumi, 1994)

Bodies and the commons: based on interviews of the inhabitants and traditional tools of "reading" of the existing context the studio has investigated the street of Vasagatan in central Umeå and explored six different sites proposing interventions for the reactivation of the city based on the idea of "The city as a festival". (Sottsass, 1973)

Re-activation: the notion of reuse of existing buildings as permanence (Rossi, 1966) in the city, is used as a content base and the overall approach and tools guide the students, through a holistic and comprehensive study of the complexity - based on material, structure, memory, and identity - to radically formulate alternative scenarios for the future (Kaijima, Kuroda, Tsukamoto, 2001). This complexity is hard to define and grasp as it is based on uncertainty and on the need of making decision as part of their design process. This aspect is seen as an opportunity for learning and progressing, rather than as an obstacle.
The result is a collective Atlas where different scenarios are produced based on a common use of tools and methods, but based on personal perspectives, interests, and open interpretation and collective discussions.

Conclusions
This contribution aims at underlining the necessity of understanding the osmotic relationships between actions and spaces in the architectural design process aiming at analysing and investigating how this could be used as a method in specific in the architectural design on existing spaces and buildings.
Researchers, architects and artists have been invited to contribute to the studio through lectures and workshops.
The studio is part of the International Programme University of Universities UOU (Nobile, Sanchez Merina, 2023) and is organized in three main modules: The city as a festival - Describing the CONTEXT. Describing the context through the design of an architectural performance in the space and a spatial body device; The Architecture of the City - from the CONCEPT to the PROGRAM. Defining the program as a series of action, understanding architecture as a device; Architecture as a Device - from the PROGRAM to the DETAIL. Resolution of the architectural intervention through the definition of architecture as a device to be inhabited.

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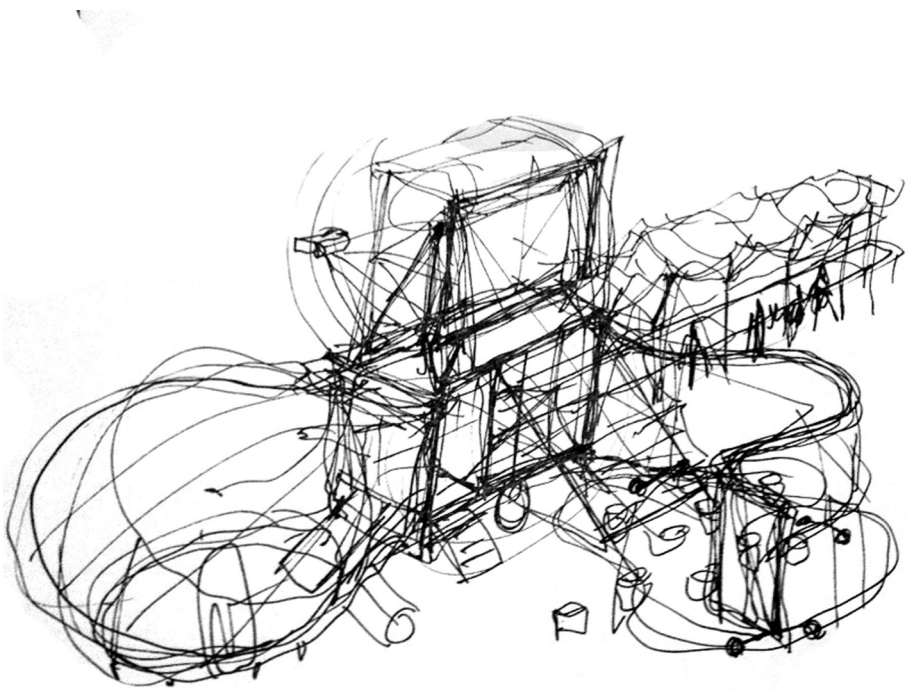
FIGURES

Fig. 1 - Studio 3, collective exploration of the body/space relationships, multiple techniques. 2023.



Bilge Can[1], Fatma Erkök[2]
[1,2] Istanbul Technical University, Architectural Design
[1] canb16@itu.edu.tr

Critical potentials of embodied mind through the works of Raumlabor

Key Words
Body, Mind, Critical thinking, Experience, Embodied mind

This paper aims to open a discussion on the critical potential of the embodied mind within spatial experiences. The embodied mind is a concept related to cognitive sciences, but we argue its potential evaluation to art and architecture in terms of the relationship between the body and mind. The concept of the embodied mind is interpreted by this paper as a critical concept that attempts to regain the lost balance of the body and the mind within the detachment from tradition through modernist rationalism in the twentieth century. This detachment led discussions on the characteristics and constructions of the disciplines as specific areas of knowledge. The main argument here is, that an emphasis on the unity of body and mind produces an ability for critical dynamics instead of stable situations and categorizations. The previous philosophical attempts such as phenomenological inspirations on the idea of the embodied mind, can be interpreted here as the retrospective aspect of the research.
How can spatial experiences be critical in the context of the embodied mind? To start giving a proper answer, we must emphasize the aim of modernist rationalism as constructing a collective perception of an aesthetic instead of a richness of meaning depending on individual sensualities. The importance of measurable data can be still considered as the result of the increasing speed of life through new technologies. After the evaluation of measures as the only trustable source, the mechanization of life became visible in different branches of art. Meanwhile, buildings as objects of architecture started to be built with new construction techniques and materials and even offered machines to live in [Le Corbusier, 1923]. The body is characterized mechanically by proportions and measures in this standardization, such as *Modulor* developed by Le Corbusier [Le Corbusier 1943-1954]. This mechanical interpretation of the body can also be observed in the paintings of Fernand Léger. The artwork of Raoul

Hausmann called 'Spirit of the Age: Mechanical Head' is also quite striking in this manner [Hausmann 1919].
The phenomenological emphasis on sensuality responded critically to the domination of rationality and mechanization of life. Phenomenological thought, based on fundamental relationships between phenomena, influenced architecture when philosophers explored a wide range of themes relevant to architecture, offering a more holistic view by concentrating on the structures and contents of consciousness. Through phenomenology, it becomes essential to understand how things in the world appear to us rather than how they might be in themselves. Hale argues phenomenology in architecture is 'less of a design method and more a form of discourse, offering a powerful way of describing, discussing and deciding' [Hale 2017].
In this sense, the philosophical inquiries that affected art and architecture created a horizon for a better understanding of the shift in the time-body-space relationship. The idea of the embodiment of the self in Merleu-Ponty's philosophy conceptually changed Descartes' definition of the self. In Merlau-Ponty's philosophy, the embodied self takes center stage as an active agent in the world and sense is inherent in bodily experience. The body acts as a vital pivot between the individual's inner world and the outer world of social and cultural forces. Therefore, Merleau-Ponty emphasizes the relation between the self and the world, the simultaneity and interaction of the senses to grasp a unique way of being. Hale also emphasizes that the philosophy of Merleau-Ponty transformed the meaning of "the self as I am" offered by Descartes into "the self as I can".
Phenomenology, especially Merleau-Ponty's writings, inspires cognitive studies centered around the embodied mind [Varela, Thompson & Rosch 2016]. The concept of embodiment in phenomenology is grasped by embodied cognition that encompasses the body both as a lived and experiential structure and in the context of cognitive mechanisms. In other words, it combines both biological and phenomenological aspects in a way which are not opposed to each other. Rosch emphasizes that in Europe and Latin America, interest in phenomenology originated by Edmund Husserl, Martin Heidegger, and Maurice Merleau-Ponty is growing, and it is applied to research that investigates experience through a variety of other methods [Rosch 2016].
Although this cognitive approach criticizes the phenomenological approach as being purely theoretical [Varela et al. 2016], the phenomenological philosophy still inspired the cognitive approach of the embodied mind offering that perception and thinking are not separate entities from bodily experience. Therefore, this cognitive approach of embodied mind transcends the Cartesian duality of body and mind, proving that our experiences, thoughts, perceptions, and activities occur through the common role of the brain and body. Therefore, embodied meaning transforms and re-directs the experience and defines a position that meaning and thought directly depend on how our bodies and brains work and how our physical interactions with the world and environment take place. In other words, our ability to understand and, therefore, our identity is re-structured through new experiences and situations. In both art and architecture, the boundaries of the disciplines extend when there is a need for a stance and interpretation towards social issues. Therefore, it becomes understandable that our bodily experience establishes the creative dynamics of criticality as a stance about the situations in life.
This paper aims to discuss the criticality of the embodied mind through the works of raumlabor. Raumlabor is one of the collectives that came together to work at the intersection of architecture, city planning, art, and urban intervention. They offer different kinds of interactions within space through their design projects and their sites of experimentation are usually composed of difficult urban locations and places that are abandoned or in transition for the urban transformation process. Raumlabour believes that these kinds of places offer potential and aims to activate this potential to open new perspectives for alternative uses and collective ideals (URL-1)
Raumlabor seeks to discover new areas for action and smart designs to deal with those difficult places. The interesting thing about Raumlabour is the two-sided methodology they use. Their designs are considerably smart and rational but also sensitive to human needs, creating uniqueness for every spatial situation since they consider the conditions of the sites. Raumlabor does not define this process as a kind of problem-solving, however, as 'an initiation of the process which allows people to know, understand and use the city and its dynamics, as well as its possibilities.' The works of raumlabor aim to open discussions on different issues through spatiality and produce creative interpretations through space, developing a critical attitude that enables a potential to combine this attitude with a spatial interpretation. Their designs are examples of interaction between the world and people through unique spatial experiences that drive people to rethink critical social issues.
The Great Escape [2016] is one of their designs of DIY (Do-It-Yourself) building. It is a 'nomadic entertainment facility' that temporarily injects a metropolitan dynamic in small towns through

different modes of events and experiments. As raumlabor defines the aims of the Great Escape, we understand that there is a sensitivity to the migration and refugee crisis caused by the economic crisis. By this design, raumlabor questions not the issue of living together, but how to live together through the differences. The Great Escape aims to create a chance for encounters by occupying public space temporarily and socially engaging people from different cultures through different modes of activities. These activities carry the potential to help the issue of co-existence.

Floating University Berlin [FUB, 2018] is another project of raumlabor with ephemeral structures planted into the concrete floor of a disused rainwater basin hidden in the centre of Berlin aiming to create a place for transdisciplinary research teams to grapple the complex questions of urban practices. Ranzato and Broggini's conversation with architects from raumlabor collective involved in the FUB about the stormwater detention basin of the former Berlin Tempelhof airport offers an insight into the mechanisms by which adaptive reuse can also concern the infrastructural world in operation. They underline that Tempelhof's change of function from an international airport to a large abandoned urban space and then to a park, the detention basin has never ceased to function. However, the subsequent process of reuse has reshaped the patterns of maintenance of the reservoir, leaving room for first non-human and then unskilled human action [Ranzato & Broggini 2024].

Mayer and Bader also emphasize that from its beginnings in 1999, raumlabor was driven by shared interests – not so much in running a business, but rather an enthusiasm for processes of architectural and urban production [Mayer & Bader 2018]. Raumlabor developed its working methods pragmatically and its activist approach to generating projects and work is a consequence of this [Mayer & Bader 2018]. To sum up, this research aims to present an alternative perspective to the works of raumlabor to enable the reader to recognize the idea of the embodied mind and its potential for criticality under the light of philosophical knowledge on the body and mind.

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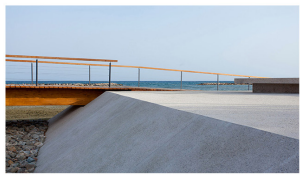
URL[1] https://raumlabor.net/category/6-about/

FIGURES

Fig. 1 - The Great Escape. Source of the Image: https://raumlabor.net/the-great-escape/





Margarita Danou[1], **Sevina Floridou**[2]
[1,2] Architects
[1] danosa@spidernet.com.cy

Voroklini coastal promenade and re-configuration of the Verki coastal estuary

Key Words
Public space, Insertions, Spatiality , Events

A landscape can be seen as defined by verbs: walking, running, turning, being. Verbs which associate themselves with a landscape may appear and disappear over time and recovering them can bring a different understanding about time and place, even about feelings about a place.
In "Quotidian Utopia" Tracy Ireland [2017 pp. 13-26] discusses a utopian future which is centred on the constitution of empathic, materially-mediated experiences of the everyday—particularly of joy, love and happiness—emotions which are rarely encompassed or made visible; particularly through the frame of spatial design. Yet concern with experience and emotion rather than representation, and with the vibrant materiality of spatial insertions, rather than merely representative assemblages of urban interactions, links to a paradigm shift in interest from what spatial design might portray, to what it might do.
Open and accessible public space is crucial to the civic health of our cities and shared landscapes, and it provides a critical communal resource. As our world appears increasingly comprised of a succession of distinct, privatised territories, emerging as borders encroaching onto public space, the tissue of liminal space in-between these, may prove to be the last resort of transforming it through public generosity: "threshold" as a positive and identifiable space rather than as "residual membrane". As such, bodies exist within these borders, they are affected by them, whereas the open space becomes an extension of the body, a form of 'Geo-body' [Viernes 2013, pp. 237-255], in all the ways that it is immersed: spatially, through maps, history, ecology, etc. The critical ability to establish a continuity of movement and perception in a world where public spaces become increasingly threatened in the face of commercial and political forces, is profoundly hopeful and liberating.
Both projects, the Voroklini coastal promenade beside the re-configurated coastal estuary

of Verki, allow for an unself-conscious succession of special unstructured "happenings"- a series of actions and events, inserted into the disorderly coastal landscape. Each element settles yet maintains a distinct logic of pace, scale and expression, with admirable ease. An understanding of scale and perspective is gifted, both to the viewer as occupier but also for the viewer as participant. Changes in scale and finesse of the structures signal a deliberate invitation to occupation, while perpetuating a broader spatial clarity.

Reflections

Having approached the design through selected "genus loci" research of the island's landscape heritage, observations crossed over translating and enriching the design. As our architectural design evolved, we formulated a philosophy towards how we envisioned the future of the coastal area, through our own actions, but chiefly to provide discourse that can withstand various pressures from other private but also public actors.

Through writings in contemporary archaeology, such as Heidegger's philosophy for plain living [Building, Dwelling, and Thinking, in Catapoti-Relaki 2020, pp. 289-308], but also other multidisciplinary writings in arts and landscape we discovered other disciplines sharing similar concerns. These have played a fundamental role in reshaping our perception in considering space: peeling back decades of interventions in order to recognise basic unaltered qualities of the inherent landscape; memory of space; or how technology could provide and override resolutions when a total recovery was not possible or desired. Yet how to create meaningful space that will be returned to its users.

Voroklini Coastal Promenade is an irregular, linear strip of public beach that lies between a hard border edge of existing private resort developments, some properties under state care, and a fluid coastal edge. Over time and administrative lack of intervention, numerous private ownerships have encroached onto the beach, giving rise to a dichotomy in perception between commercial, privately owned "land" versus "landscape" open to all. We created a walkway that became a threshold between private development and the public beach with leisure spaces. The promenade consists of a series of platforms, canopies and lighting elements unified by a meandering path, which loosely follows the coastline, widening and narrowing to create a series of specific places along the way.

Far from imitating nature, the walkway introduces an 'urbanising' element to the coastal space, through layering and terracing that provide resting spaces and social meeting areas. The path plays against the coast's curves borrowing in scale, the fleeting traces of waves washing against it. Different materials interchange along the path as it evolves. New edges are introduced – sometimes hard and defined against the beach or else soft, and receding into the sand.

Along the promenade, an open resting-place with the sea to one side and an artificial lake on the other, echoes the presence of a long-gone coastal lagoon. Changing and washroom facilities are accommodated in a narrow concrete building with timber screens, while a kiosk is contained in a wooden shell , opening up to reveal the interior.

The entire walkway of timber, stone and monolithic pebbled concrete, sits lightly onto the beach, supported on a concealed structural system that allows for the natural movement of sea and sand forces beneath it. Following seasonal fluctuations along the beach, the walkway appears to either float or sink into the rising and receding unstable landscape according to vagaries of weather and the naturally changing coastline.

Scale and finesse of the exterior furniture signals a deliberate invitation to occupation, establishing a continuity with the design principles that have been applied to the timber platforms and the louvered canopies. The hydraulic, structural engineering requirements made the decisions taken incredibly precise, concerning the particular task of the project and its site circumstances.

Reconfiguring Verki locality

The site adjoins the first phase of the completed waterfront promenade to the west, while the east borders onto raised courtyards of exclusive private summer homes. The locality is an irregularly-shaped, publicly owned coastal estuary, formerly remembered by the local community of Voroklini as "Paragathkaina", a shallow coastal lake, replenished by freshwater springs. The topography comprises of a narrow stream entering from the north, discharging into a wider coastal estuary, facing south. The stream route was however interrupted just north of Verki, by the coastal highway covering it and encasing it in a concrete canal. By 2010, the surrounding natural coastland bordering onto the estuary on either side had been further eliminated by land infills, resort developments and restaurants.

The existing estuary needed to regain its role as a rain-water collecting basin, receiving discharge flowing from the mainland, that would allow it to percolate gradually into the sea. The basin had to also regain its role of coastal diffuser, absorbing and deflecting seaward pressure, thus relieving adjacent beaches from danger of erosion. Former misguided attempts

to control the bipolar natural water forces filled the estuary with debris, resulting in seasonal floods in the hinterland, but also stagnating pools beside the sea.
Our proposal allowed the body of water to regain its major role as part of the reconfigured landscape. The basin collects rain water flow, gradually allowing it to be absorbed and discharged, while the sea is simultaneously allowed to seasonally wash into the estuary, breaking through dunes at the estuary mouth, that gradually build up through forces of wind and sand. The retainer thus becomes container, composed of archetypal materials assembled around an ever-changing landscape where water predominates. River boulders, white exposed aggregate concrete, wood and gabions, are composed into a reconstructed basin through a system of intelligible recreated flow-lines, adjusted to the contemporary scale of the landscape. The original estuary bed, re-discovered at a level below the coastal edge, and with an inverse gradient, sloped inland instead of seaward. It was cleared and reconstructed as a deep water-filter, composed of sand, rocks and river boulders, laid in alternating layers along its natural slope. Natural features as well as interventions thus became key interacting components in the new composition. The estuary's easternmost side with adjoining private infill, was supported by a tiered gabion wall, of similar river boulders to the top layer of the estuary bed. Gabions also allow percolating surface rain-water. Along the west estuary flank, a pedestrian walkway in white monolithic concrete with exposed, pebbled aggregate, slants towards the estuary and submerges into the water. The walkway above links to the westward coastal promenade whose similar concrete surfaces are suspended over deep embedded piles. A wooden bridge suspended over the estuary opening, widens into a platform as it slopes down to touch the beach, "sinking" into the sand surface.
Relationships and simultaneous interactions, at times conflicting positions of contemporaneity, were resolved; the freshwater springs re-emerged, restoring the lake of memory. Fresh water, and endemic river reeds introduced into circular planters, drew small wildlife to re-create the natural life-cycle, allowing for a self-sustainable environment.

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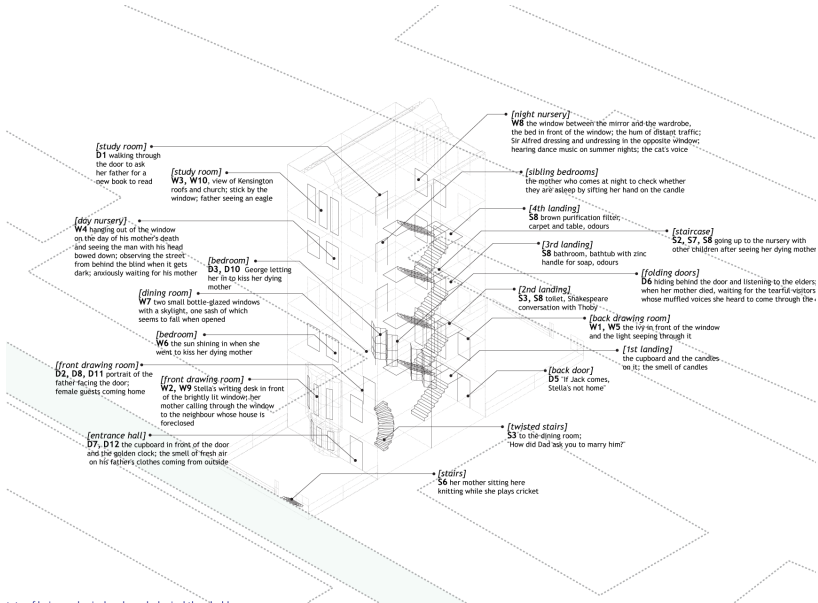
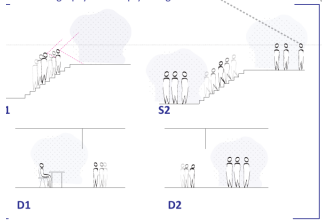
FIGURES

Fig. 1 - Up, Voroklini Coastal Promenade, 2022, Architects_Margarita Danou & Sevina Floridou. Down, Verki Coastal Walkway and Estuary, 2015, Architects_Margarita Danou & Sevina Floridou.

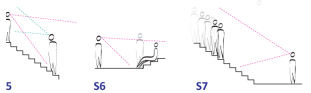


tate of being a physical and psychological threshold

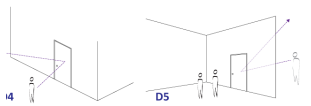


ciation of thought, sensation and speech with bodily movement

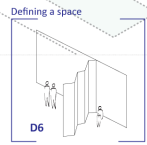
l of people's images or actions on the staircase



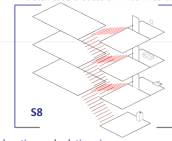
tate of being a physical and psychological obstacle/limitation



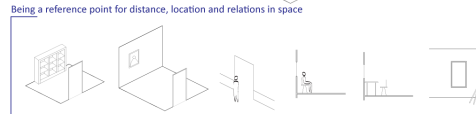
Defining a space



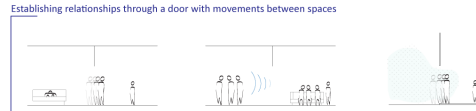
The staircase creates an 'intermediate-space'



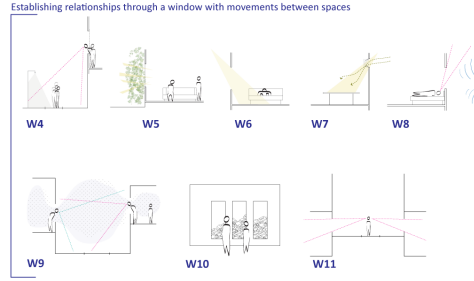
Being a reference point for distance, location and relations in space



Establishing relationships through a door with movements between spaces



Establishing relationships through a window with movements between spaces



Elif Cemre Çelikcan [1], Aslıhan Senel[2]
[1, 2] Istanbul Technical University, Department of Architecture
[1] e.cemrecelikcan@gmail.com

Spatial correlators in the functioning of autobiographical memory: wandering through Virginia Woolf's home

Key Words
Autobiographical memory, Spatial experience, Recalling spaces

Memory does not seem to belong to or to be about one's past, but more about the whole of past, present and future. The space experienced with the body and with the perception shaped by what has accumulated in our memory, continues to exist with us as part of the whole by being encoded into memory through a mental reproduction. Therefore, it is explicitly pivotal to have a deep understanding of human memory and its engagement with perception to discuss the spatial experience. This study aims to discover the autobiographical memory's relation with space and architecture by approaching the perception and experience of space through the framework of autobiographical memory and discussing the complex co-functioning of this triad. As the discussion exposes the role of spatial inputs in the functioning of the memory, I aim to seek these spatial correlators through thresholds of the physical space. For this purpose, I resort to a literary work as the material of the study for decoding the nature of correlators; an autobiographical memoir, named *'A sketch of the past'* [1985] written by Virginia Woolf in 1939. Autobiographical memory refers to the type of memory that comprises a person's phenomenal experiences relevant to the 'self'. While personal memory is a factual record of the event that a person experienced in the past, autobiographical memory includes not only the information about how the event occurred, but also the phenomenological knowledge of the person's experience [Brewer 1986; Baddeley 1992; Conway 1992; Conway & Pleydell-Pearce 2000; Conway 2001; Conway & Williams 2008; Roediger & Marsh 2012]. In the functioning of memory, the act of remembering past experiences is not locating but rather constructing [Rosenfield 1993]. This also points out that memory is not fixed, in other words, the memories are not stored as frozen fragments of reality; instead, they are reconstructed as a whole through recollections. Thus, in our memory we reconstruct the past at the present moment through the act of remembering. The subjectivity of this act is intriguing and the act of remembering spaces is no exception. In fact, this is a bidirectional construction as the past shapes the experience

in present through perception. In present, perception works like a sifter; not creating anything, but eliminating any irrelevant images from the whole (Bergson 1896). In doing so, it cannot work independently of memory; everything in memory, hence who we are, constitutes the mathematics of this sifting. Everything that we experience and are not even aware of being stored in our memory is also included in the mathematics of this sifting [Schacter 1996]. In the novel *In Search of Lost Time*, the implicit memory, which is stimulated/activated in Proust's *moments bienheureux*, unexpectedly and involuntarily incorporates one's past into the present. According to Beckett's (1965) assessment of Proustian exposition, "the most trivial experience is encrusted with elements that logically are not related to it and have consequently been rejected by our intelligence". Thus, the unexpected recollections of implicit memory are realised through the elements of the experience that we are not conscious of, which I will refer to as *the crust over the experience.*

When we contemplate the experience of space from this perspective, individuals' experiences of a space can never be identical although they share commonalities. Moreover, it can be said that in experiencing space, ties are established with other spatialities in our memory that we have experienced in the past through a set of similar perceptions. We may approach these ties between spatialities as if they are formed through Proust's *crust over the experience.* Here, spatial situations, defined by some building elements -such as door, window, staircase-, present the commonalities I seek for examining the spatial correlators in the functioning of autobiographical memory. The striking element for us in this functioning is that there may be elements in the experience that strengthen the association of information in memory with each other. The characterisation of each experience may come through objects, people, actions, as well as some building elements. In particular, since it is known that information is encoded in memory in correspondence with space, the known effect of physical space on experience and recalling information may be one of the factors that strengthen the establishment of links among many information in memory.

Each experience of space, the encounter of a person and a space is unique; the countless elements both the space and the person hold in one single moment or a duration make the experience non-recurrent. The time layers of a person have variables such as senses, feelings and actions that are shaped by the re-established memories of the time layers of one's time. Hence, the experience of space could be seen as the encounter of a time layer of a person with a time layer of a space. Space relates with time through movement; of air, light, sounds, bodies, objects and so on. This relation is possible through the openings of the physical space, connecting it with other spaces. Doors, windows, and stairs, the building elements of the physical space create spatial situations through which the effects of establishing the memory of the space will be examined in this study. The assertion is that these building elements may provide information about the memory and space relations via the contributions they make to the experience of space. The main idea of all these and their importance for the subject is that the existence of movement breaks the closed system of the space and enables to establish a relationship and to give the space its temporality.

Another significant reason for the selection of these building elements is the fact that they are commonly encountered elements in spaces with a high frequency of occurrence. The habitual, accepted, and familiar elements of space are important in terms of being a natural and probable part of any space. This quality contains a potential for being the crust over the experience. I consider that attempting to answer the question of how the memory of the space is established, not through the elements that are foreign or unexpected when encountered, but through the elements that we cannot think of the space separately from, that are frequently encountered, that are part of almost every space, will provide a more accurate ground for this discussion. The recalling of the data, in other words remembering it, may be voluntarily or involuntarily by reaching the links of these elements. The elements of experience therefore constitute the prerogative of remembering.

Virginia Woolf, who writes about her childhood years starting from the first memory she can remember, considers it important to present who she is and the past as well as the context of the present in which she recalls the past. The childhood memories, recalled through voluntary recollections written over a period of about two years, contain deep and subjective descriptions of people, events, places and feelings, thoughts, emotions. In her essay, which we can say is an experience of exploring both the present and the past, the author shares some of her most intense experiences for the first time, perhaps even with herself, by paving the way for remembering through the act of writing. The text is an autobiographical essay, written in a free-flowing and unrevised manner, without a specific structure, and without the aim of presenting a specific narrative as a whole with a definite beginning or end. As the text contains occasional recollections of personal experiences, almost every recollection was accompanied by spatial information. It was observed that this spatial information did not consist of descriptions of the

space, but often consisted of different spatial situations created by the element of space. The methodology is framed for revealing the occurrences of spatial correlators and consists of the following stages: A transcription is obtained by extracting all the spatial situations mentioned in the text and the elements that may have been caused by the spatial situations. The data in this transcript were first classified according to the time-space in which they were found (e.g. Hyde Park Gate 22, London 1890), then according to the space of which they were a part (e.g. dining room, entrance hall) and then according to the source element of spatial situations (door, window or staircase). The places encountered in the text and the physical or temporal relationships between them were transcribed. In the light of the data obtained from the inventory of the spatial situations encountered in the memories and the transcription of the real places, the spatial situations and remembered experiences of those places were engraved on the drawings. As a result of the analysis, it is seen that the commons of the spatial situations arising from the three different building elements are that these elements trigger movement or action as a result of the physical relationship established with other spaces or the outside.

ACKNOWLEDGEMENT

This work presents one of the two case studies from the thesis entitled *'Establishment of space in autobiographical memory and spatial situations: A research through cinematographic and literary works'* which was prepared by the author for the degree of Master of Science in Architecture at Istanbul Technical University and supervised by Assoc. Prof. Aslıhan Senel (PhD).

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FIGURES

Fig. 1 - The transcribed spatial situations and remembered experiences engraved on the drawing of Woolf's childhood home, Hyde Park Gate 22, London. The graphic representations of the spatial correlators inventory, grouped according to common effects on recollecting the experiences.

Ozan Avci
MEF University Istambul, Department of Architecture
ozan.avci@gmail.com avcio@mef.edu.tr

The body as the site of architectural knowledge

Key Words
Body, Knowledge, Architectural knowledge, Bodily experience

Architecture is not only about buildings but more about the interwoven relationships between the built environment, people, and other living organisms. So, the knowledge of architecture does not merely belong to the world of objects, yet to the whole world that consists of subjects and objects. Here, the body becomes the mediator that constructs the relationship between these two worlds. Through this relationship knowledge is produced within the body, thus the body becomes the site of this knowledge production process. In this paper I would like to discuss the discovery and production of architectural knowledge through a theoretical background – based on the interconnected relationships between philosophy, psychology and architecture – and my teaching practices.
Knowledge is a phenomenon that is learned and reproduced as a result of human thinking processes. For this reason, how we perceive the world of objects and subjects that make up our environment affects the structure and formation process of knowledge. Perception isn't an external event; rather, it's deeply intertwined with our existence as embodied subjects. Our physical presence actively shapes and influences the way we perceive the world around us. Knowledge can be defined as the truth obtained through learning, research or observation, and the product of thought that emerges as a result of the work of human intelligence. The process is extremely important in the formation of knowledge. In the realm of architectural education, I strive to push the boundaries of traditional learning spaces by taking classes into the cityscape. By immersing my students in the vibrant world around them, I encourage them to engage with their surroundings using their own senses and perceptions. Through this hands-on approach, each student has the opportunity to develop their unique understanding and expertise in the field of architecture while gaining the courage to actively pursue new knowledge.

Mariano L. Bianca defines knowledge as follows:

> "Knowledge is the acquisition, the formation, the possession and the elaboration of information about any kind of something which is considered to exist: acquisition, performed with perceptual and nonperceptual processes and tools; formation, understood as a process that aims to formulate purely idetic something and to assign to them attributes like cognitive, theological, metaphysical, theoretical, non-empirical or non-perceptual something (idetic something); possession, referring to the memorization and therefore to the presence of information in the mind; elaboration, as the collection of processes aimed at the acquisition, formulation and possession and of changes, relations and influences amongst the various pieces of information" [Bianca 2015, p. 4].

The potential for any type of knowledge hinges on the presence, whether actual or assumed, of three elements: a) a biological or artificial organism (referred to as a subject); b) a biological or artificial mechanism within this organism capable of acquiring, formulating, and processing information, specifically a brain or mind; and c) a vast realm of diverse entities belonging to the phenomenal world or other realities [Bianca 2015, p. 5]. These three categories all refer to the body and hereby the body becomes the site of knowledge.
Spinoza describes the body not in terms of families and species, but in terms of what it can do and its effects. According to Spinoza, all nature is a structure consisting of particles, and at this point nature turns into a single body. The boundaries between different bodies are constantly changing. Since the body becomes fluid and integrates with the space, it is not possible to talk about a dissociated subject-object relationship. Within this interconnected dynamic between subject and object, architecture students immerse themselves in both nature and the built environment, merging with them as a unified body. This holistic engagement enhances the capacity for uncovering new architectural insights and understanding.
Architectural knowledge is not static. It transcends mere textbook learning and narrow subject areas. Rather, it embodies a fluid, adaptable nature that thrives within collaborative endeavors. This knowledge is forged through collective efforts, facilitated by encounters between subjects and objects. These encounters, rich with intellectual, imaginative, and creative exchanges, occur within the spatial context inhabited by the subject. The resulting insights are internalized and processed within the individual, ultimately culminating in the creation of architectural knowledge.
Architectural knowledge encompasses historical, theoretical, and design-based dimensions, which undergo expansion and enrichment when integrated with other disciplines. In this interdisciplinary approach, the role of the body in knowledge production becomes paramount across all three categories. Utilizing the body as a tool, through direct bodily experience, becomes integral to this process. This firsthand encounter is often referred to as "lived experience," contributing uniquely to the understanding and creation of architectural knowledge.
Thomas Fuchs, as a psychiatrist and philosopher, tries to define the two concepts: lived body and living body in the context of social relations. He says:

> "Using the phenomenological distinction between the subjective, lived body (*Leib*) and the physical, living body (*Körper*), we can also describe this mutual intertwinement as follows: The lived body's impression in the one person (A) becomes a living body's visible expression for the other person (B), and vice versa: the impression produced in B's lived body becomes a living body's expression for A. Thus, it is the peculiar "chiasmatic" structure of the body as the turning point of interior and exterior, as both *Leib* and *Körper*, which enables the interlacement of self and other in the process of mutual affection and perception. This analysis may be regarded as an articulation of Merleau-Ponty's concept of 'intercorporeality'" [Fuchs 2017, p. 9].

To achieve embodied communication, intercorporeality refers to the prereflective intertwining of lived and living bodies, whereby my body is affected by the other's body in the same way as his/her is by mine [Fuchs 2017, p. 9].
Intercorporeality and interaffectivity are two important keywords to decipher the whole world. As a psychiatrist Thomas Fuchs underlines these concepts in the context of social relationships, but it may also be adapted to all kinds of relationships between not only subjects but also objects. The affection process, as Spinoza says, constructs the whole world that surrounds us [Spinoza 2011, p. 131].
A reciprocal connection exists between us and our bodies, highlighting a complex interplay. This scrutiny underscores that knowledge is intricately linked with our physical existence; it is embodied. Our bodies are not merely surfaces or isolated entities; rather, they engage in continual internal and external motions. We are inherently intertwined with our bodies, and

active introspection fosters a comprehensive consciousness, particularly enhancing our understanding of both ourselves and others [Koeltzsch 2021, p. 5]. In architectural education, recognizing the body as a locus of knowledge leads to the activation of physical engagement, fostering a diversity of bodily experiences and interactions. This active involvement serves to generate a broader spectrum of architectural knowledge through heightened sensory engagement and experiential learning. For instance, strolling through the city with my students during studio hours activates the body in a wider scale while the process of designing and making physical models similarly ignites this activation in another scale.

Elizabeth Grosz, philosopher, feminist theorist, and professor, defines the city as a place of "reflection, projection, or product of bodies" [Grosz 1992, pp. 241-254]. She highlights the importance of bodily experience while defining the city or a place. Similarly, Kim Dovey defines place as assemblage and says that "it enables us to encounter and understand the sense of place as an everyday experience rather than either an essentialized 'genius loci' or a myth." [Dovey 2010, p. 30] Here, the subject who performs the experience is involved in the formation of knowledge. It is a performative process based on encounters.

Encounters play a crucial role in fostering creativity. In his book "The Courage to Create," Rollo May discusses the significance of encounters in the emergence of creativity. He articulates his theory in the "Creativity and Encounter" section, expressing it as follows: "Creativity emerges in an act of encounter and can be understood if the encounter is taken as the center" [May 2008, p. 95]. May states that the tree painting that Cezanne created as a result of seeing a tree, that is, his encounter with it, contains something from both Cezanne himself and the character of the tree's own existence. The painting emerged as a result of the pendulum between the subject and the object, so its character of existence includes something from both. According to May, this tree, that is, the representation of the tree, is completely original and new. Through creativity, something new is born and comes into existence [May 2008, p. 95]. In architectural education, transforming architectural representation into a bodily performance and using it as a design tool facilitates students in encountering themselves.

Returning to the production process of architectural knowledge, it becomes evident that regardless of whether the knowledge pertains to history, theory, or design (linked to creativity), the body serves as the site of this knowledge production. As framed by Merleau-Ponty and Smith [1969], the body is in the world as the heart is in the body: the body and the world are thus dialectically interwoven, pre-reflective understandings of relationships with other people, oneself and the world [Engelsrud and Rosberg 2021].

In conclusion, I would like to extend this theoretical perspective through my teaching experience. I believe that activating the body through activities such as walking, exploring the city, crafting models, sketching, and immersing oneself in virtual and physical realities plays a crucial role in architectural education for the production of architectural knowledge. I argue that this knowledge is not solely generated within the confines of our brains or minds; rather, it manifests within our bodies through experiential engagement. Paul Emmons makes a similar statement: "Drawing is not only an aid to imagination; the locus of invention is within drawing. Contemporary approaches to human thought do not limit its location to the brain; thinking is suffused throughout the body" [Emmons 2019, p. 2]. Expanding the frequency of encounters, altering contexts, changing places, engaging in reading and discussions across diverse spaces, and broadening the physical boundaries of educational institutions through excursions, mappings, diagrams, models, and other advanced architectural representations all serve to activate the body and enhance the knowledge production process inherent within it.

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Michela Barosio
Politecnico di Torino, DAD - Dipartimento di Architettura e Design
michela.barosio@polito.it

Types, codes and algorithms for a perception's centred design

Key Words
Type, Codes, Algorithm, Perception, Parametric

The Modern Movement was born with the rejection of rules and norms. These are the formal rules, the canons deriving from tradition, the classical canons and their Renaissance re-readings/rewritings. This rejection of the rules is exemplified by Le Corbusier's sketch in which a half-naked woman happily declares that "Vignola est foutu", to say that Vignola and his systematization of the classical orders in the form of geometric and mathematical norms was surpassed, outdated. The Modern Movement broke with the classical rules, of the rules concerning forms, styles and proportions, its flag, but at the same time it set as a crucial topic of dimensional norms, the *Existenz-minimum* which will then be origin of one of the major legacies of the Modern Movement, namely standards and building regulations. It could be argued that the only rules allowed in modern architecture are functional rules, therefore dimensional, quantitative, but one of the main manifestos of the time is a text which, using the term points instead of rules, states five points that allow us to define modern architecture and which are not dimensional elements, but formal, stylistic elements: the pilotis, the garden roof, the free plan, the free façade and the ribbon window. This reflection questions on the one hand what the role of rules is in contemporary design and on the other how much, and on the other the extent to which these rules include dimensional or perceptive parameters directly or indirectly linked to the users' bodies. To this end, the paper is organized around three compositional tools or techniques - type, coding and parametric design - which allow these rules to be read, written and finally informed. In this sense the meaning of the term "rules" is understood in the broadest sense as a possible rule, not given a priori, formulated with a logical process of abstraction on the basis of tradition and experience.

Type: reading the rules
The type is a concept aiming to read the invariants of the form, therefore the rules of morphogenesis. The most contemporary developments of the type try to use it to understand the rules of urban fabrics belonging to other cultures (Asia, Africa) and to try to forecast the evolution of fabrics not yet consolidated (slums, abandoned areas). However, for now, the type remains a disciplinary tool in the sense that it is focusing on the rules and invariants of pre-existing architecture and urban morphology. The morphological invariants that define types are often considered the reification of constructive, economic and cultural phenomena in a broad sense. It is interesting here to question the influence that the relationship between the human body and built space has had in the definition of architectural and urban types sedimented over the centuries. To which extent can we consider that consolidated urban types, such as the square or the street, have been configured not only following functional, social and economic phenomena, but also in accordance with the human perception they will be able to engender related to the space/space relationship Human Body? This topic of perception as a focus of the design process was already proposed by architectural scholars such as Auguste Choisy who explained, for example, the spatial composition of the Acropolis of Athens as strictly related to the visual effects that the layout of the buildings provokes. The essential role of perceptive phenomena as urban design tool has been more recently systematized in the studies of Gordon Cullen in the 1960s. With the urban design manual *Townscape*, Cullen explores the effects of the human movement in the perception of the types of urban spaces, stressing the effect that spatial relationships between the elements of the urban scene and the human body have. The perception is since then considered fundamental and essential elements in their urban space design.

Coding: Writing the rules
The recognition of urban and architectural types enables to identify possible conception rules, spotting invariants, it is then necessary to codify these rules and in particular those that relate the human body and space in order to make them operational, and sometimes normative, tools for the project. Coding is in fact the attempt to prefigure the development of territorial, urban and/or architectural form, through the development of a grammar, a set of elements and rules that constitute its syntax. Coding, contrary to type, does not aspire to read, to understand the form, but to regulate, to drive, its conception process and development. Architectural and urban types
Might be considered as a starting point for the urban and architectural design process. From then, coding aims to understand aspects of urban dynamics, even those that are not strictly disciplinary, such as the performance of the real estate market, fiscal measures, climate data and, last but not least, anthropometric data and perceptive phenomena, in order to integrate them into the conception of architectural and urban form. It is a system of written and designed rules, which express a political will, but also a cultural sensitivity, and which are placed as a fixed framework, within which designers must develop their project for the transformation of space. In this sense, Stephen Marshall's studies, focusing mainly at an urban level, identify three different types of codes: morphographic codes, morphological codes, and morphogenetic codes. Generally speaking, coding is built on identifying the project elements, then the mutual relationships and finally the steps of generation. The three orders of codes therefore provide different degrees of relationships, from the most implicit to the most explicit, to arrive at the deterministic relationships of morphogenetics. The high degree of subjectivity, that distinguishes the perceptive characteristics of urban spaces, suggests describing them through morphographic codes which, through their symbolic properties, ease the conception process based on properties that are reified in a multiplicity of forms and not in a single fixed and predetermined shape.

Parametric design: informing the rules
Parametric design consists of linking the final shape to a series of information, called parameters, through mathematical algorithms that express rules capable of managing the complexity of contemporary projects. These systems of rules are therefore not external to the project, but internal, and they are developed by the designers according to two possible different viewpoints or purposes. A first approach entrusts the algorithm that processes the project parameters with the task of prefiguring the shape of the transformation, this is the so-called form-finding process. The second approach, instead, uses the desired shape as a starting parameter, starting from which it is possible to discretize in a coordinated way all the sub-systems that contribute to the desired shape. The interest of both processes lies in the clarification of the system of rules and parameters and therefore in the possibility of intervening on each of them in full awareness, generating new configurations that maintain

the character of coherence and congruity with respect to the requirements (of form and function) expressed. In the case that interests us here, namely how to embed the perception of urban environments deriving from the human figure/urban space relationship into the design process, we are obviously interested in the form-finding process. Once again, form-finding process is not intended here as a deterministic process that leads to a single specific form, but as a process capable of providing the designer with formal schedules that satisfy the required perceptual needs.

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Gianluigi de Martino[1], Viviana Saitto[2], Stefano Guadagno[3]
[1, 2] Università degli studi di Napoli Federico II, Dipartimento di Architettura
[3] Università La Sapienza di Roma, Dipartimento di Scienze dell'Antichità
[1] g.demartino@unina.it [3] stefano.guadagno@uniroma1.it

Not only human. Not only terrestrial. Teaching through the measurement of body and space

Key Words
Exhibit, Restoration, Heritage, Teaching

Introduction
Designing a new, non-architect-specific heritage course meant planning ahead. We envisioned a design-focused curriculum exploring either design elements or industrial objects. To bridge the two modules (restoration and interiors/exhibition design), we needed objects existing within a culture understanding "conservation vs. restoration." Vintage cars and motorbikes fit perfectly, embodying "conserved-restored" through diverse economic values. These familiar objects become time capsules, allowing students from various backgrounds to engage with heritage and appreciate preservation and reinvention in design and industry. We soon realised that, as much as the examples could be of extraordinary value both historically and aesthetically, the 'field of action' very quickly became self-limiting in time and in the variety of cases. We therefore progressively adjusted the scope by trying to define with questions of terminology what the students themselves meant by 'heritage' and 'exhibition'. The basic ingredients were narrowed down to the bare minimum of 'time', 'space' and 'matter'. For the first two years of the course we therefore focused on the terms 'time' and 'space', playing on the possible ambiguity of their literal interpretation. Objects that marked the passage of time or its evolution in technological terms and subsequently space understood as the universe (later reduced to the solar system). The concomitance of the pandemic events also suggested that an *ex tempore* exercise could consist of the creation of wearable devices; in the first experiment to realise a possible social distancing, in the second a minimal endowment for survival on planets with characteristics very different from the Earth's atmosphere. The encouraging results of these first two years of the course have prompted us to use the same experimental approach to a topic that is finally more 'real' and close at hand: the exploration of the zoological garden as a complex of small architectures created by Luigi Piccinato for the animal park annexed to the Mostra triennale delle Terre d'Oltremare, inaugurated in 1939 in

Naples. The considerations arising from the study of this work have gradually proved to be less and less confined to the study of an obviously historicised object, with exotic evocations of habitats for serrarium animals, but on the contrary have led to the contemporary conception of artificial spaces generated to support the life of all the inhabitants of the modern environment: humans - visitors, but also and above all animals - inhabitants.

Didactic experiences: the first experiment
The Exhibit Design for Cultural Heritage course faces a crucial need: creating effective exhibitions within existing heritage spaces. This involves crafting a connection between individuals (visitors) and their physical surroundings, emphasizing their heritage value. This complex inheritance encompasses material and immaterial elements, representing diverse values. The first year dives into the interplay between container spaces and exhibition installations. Students explored Figini and Pollini's factory shed in Sparanise (Caserta), analyzing its scale and materiality. This 'non-human' space hosted an exhibition of 'pavilion-objects': fundamental objects marking human industrial history, transcending their reproducibility to become shared heritage. The exhibition itself was designed as a journey through the architecture, with visitors interacting with pavilion installations representing iconic objects like the moka pot, Ford Model T, and condom. This continuous movement emphasized the relationship between the visitor's body and the objects, exploring varying scales and dimensions. Through this immersive path, visitors experience the contrast between the factory's serial, impersonal space (though designed with intriguing intent) and the human-centered space designed for knowledge and appreciation of the exhibited objects' historical and testimonial value.

Second experiment
If the first year was characterized by a theme with well-defined spatial and temporal boundaries in which the body was a measuring tool of the surroundings and the relationship with objects, the experience during the second year of experimentation (2022-2023) is different. Space is the protagonist here, light is its unit of measurement, and the body is a site of experience. Alt(r) a velocità: Tales From the Loop is the title of the World Fair designed with about fifty students from different parts of the world.
The provocation is related precisely to the concept of 'Universal Exposition,' in this case interpreted literally: in fact, powerful nations of the world are not called upon to participate in the proposed grand event, but the planets of the solar system and the moon. The aim of the course was therefore to build the heritage of little-known or completely unexplored places and offer our students (and the potential user of the exhibition) the chance to observe and rediscover the earth from space. A speculative design opportunity that, through the construction of an ironic and fantastic narrative, allowed us to reflect on important contemporary issues and approach theoretical fields of particular relevance, posthuman aesthetics, anthropocene, capitalocene, terraforming. Again, an initial exercise worked on proxemics and setting up one's body, the first known space. In this case it was the atmospheric and environmental characteristics of the different celestial bodies that determined some of the design choices (which then influenced all the set-ups), and distance was measured not in meters but in greater or lesser gravity.
The location chosen for this utopian event is an area in front of the Afragola High Speed Train Station designed by Zaha Hadid (2017), hence the title of the exhibition. The choice was not only driven by a desire to enhance an underused work of contemporary architecture, but by a number of logistical, formal, and environmental awareness considerations: every self-respecting Universal Exposition has interchanges/transportation nodes that allow the arrival of visitors (in many cases, they have been designed specifically); the station looks like a stranded spaceship and is one of the few works, in the Campania region, able to evoke a science fiction imagery that ties in well with that of the planets involved in the great exhibition; the area identified is under confiscation because of some toxic waste, and its non-use only adds to the problems of some nearby districts that could have benefited from such an important transportation system. A symbol, thus, of the failure of design and policy choices, the area in front of the station is enriched with a system of concentric paths that can lead visitors to discover the heritage of the planets of the solar system. The pavilions build on earthly experiences and works to tell the story of possible life and production in these faraway places, and they do so by touching on themes of particular value: they speak of biodiversity, gender transitions, and environmental crisis.

Last experiment
Last year's study focused on the Naples Zoo, a wildlife park designed by Luigi Piccinato in the 1940s for the Triennale d'Oltremare. Conceived together with the exhibition area, the zoo aimed to showcase the power of colonial Italy in the world. Beyond its symbolic value, the project

represented an opportunity for Piccinato to engage with the new rationalist architecture. The pavilions, nestled within a complex of paths, elevation changes, and vegetation, were intended to house mainly exotic and rare species, while providing them with adequate living space, at least by the standards of the time. The silhouettes of giraffes and other animals in different positions within the pavilions, the dimensions related to their activities, the separation of flows between staff and visitors: all these elements, documented in Piccinato's drawings, reveal a truly rational design process that relates, through architectural space, the animal and the human. These characteristics, combined with the undeniable architectural quality, have led to the protection of the zoo's pavilions. However, these 'exhibition machines' now appear anachronistic in light of the changing sensitivity towards animals, and the zoo itself is slowly being converted into a research and rehabilitation center. The educational (and research) experience stems from a few questions: how to preserve the architectural artifacts and their history, however controversial, once the last animal is gone? How to improve the well-being of the animals housed in the center without altering the architecture? The issue offers an opportunity to imagine new relationships and modes of expression and storytelling, designing layouts that respect both animals and architecture. However, once again, to understand the complex relationship between architectural space and figure (human on the side of paths and exteriors, animal on the side of interiors and architecture), students had to imagine putting their own bodies into play to understand how to relate to the different species, how much space they need, and for what activities. Once again, the reflection did not start from the design of the exhibition or even from the heritage architecture, but from understanding the relationships that the body generates by moving in space.

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Claudia Pirina
Università degli Studi di Udine
claudia.pirina@uniud.it

To the rhythm of dance.
Interactions between body, light and architecture

Key Words
Space-Time-Body, Gender-Space-Architecture, Built Environment

In 1936, in the incipit of the text *The Work of Art in the Age of Mechanical Reproduction*, Walter Benjamin reports some considerations expressed by Paul Valéry already in 1928. In the text *La conquête de l'ubiquité* the French poet questions the future of "Nos Beaux-Arts" in relation with "l'étonnant accroissement de nos moyens, la souplesse et la précision qu'ils atteignent" which "nous assurent de changements prochains et très profonds", due to the new ideas and habits that these technical means introduce. It will be the "partie physique" that will have to respond most to the innovations introduced by modern knowledge and techniques which involve changes in matter, space, and time. "Il faut s'attendre que de si grandes nouveautés transforment toute la technique des arts, agissent par là sur l'invention elle-même, aillent peut-être jusqu'à modifier merveilleusement la notion même de l'art".
If at that time the considerations expressed by Valéry found more explicit and easy reference to music, today referring to numerous fields of the Arts they continue to renew their relevance and can be reread again in the light of the innovations produced by digital. Its advent has in fact profoundly changed the relationship between man and the visual arts, favoring the birth of a multimodal and trans-disciplinary language. New technologies have allowed man to interact in real time with artificial environments, determining a transition from interactive relationships towards an aesthetics of interactivity that extends perception from visual to synesthetic. Man has seen his role changed, as an active participant in the space that surrounds him.
In the evolution of techniques, digital scenographies have transformed into increasingly interactive spaces in which actors or dancers interact directly with virtual projections, placing the body at the center of the images, as in the case of the shows of the Adrien M & Claire B company. In their projects, dance, technology, and multimedia investigate the multiple interferences and resonances between body, graphic and digital creation, mostly in neutral spaces in which the relationship with the physical architecture of the spaces often plays a

secondary role. In a series of shows/installations the company manipulates bodies and images directly by animating them through choreographies that draw "l'évanescence du rêve et l'impermanence des choses". Borrowing the title of the show from the Japanese vocabulary, in *Hakanai* (2013), for example, they experiment with a "symbolic collage" between the dancer's body and a series of light beams that design and simultaneously define the space. The relationship with the physical space in which the show takes place no longer constitutes one of the founding elements of the work, as in the tradition of theatrical performances or ballet.
The space is thus situated "à la frange de l'imaginaire et du réel". The search for illusion, in the mix of actions between dance and digital, also constitutes the core of interest of the show *Pixel* (2014) which combines energy and poetry, hip-hop and circus. By actively interacting with the body, digital projection thus entirely replaces the "physical" scenic space, "building" ephemeral and "volatile" worlds, which propose a unique relationship between space and time.
In this sense, in the first years of the new millennium Studio Azzurro proposes two shows in Nuremberg in which the bodies of the dancers interact directly with a series of video projections, but in which in the scene, "thought of as an organism in transformation", relationships are still built with some physical elements of space. In *Galileo* (2006) and even more in *Wer möchte wohl Kaspar Hauser sein?* (2000), the space of the theater in which the performance takes place, and some "elements" used by the dancers, are still able of that ancient mediation between body and digital which in the most recent shows by Adrien M & Claire B has been progressively dissolved until it disappeared.
The synthesis between scenic space, virtual space and body has its roots in an artistic research already begun in the 20th century. The "contaminated" language between theatrical space and digital projection finds, in fact, interesting antecedents in some works and scenography that the text investigates to understand the opportunities and consequences that an interaction between these areas of application can offer.
An important contribution on these themes can already be recognized in some pavilions presented at the 1967 Montréal Universal Exhibition entitled *Man and his World*.
Designed by the National Film Board of Canada (NFB), the Labyrinth Pavilion is one of the most interesting. This building presents itself as a completely introverted architecture within which the visitor – like a modern Theseus – is invited to walk through environments in which interact, in a different way, with projected images. The pavillion is conceived to involve public participation by developing a principle of interactivity and relationship between image and viewer.
Within this architecture, cinema and body establish a completely new perceptive and physical dialogue in which space is understood as a sequence of immersive environments. The work thus expresses a relationship between the two languages – cinematographic and architectural – which is particularly effective in generating "fertile areas" of embodied experience. Digitalization therefore does not appear to be subject to an expressive purpose but constitutes itself as an opportunity for an aesthetic, sensitive and bodily experience.
Following Deleuze's reflection on the conception of the body in Spinoza, *Labyrinth* combines the element of the body as a "relationship of movement and rest" and the element of the body as an "object of affections", perceptions and relationships. Indeed, it can be argued that the aesthetic strength of Labyrinth arises precisely from the junction between the kinetic and dynamic register.
This work shows how movement is not just a translation in space but a real qualitative change in which abstraction and realism coexist, producing the alienating effect of the mind which allows itself to be questioned by the space in which it participates. The research that *Labyrinth* talks about is precisely that around the link between body, movement, and spatiality, as the foundation of self-awareness.
Scenic space, filmic image and architecture also interact in the experiments of Josef Svoboda who, in Montréal, presented the *Diapolyècran*, an evolution of the *Polyècran* already presented in Brussels in 1958.
Polyècran interprets the idea of poly-vision by working on the redefinition of the relationship between the work on stage, architectural space, spectator, and filmic image, through which a new theatrical-cinematic form is born. With it, Svoboda continues his investigation of the limits of scenic space and the creation of what he himself defines as "psychoplastic environments". This allows a use of space capable of designing a kinetic-architectural progression, arousing an immersive perception, not only visual but truly corporeal. The spectator's experience is thus not limited to a vague, indefinable state of mind, but, due to the importance given to rhythm, time, pauses, takes on the characteristics of an experience that the body remembers. What is essential for Svoboda is the symbiosis of the stage action with the projection because it is this simultaneity that generates a completely new perception of the dramatic action in the audience. In this sense, the spectator's relationship with the work follows the trend of a

process that develops gradually, and which allows him to perceive, through parallel scenic actions, the coexistence of different points of view and to build his own personal path from causes to consequences.
The scenic image in three-dimensional space, as demonstrated by the works of Studio Azzurro and before that by Svoboda, can arouse such an immersive perception that it places itself in a "new territory". A territory in which space does not simply act as a frame, but participates in revealing the forces, situations, and atmospheres on stage. In a multiple interdependence between work and spectator, but also between architecture, body and digital, spatial abstraction thus takes shape in works or shows, interweaving thin threads with ancient thoughts and studies.

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FIGURES

Fig. 1 - Josef Svoboda, *Theatral show employing the polyecran system*, Brussels 1958.

1 / CONCEIVED ENDNOTES

Alisia Tognon
Politecnico di Milano, Department of Architecture and Urban Studies

Traditionally, humanistic culture has interpreted space through bodily analogy, to define the body not only as an aspect of proportions, measurements and geometry. Indeed, the body refers to space, and through it we inhabit it. However, through the body we create an "existential" space (Merleau-Ponty), because as phenomenological thought claims the body inhabits and applies to space and time it is "a means to a world". The body is not just an object in space but is the point of view from which we perceive space itself. Even in Foucault's structuralism, the constant relationship between the 'I' and the 'body' — I am where my body is — refers to an indissoluble bond with the space of which the body becomes a 'fragment', reiterated in its power by Barthes. It is a relationship of co-presence, but also of co-construction, as in the complex interactions between humans and non-humans (Latour). So spatial practices are shaped not only by human intentions, but also by material and technological dynamics, which can translate into a post-organic body as in Gordon Matta Clark's experiments.

But also, the performing space becomes the place through which to explore the body-space relationship in innovative and profound ways, as in theatre-dance (Pina Bausch) or Kantor's theatre. The theoretical reflection on the body, on the relationship with the soul (St. Augustine), overcoming that soul/body dualism (Galimberti), suggests that interaction with space is crucial not only for individual identity, but also for social categorizations and institutions, reflecting wider social norms and roles.

Based on these assumptions, the 'conceived' session brought together a myriad of wide-ranging reflections relating the discipline of architecture with a multidisciplinary interplay of theoretical and practical interpolations. By investigating the relationship body / space, several contributions highlight how architects can design spaces that not only embrace human activity, but also enhance and engage the human experience. In the practice as well in the academia, the body becomes a crucial tool and mediator to produce architectural knowledge. Moreover, from different angles, the examination of the voice of space itself, gives a deeper understanding of the embodied existence and the dynamic interaction between us and the world we inhabit. The intrinsic connection between the body and the built environment is investigated by referring to designers and theorists as a reference such as Hollein, who invited us to reconsider the ways in which we interact with the spaces, or the exploration of human perception by Carlos Martí Arís.

Edited by the Inter-Active Scientific Committee and the Milan Organising Committee, see p. 21

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/ On the dynamics of active interaction in the body-space and bodies in the space relationship, highlighting the role of presence, co-presence, movement, gestures, and sensory engagement in terms of embodied experience.
Today, we understand space neither as a Cartesian entity merely defined by coordinates nor as a passive element identified by voids that we can occupy, observe, and cross. In addition to proportions, measures, and geometry, we now incorporate as aesthetic categories but not only actions, movement, and experience to appreciate and interpret contemporary spaces. It implies that bodies are acting and active agents affecting the connotation of space. The inter-active session interprets the relationship between body and space as mutually influencing, where their interactions nurture distinctive living habitats. Beyond a subject that produces space, the body is also a medium that, moving away from the tyranny of 'oculacentrism', perceives its tangible and intangible qualities. Therefore, we can understand what stands between the body and space, a realm of filters that affect our sensing capacity. Such filters, which emphasize, mediate, or negate body-space intertwining, are often the result of an architectural choice materializing with anything that can be perceived by our senses, from sight to touch and smell.
The encounter of multiple bodies in space and their material experience converge in the construction of a space, resulting from an articulated and multifaceted, mediated and shared practice, where bodies become agents of transformation on different physical-spatial levels: bodies as actors in practices and actions, their interactive capacity; bodies active in the design of space (the eye, the hand, the sign); bodies and the construction of space (the survey, the construction site); bodies, space and didactics between presence and virtuality. With these premises, we can frame the production of space via architecture as an increasingly inter-active practice that involves a plurality of actors and actions through time.

The session welcomes contributions which include but are not limited to:
/ Bodies as modification of living space;
/ Bodies perceiving space through the senses;
/ The eye, the hand, the sign: the active bodies in the design of space;
/ Bodies and spaces as mediated relationship by filters, skins, dressings, envelopes, or other mediums and sensing tools;
/ Interaction practices between bodies and temporality, e.g., theatre performances and others;
/ Collaborative practices for the transformation of space, e.g., as co-design and others;
/ The bodies and the construction of space: the survey, the building site, the journey;
/ Bodies and didactics between real and virtual space.

Luca Lazzarini[1], Gloria Lisi[2], Marco Mareggi[3]
[1,3] Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
[2] Università di Palermo, Dipartimento di Architettura
[1] luca.lazzarini@polimi.it [2] gloria.lisi@unipa.it [3] marco.mareggi@polimi.it

The Walking Body.
A reflection on the walking–design relationship based on the experience of Laboratorio del Cammino

Key Words
Walking, Design, Planning, Experience, Vulnerability

The walking-design nexus: two interpretations
In the past decades, several authors have explored the role of the body and senses in urban studies, through a variety of approaches and tackling different conceptual [Tuan 1977; De Certeau 1988; MacFarlane 2011; Ross and Giovannoni 2019], methodological [Dunn 2016; O'Neill and Roberts 2020] and design implications [Secchi 2000; Zardini 2012; Ritter and Schmitz 2015; Careri 2017; Bianchetti 2021]. Within many of these contributions, the act of walking emerges as a spatial practice producing a multi-sensory and bodily knowledge that affects our ways of transforming cities and territories [Wunderlich 2008; Lazzarini and Marchionni 2020; Piga et al. 2021]. Walking is frequently highlighted as an approach that has the advantage of combining the exploration of places with a tension to transform them, through a more or less explicit project [Paba 1998; Decandia and Lutzoni 2016; Biondillo 2022].
Within the planning domain, it is recognized in the debate that the practice of walking represents a relevant means through which the plan and the planning project can be constructed, at least since the origins of the modern discipline [Geddes 1915; Abercrombie 1915; Sorya Y Mata 1926]. Despite the long-term discussion on this topic, we believe that the walking—design relationship is still a contested issue in the debate, and that more reflections are needed to unfold the complex dynamics and attributes linking the practice of walking to the design process.
In this regard, two interpretations of the walking practice are highlighted below. The objective is to briefly present two possible – though opposing – viewpoints on how the act of walking can (in)form the project construction. By taking Wunderlich's definition [2008] as a reference, the first perspective interprets walking as a "purposive practice", while the second as a "discursive practice". Wunderlich also proposes a third practice, the "conceptual" one, related to walking as

a performative act. As both discursive and conceptual practices promote engagement with the place and consequently configure themselves as "participative practices" aimed at interacting with the socio-spatial milieu, only the purposive and discursive practices are considered for the aim of this paper. A brief description of the two interpretations is provided below.
Viewing walking as a "purposive practice" means interpreting it as a "necessary activity performed while aiming to reach a destination". In this case, emphasis is placed on the act of "walking to" or "walking towards" a place. According to this interpretation, walking serves to connect A to B to C and so on, without any attention oriented both to the process of reaching the destination or the space crossed by walking. An example is the employee who rushes every day by walking from home to work. During this act, the person is not caring about the surrounding urban environment and the main goal is to reach as soon as possible the workplace. According to Wunderlich [2008], this interpretation produces a bodily disentanglement and, since it "foster a sense of order and continuity", it undermines the perception of landscape. Here it is taken the view that, if designers are limiting their walking experiences to a purposive practice, this could affect their capacity to approach and construct a project. This assumption resembles the critique by Burckhardt on landscape perception in the contemporary age [Ritter and Schmitz 2015], according to which contemporary designers typically overlook the perceptive sequences that characterize the act of approaching a place (project area). In doing that, a clear demarcation and a strong detachment between the designer and the space is produced, where the latter is a "place-object" delimited by clear boundaries and internal dynamics and forces, and not the outcome of a multifaceted human-environment interaction. This is why, according to Burckhardt, a new science of walking (*Spaziergangswissenschaft*, or strollology) is needed to regain awareness of the complex conditions of perception of the environment.
The second viewpoint looks at walking as a "discursive practice", it is a spontaneous way of walking which is sensitive to external paces, agencies and temporalities in the space. The term is inspired by De Certeau's interpretation of walking as a speech act: "The act of walking is to the urban system what the speech act is to language" [1988, 97]. This conception highlights the walking body's ability to perform a conscious exercise, oriented to build a complex socio-spatial relational knowledge of places, which is not static but incremental and dynamic because it evolves over space and time. According to this interpretation, walking emerges as a *reflective tool* [Wunderlich 2008] that informs and nourishes the project. It can thus serve as a methodology able not just to gather knowledge or build awareness on the environment but also to challenge project assumptions with founded agencies, to validate its outcomes and to monitor its evolution. Therefore, walking becomes a reflective "design medium" that has the advantage of integrating what MacFarlane [2011, 50] defined as "a particular kind of education of attention to the urban environment" with "an embodied condition of thinking and perception in a constant flow". While walking contributes to shape a multisensory awareness of the environment, the body-subject has the potential to become the transit channel between the space and the project [Bianchetti 2021], a sort of device through which urbanists can shape the space. Differently from the previous conception (purposive perspective), walking is here interpreted as a practice that conveys an embodied sense of place nurturing the socio-spatial milieus of localities.

Walking as a discursive practice: the case of Laboratorio del Cammino
Within the background highlighted above, we present a specific case of application of the "walking as a discursive practice" interpretation to planning education. The Laboratorio del Cammino (LdC) is an inter-university network of researchers committed to investigate how the practice of walking can innovate planning and design education and research. The main activity promoted by the LdC is an itinerant Summer School organized every year since 2017 which involves a group of 40 students and researchers that walk for about 10 days along a territorial transect of Italy for 150-200 kilometers. The aim is to explore and investigate one form of territorial vulnerability and outline design scenarios and strategies for improving the local community's capacity to adapt to that form of vulnerability [Lazzarini and Mareggi 2021; Lazzarini et al. 2022] (Fig. 1). During the 6th edition held in 2023, the Summer School took place in the Karst territory between Italy and Slovenia following a path from Nova Gorica to Izola, crossing Doberdò del Lago, Sistiana, Duino Aurisina, Sgonico, Sezana, Trieste, and San Dorligo della Valle. The main topic of the Summer School, titled WalKras, was the climate risk and participants were asked to research and describe the socio-spatial impacts of climatic change and recognize the material and immaterial resources to activate to contrast their negative effects. Emphasis was placed on the participants' capacity to investigate with their senses and experience the changes taking place in the territory crossed by walking, and elaborate spatial narratives and possible design trajectories for tackling the challenges of climate change.
During the WalKras Summer School, under the supervision of young researchers and

professionals as mentors, the student groups have elaborated technically sound descriptions of five forms of climate risk (heatwaves, forest fires, coastal erosion, urban flooding and hydrogeological risk). Although the emphasis was oriented to build a well-grounded "territorial description", interpreted as a practice that is already endowed with a design tension [Merlini 2010; Mareggi and Merlini 2014], students were also asked to elaborate one or more explorative scenarios to spatialize the change dynamics, provoking local communities with alternative ideas of the future. The Summer School adopted walking as a discursive practice which was able to produce a bodily and experiential knowledge on the impacts of climate change. It allowed students to approach slowly and empathize with the local communities. The act of walking was not spatially constrained as the walking body, being sensitive to improvisation, was predisposed to the exploration of the local context and its temporalities [Wunderlich 2006], making possible deviations along the path where something significant caught his/her attention. Therefore, the sensory perception of the walking body was relevant to identify and map the more vulnerable areas to heatwaves, such as the large concrete parking lots or the logistics centers, and the data collected by walking were combined with those extracted from the land surface temperature maps, to build a complex knowledge of the phenomenon, that has then brought to the identification of a set of design actions to reduce its negative consequences. In the same way, walking was also crucial to describe the impacts of the forest fires on the Karst landscape, integrating, validating – and sometimes challenging – the data collected through aerial photos and official policy documents with those originated by the walking body. This has allowed to map both the visible signs of the fires and the invisible ones, thanks to the act of listening to the institutional and civil society actors encountered during the walk. The idea that the journey is always more meaningful than the destination, as are the entangled encounters along the route, is a guiding trait of the Summer School experiences.

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FIGURES

Fig. 1 - The group of the Summer School WalKras walking through the Karst territory in the area of Doberdò Lake Natural Reserve. Source: Serena Marchionni.

Dafni Riga
Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani.
dafnitheodosia.riga@polimi.it

Bodies on the move:
exploring the effects of speed in the body-space relationship

Key Words
Body-space relationship, Speed, Embodied movement, Environmental perception, Affective experience

The person-environment relationship has received researchers' undivided attention throughout the years, with insights spanning multiple disciplinary fields: from environmental psychology, sociology and geography to urban planning, architecture and neuroscience. Scholars studying the complex body-space interaction regard both components as a system, in which the person is part of the environment [Rapoport 1977; Ingold 2022]. Multiple factors mediate the way humans perceive the environment: physical features and environmental properties, perceptual-cognitive and affective judgements, purposes, preferences, and culture. Since the 1970s, scholars have been stressing the role of human corporeal movement in environmental perception. Visual perception and sensory experience of space are not static processes [Rapoport 1977]; instead, the human body plays an active role in interpreting reality through movement [Gibson 1979]. The new mobilities paradigm advocates for "the recentering of the corporeal body as an affective vehicle through which we sense place and movement and construct emotional geographies" [Sheller & Urry 2006, p. 216]. Humans are mobile beings that experience emotions while on the move [Rapoport 1982; Cresswell 2006; Metz 2008; Spinney 2015]. Yet, it is crucial to address the following questions: What happens when the concept of speed is added to the equation? How does speed condition movement through and within space? The present contribution aims to provide a theoretical reflection on environmental perception and affective experience of bodies on the move, drawing from the hypothesis that different forms of movement, and thus different speeds, give rise to different sensory and affective experiences [Johansson et al., 2016]. Regarding the body as both a physical structure and as a lived, experiential structure [Merleau-Ponty, 2002], we will challenge the concept of speed and explore potential reconciliations for embodied movement in space. Finally, we will present empirical insights from a study on environmental perception and affective experience of being on the move at different speeds.

In an era of perpetual movement (of humans, objects, information), the effects of speed and its pervasiveness in our experience of space are increasingly questioned [Solnit 2001; Rosa 2015]. The high speeds of human mobility have eradicated the sense of distance, annihilated space and time, and dissociated kinaesthetic from visual space [Hall 1982; Schivelbusch 1988]. Through the mechanization and disembodiment of human mobility, modern rhythms facilitate movement from A to B but impoverish spatial experience, rushing passengers through intangible landscapes. "It's the end of the foreground" [Schivelbusch 1988, p. 65], that is the fundamental spatial dimension of the mobile experience in which the person establishes contact with the space he/she is moving through. Experiences of movement have increasingly become passive, disengaged [Metz 2008] and mediated by filters: windows, screens, transparent or semi-transparent surfaces. The insulating capacity of cars and trains induces a 'tactile sterility' [Sennett 1994], where sounds, smells, sensations of touch and temperature are all diluted [Urry 2006]. With the aim to reinstate embodied movement and body-space interaction, scholars underline the potential of slower speeds and rhythms [Gardner 2009; Edensor 2010; Pileri 2020]. Slow mobility is expressed through active modes of movement in which the body itself generates motion, such as walking and cycling. Active and embodied movement at speeds below 20 km/h yields rich sensory experiences, enables immersion of the body in space and encourages the person's engagement with the landscape [Illich 1974; Gehl 2010].

The above observations are supported by evidence from a study (carried out in the context of a PhD research project) on the relationship between mode of movement and environmental perception. The study took place on three peri-urban areas along the embankments of the Po river in Lombardy, Italy, where it is possible to encounter individuals using different modes of movement. Based on the premise that the study would include participants of all ages and using the method of intercept survey, the aim was to qualitatively investigate environmental perception and affective experience of people walking, cycling, or driving a car. Individuals who agreed to participate completed a verbal questionnaire and were free to provide additional personal observations. The questionnaire consisted of both closed and open-ended questions regarding purpose and duration of movement, familiarity with the surroundings, perception of speed during movement, environmental features perceived during the trip, and demographic data. Moreover, participants were asked to describe the surroundings in their own words.

The survey yielded a large amount of qualitative material, that does not lack complexity. Participants involved in the study age from seven to 74 years-old, therefore constituting a wide sample that allows for data interpretation according to age. Findings for the three modes of movement (walking, cycling and driving) are currently under interpretation, yet it is possible to derive some preliminary observations. Firstly, walkers and cyclists referred to both large-scale (i.e., river, vegetation, landmarks) and micro-scale environmental features perceived in the foreground (i.e., animals, types of vegetation), confirming previous research that slower speeds allow for an enhanced visual perception of space [Liu et al. 2021; Hannam et al. 2021]. Walkers and cyclists involved in the study declared no disability; we may thus consider their bodies as able to generate motion at different speeds, according to their age and experience. Their kinaesthetic and sensory experience was almost non-mediated, since they also referred to sounds, smells, the weather and other sensory variables, such as the pleasant shade of the trees. On the other hand, car drivers' description of their surroundings was limited to generic visual judgements of environmental features perceived panoramically and at a distance (i.e., river, fields). This observation confirms the assumption that the car functions as a 'vision machine', dominating sensory experience and imposing panoramic, cinematic views of the landscape to the otherwise immobilised passenger [Larsen 2001]. Secondly, cyclists particularly expressed feelings of freedom and relaxation during movement, while some referred to the potential of the bicycle in stimulating both body and mind and inducing an affective, mobile sense of place, as also suggested by Dunlap et al. [2021]. Although all participants reported stops during movement, walkers' and cyclists' motivations to stop were often related to a need for observing and engaging with space, as pointed by Pileri [2010], whereas car drivers' motivations were of instrumental nature. The main conclusion drawn from this preliminary analysis aligns with previous studies in indicating that speed is an experiential quality of movement and environmental perception [Ingold 2021] and is suggestive of our sense of dwelling or belonging to a place [Kaplan 1988; Sheller & Urry 2006].

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[brunnen·gehn]

Alba Balmaseda Domínguez
Università degli Studi Roma Tre - Department of Architecture
alba.balmaseda@uniroma3.it

Bodies, water and the city:
Collective bathing in urban surroundings

Key Words
Embodied experience, Bathing waters, Urban space

> "Bathing, in whatever fashion performed, is concerned with care of the body. To maintain the balance of this delicate instrument, to dwell in harmony with our organism, is a prime necessity of life" [Giedion 1948, p. 628].

A number of studies have shown how the reduction of urban spaces to mere functionality leads to an alienation of corporeality and a lack of engagement with our surroundings [Sennet 1996; Pallasmaa 2012; Bianchetti 2020]. The technification and digitalisation of our time has favoured the immediacy of the use of the common spaces of our cities. They are no longer spatial experiences to be embodied, but theoretical realities that we pass through from the outside. This physical separation from the built space, together with "the dullness, the monotony, and the tactile sterility which afflicts the urban environment" [Sennet 1996, p. 15], is turning us into deprived, objectified, and isolated bodies.
In this context of a passive material and immaterial metropolitan body [Blell 2020, p. 82], the urban waters today constitute a space in the city that is highly contested for re-incorporation and re-appropriation. The deindustrialisation of cities [Ruby et al, 2020, p. 11], the sensitivity of global warming and the capacity of water for social cohesion are mobilising citizens to claim their right to bathe in urban waters [Balmaseda 2023, p. 244]. Examples of this trend include: the Association d'Usagèresers des Bains des Pâquis, set up in Geneva in 1980 to prevent the demolition of an existing public bathing area; the Flussbad project in Berlin, which has been reclaiming the Spree canal for open bathing since 1990; Bagni Popolari in Baden, which has been deprivatising the existing medicinal water through various projects since 2012; Pool is Cool in Brussels, which launched an urban debate in 2015 by highlighting the fact that there was no outdoor pool in the entire city; or Brunnen gehn in Basel, an urban ritual launched in 2016 by the Hotel Regina collective in which people bathe in public fountains.

The methodology for this contribution has been to apply a research question to the above-mentioned examples to understand how collective bathing in urban environments contributes to being, as Sennett [1996] would put it, "more aware of each other, more physically responsive." The examples have been identified in the context of a doctoral thesis that examines in detail the social and spatial conditions of collective bathing initiatives that operate in the urban so-called bluespace [1]. In this sense, the success and proliferation of social initiatives and bathing spaces suggest that there is a great appetite for urban bathing, and therefore for places that create alternative relationships between the body and the built and natural environment. Based on the foregoing, bathing waters were found to contribute to the themes of the research question as follows:

(1) Living organisms on planet Earth need water to survive. However, the human relationship with water goes beyond the purely utilitarian. On the one hand, there is a strong physical connection: Water is human's first home [2] and sensory experience. [3] To immerse oneself in water is to return to the prenatal space and to reunite with a material environment made of the same substance as our bodies. On the other hand, once humans recognised the importance of water, an intellectual link was established: water became a revered, sacred, political, and highly ritualised space for many human communities [Giedion 1948, p. 628].

(2) The practice of bathing awakens our "body awareness, literally bringing us closer to materials and bodies than we are in other spaces" [Pearson 2020, p. 11]. Understanding the material nature of the body "opens all of our senses toward the physical world entwined with the social" [Ibid]. This connectedness [4] with the corporeal is the starting point for becoming aware of the presence of each other and our environment, and therefore caring for another and feeling responsible for the social, ecological, and political body [Sennet 1996, p. 370].

(3) Bathing together offers a shared space free from the triumph of consumption, "where jouissance becomes a collective experience" [Lefebvre et al. 2014, Introduction). In the collective bathing architectures created in European cities by the initiatives mentioned above, the pleasure of a total-body [5] is "experienced within a social framework" where there is no separation between private and public. In bathing, publicness does not "have the unpleasant, almost ridiculous, character it has assumed in our society, where the social and socialization are generally met with disapproval" [Lefebvre et al. 2014, p. 137]. A collective intimacy is established in an existential relationship between bodies, water, and the city.

(4) The spaces for collective bathing that are emerging in cities show how a part of society is reconstructing spaces that are linked to "images of presence" [Pallasmaa 2012, p. 48], capable of "giving rise to images of memory, imagination and dream" [Ibid, p. 48]. Spaces that offer the physical and social experience of belonging. Bathing brings the user into an unmistakable haptic contact with the material through the skin. The practice leads the user to experience the environment from living, present bodies, rather than from possessed or represented ones [Sennett 1996, p. 16; Bianchetti 2020, p. 17]. "Il corpo non è mio, Il corpo sono io (The body is not mine, the body is me)" [Bianchetti 2020, p. 17].

(5) It is something unusual to show the body in the city. There are few collective spaces where we feel comfortable undressing in front of others. Bathing together is undoubtedly one of the practices that normalises this bodily engagement with each other. Without going into social conventions, "there is a strong identity between naked skin and the sensation of home" [Pallasmaa 2012, p. 63]. In ancient Greece, the display of the naked male body in the urban environment signified security and a sense of being "entirely at home in the city" [Sennet 1996, p. 33]. The possibility of bathing in the open built environment offers citizens wellbeing, softness, and a sense of home. By activating the sensory body, boundaries are blurred, "I dwell in the city and the city dwells in me" [Pallasmaa 2012, p. 43].

In conclusion, collective bathing is a complete and profound embodiment with the environment, far from the experiential offers of today's urban space. In order to become more aware of each other and more physically responsive, the implementation of urban bathing in our cities mediates by correlating with water (1), promoting connectedness (2), accommodating the total body (3), reconstructing images of presence (4) and perceiving the city as home (5). A horizon of investigation in urban and architectural practice is opened by these aspects (1, 2, 3, 4 and 5). The preservation of existing bathing spaces, the restoration of urban waterways, the provision of access to urban waters, and the return of lost structures through revived prototypes could bring several benefits to urban life and to life as a whole.

ENDNOTES

[1] Natural or human-made outdoor environments where water is present and accessible to people.

[2] Referring to the concept of the Maison natale, the first space in which we live after we are born [Bachelard, 1994, p. 7].
[3] "The sense of touch, is the earliest to develop in the human embryo [...] In the womb, bathed by its mother's amniotic fluid and enveloped by the soft walls of the womb, "rocked in the cradle of the deep," the conceptus* leads an aquatic existence" [Montagu 1986, p. 3].
[4] A reference to the term, which was the subject of the Danish pavilion at the 2021 Venice Architecture Biennale, under the curatorship of Marianne Krogh.
[5] "At the center of the theory and the possible new practice lies the total body, simultaneously reality and value (...) a body occupying a space and a body producing a space. In other words, a natural body (material, employing its articulated members) and a social body (using abstract forms, primarily language, for its destructive and creative activity)" [Lefebvre et al. 2014, p. 149].

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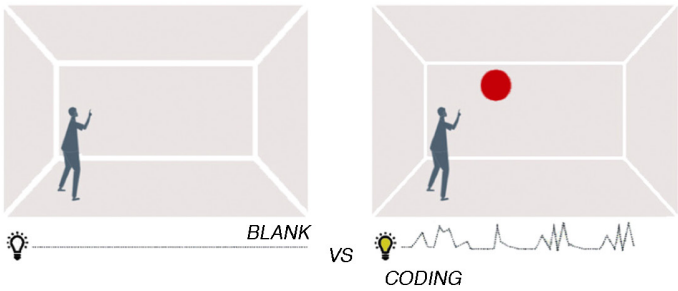
FIGURES

Fig. 1 - © Dominik Dober/Hotel Regina.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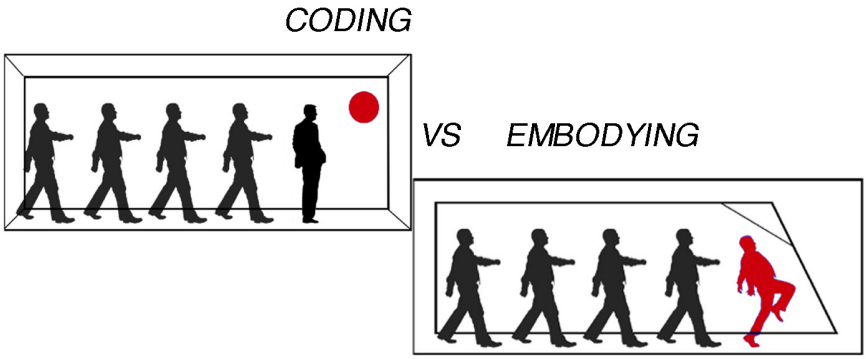
CODING
VS
EMBODYING

Nicoletta Brancaccio
University of the west of England, CABER -Centre for Architecture and Built Environment
nicoletta.brancaccio@uwe.ac.uk

Embodying the oblique.
How space coding and construction of reality can explain in relation between space and emotions

Key Words
Space coding, Construction of reality, Non-orthogonality, Predictions & emotions, Curious spaces

Space can inform, determine and/or drastically subvert our usual movements and behaviour [Robinson & Pallasmaa 2011]. We might navigate it passively or be surprised and influenced by it, but we can never be indifferent to it (Image1).
Space influences its user's behaviour by determining the possibility of movement [Rizzolatti et al. 1999]; some branches of neuroscience study space coding and construction of reality at the neural level. Space coding happens through the coding of discontinuities [Rozzi & Fogassi 2017], these are considered the interruption of the blank space: we can affirm that facing a blank space we would not codify anything due to the lack of brain activation. Architects design discontinuities which profoundly impact our brains: architecture in fact, creates enclosure but also meaning. We do not codify reality, we build it and it is different for every individual: the neural construction of reality – how we perceive space and our surrounding reality – happens through the overlapping of several layers of perception, including space coding, our experience and the meaning previously attributed to similar spaces and objects, in other words their semantic. Space influences our behaviour: human beings, while programming their moves, calculate the possibility of action offered by space and behave in consequence (Rizzolatti et al. 1999). Understanding the neuroscience behind space coding and its impact on people aids in comprehending behavioural and psychological responses to specific spaces, equipping designers with tools to integrate space and emotions effectively.
Emotions have been extensively studied by numerous neuroscientists. Already in 1884, psychologist and philosopher William James theorised that emotions are equivalent to our subjective experience of physiological changes and are experienced as feelings. In his words, "our feeling of the same changes as they occur is the emotion" [James 1961, p. 189]. Jaak Panksepp [1992], one of the most interesting authors about emotions, suggested that we have a total of seven primary and secondary emotional pushes, these systems are divided in positive and

negative emotions; within his work he explored also the link between space exploration and wellbeing; the need to explore and move around is one of the basic elements on which emotions are based.
More recent studies provided a clearer and sophisticated model of what emotions are. Lisa Feldman Barret, one of the most famous living neuroscientists, theorised that emotions are predictions and predictions help us to experience the world [Feldman Barret 2018]. According to the theory, we don't react to the world, but based on our experience, we predict and construct our experience of it. Her recent studies found out that trying to understand emotions we also make predictions of what they could (or should) be according to our previous experiences. The way we experience our own emotions is exactly the same: our brain makes predictions or guesses that are constructed in the moments by millions of neurons working together [Feldman Barret 2018]. Emotions are not innate but emerge from affect. Our brain comes pre-wired about certain base-feelings: newborns for example feel comfort, discomfort calm etc. We naturally look for internal and external balance (based on feelings) and predictions are the way our brain works. According to the theory, what we see is influenced by what we feel, emotions that seem to happen to us are made by us, somehow, we are the architects of our experience: we are responsible for our own emotions.
Relating this theory to space experience, a question arises: what happens if space does not fulfil our predictions? We daily encounter various environments, characterised by different architectural elements. However, one prevalent aspect is the orthogonal nature of architectural spaces: we frequently navigate spaces with walls and partitions perpendicular to the ground. A study revealed that culturally, we are predisposed to seek the horizon line and codify space through orthogonal directions [Shvarts et al. 2014]. Therefore, it is intriguing to explore the implications when encountering spaces that deviate from this perpendicularity: non-orthogonal geometries introduce unpredictable discontinuities. The viewer decodes these discontinuous spaces betraying his expectations and making accurate predictions elusive. Non orthogonal geometries have a significant impact on space coding and construction of reality, which cannot rely on a habitual process of recognition and is therefore affected by the impossibility of applying usual predictions: what emotions arise from this? By eliminating orthogonality, architects create a novel relationship with the ground, introducing instability and stimulating a dynamic that heightens users' awareness and engagement with their surroundings. According to Parent and Virilio, the oblique is fundamentally involved in how a body physically explores and embodies a space. Their idea was to tilt the ground to revolutionise the old paradigm of the vertical wall [Parent 2004].
Architecture and the built environment can either align with or challenge predictions, influencing the emotional balance rooted in space coding and construction of reality. Design essentially anticipates predictions - predicting a prediction a statement that might seem vague. Designers' predictions are based on needs, social relations, history and some of them simply on what is offered by space. Designing is predicting this circle working together with emotions and the way they are intrinsically entangled with space.
The oblique or the deviation from orthogonal planes, does not negate prediction but suggests that our conventional predictions might be inaccurate. Such deviations prompt countless new predictions, leading to excitement and a quest for solutions to the unpredictable. In neuroscience is a known subject: if we face an image we have a certain brain activation, if we face a scrambling of the pixel of that image (same amount of visual information but not recognisable) our cognitive area experiences a stronger activation. The non-orthogonal implies a larger number of predictions because of less controllable and pre-coded information. The mental simulations we make can be more real to us than our tangible reality. Our senses present interpretations or simulations of reality rather than direct responses to it. While it might seem that external events shape our perception of the world, much of what we perceive is shaped by our internal predictions, the sensory information we receive merely tweaks our perceptions. Balance is more difficult in non-cartesian spaces and an invasive approach to space based on control is less easy because of the impossibility to predict, this means that the users must accept what space gradually offers and be surprised by it.
Non-orthogonality defies expectations, impedes fluid movement due to changing angles, and fosters exploratory behaviours, generating stronger exploration patterns: a continuous search which is also at the base of curiosity, a basic element of our cognition and a powerful driver in human exploration [Bar et al. 2016]. Curiosity is also quoted as one of the wellbeing factors. According to Bar and Palti, amplifying curiosity in the general population, developing a design that promotes it, improves human experience and general wellbeing.
Measuring emotions, particularly in relation to space, remains a topic of ongoing debate. While definitive methodology is yet to be established, researchers employ self-reports, questionnaires, and physiological tests to approximate emotional manifestations, primarily evaluating

individuals' subjective feelings.
Returning to the concepts of passivity and embodiment in relation to space, it is possible to affirm that a three-dimensional disruption, like an oblique wall, significantly influences space coding. Such elements compel users to reevaluate their anticipated paths, fostering curiosity and potentially eliciting positive emotions.

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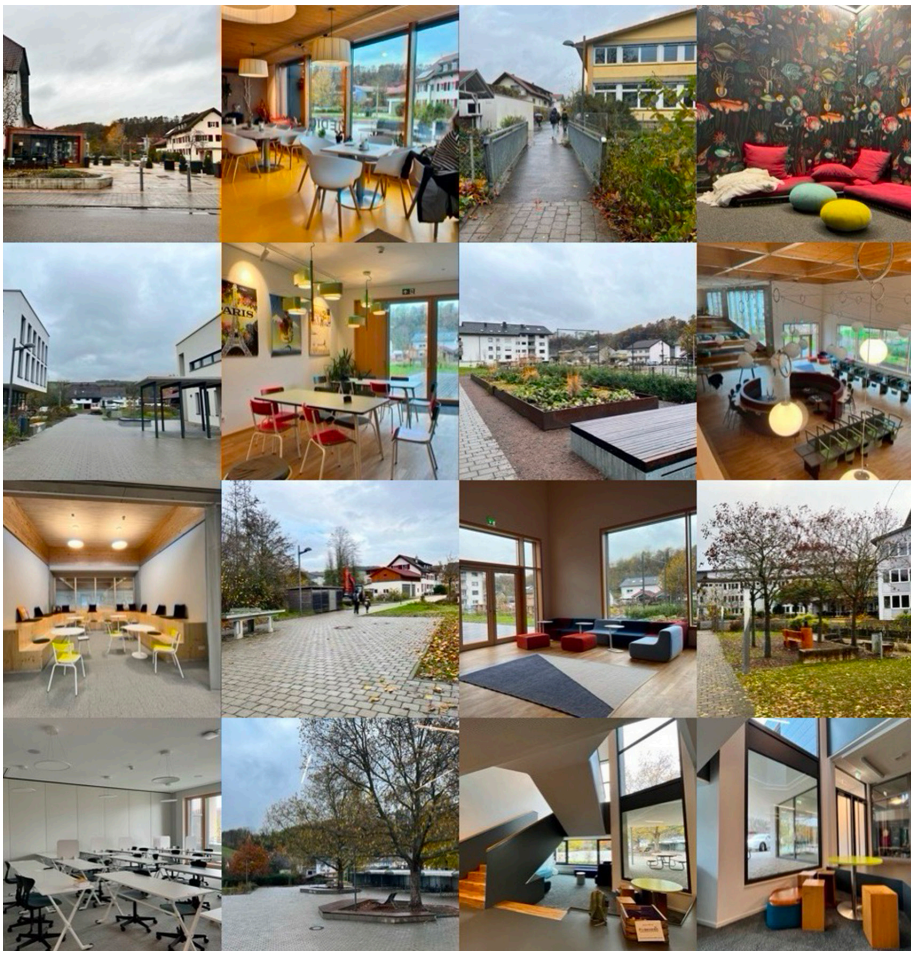
FIGURES

Fig. 1 - Brancaccio N. (2021) *Space coding, construction of reality and embodiment.*



Belen Zevallos
University of Minho (EAAD), Landscape, Heritage and Territory Laboratory (Lab2PT), School of Architecture, Art and Design
belen.zevallos@srh.de

Making a case for space in schools. The learning landscape of Wütoschingen

Key Words
Digital learning, Learning spaces, Future schools, Pedagogical architecture

The COVID pandemic unexpectedly hit the world and catalyzed a rampant digitalization process in an already changing educational landscape. In the past three years, new hardware and software for teaching and learning in a virtual setting have received a significant amount of attention. However, physical spatial settings have not. The architecture of schools persists on following the layouts of the 19th century. Furthermore, the successful implementation of pedagogical transformation is dependent on pedagogy and the spatial environment in which learning and teaching happen. This abstract highlights the role that the built environment plays in shaping social interactions and bringing up new possibilities for rooted learning. Moreover, it examines the impact of a school building that connects distinct architectural arrangements with an innovative pedagogical approach centered on digital tools and platforms. Finally, through interviews, mapping workshops and a territorial perspective it uncovers learning landscapes arguing that digital learning has a clear spatial implication.

Introduction

In a post-pandemic world where phones are filled with ten different communication apps that ask how the quality of the interaction was every time we hang up, we seem to have forgotten that all these interactions take place in a physical space. Be it fully virtual or hybrid, we are always in some sort of architecture, outside or inside, designed or not designed; we are beings bound to the corporality of space. Furthermore, the proliferation of educational resources accessible beyond the confines of schools and the emergence of novel tools for informal learning are driving a growing demand to deconstruct the school into a multitude of personalized learning environments integrated into households. In fact, some might suggest that schools will cease to exist. As if physical spaces were made obsolete by digital technologies. Here, I would like to bring up the argument of Keri Facer, which states in the preface of her book that "more

than ever, we will need schools that are physical, locally accountable organizations committed to building viable and sustainable futures for everyone in their communities." [Facer 2011]. If anything, we need to critically rethink school spaces, starting by questioning the traditional classrooms, a frontal set-up created for instruction, anachronic to current pedagogical trends (heterogeneity of the learners, 21st century skills, inclusion, among others), that ignores the digital tools potential for transformation of spatial learning settings beyond the limits of the school. As part of the PhD research "Making a case for space: About the role that space plays for digital learning in German community schools", this contribution presents the meaning of space as a third teacher, structured in cross-scale relationships, based on the Alemannenschule Wutöschingen (ASW), a community school in Germany with a fully digital pedagogical concept.

From classrooms to learning landscapes:
The idea of the correlation of architecture and pedagogy is not new. Johann Amos Commenius already recognized the connections between spatial design and the well-being of the students for learning. Other pedagogues, such as Maria Montessori and Loris Malaguzzi, among others, also addressed the matter of space as crucial for the learning process. Thus, space, its structural design allows specific activities, fostering specific pedagogies. This becomes more relevant when talking about a change in the teaching and learning dynamics of a class. Traditional classrooms foster one kind of social dynamic in class, where all pupils face the teacher, pay attention, and listen. These spaces were designed for everyone to learn the same content, in the same way, at the same time, in the same space. Yet, this can change completely thanks to digital learning. As the school director of ASW explains, "Self-organized learning should work so independently of time and space that we don't need a teacher standing in a room and calculating something specific" [Ruppaner 2021]. Digital learning detaches the learning situation from the teacher and from a specific space and time. In the case of ASW, the pupils can plan, organize, and track their learning goals and achievements. Allowing them to learn what they want, when they want it, how they want it, and where they want it. Given that there are no time schedules for each grade, but rather each pupil develops their own routine, there was a need to map the diversity of school routines that can take place [1].
This freedom of choice addresses the heterogeneity of the learners, and this heterogeneity is then addressed by the space. Some pupils learn better in groups, others alone in silence. This is why the ASW developed specific learning spaces. There are no classrooms but learning ateliers, co-learning spaces, meditation rooms, coaching rooms, and input rooms, among others. The architecture of these spaces reflects diversity and choice, as does their pedagogy. To do so, it transforms the once single instruction space of traditional classrooms into a potpourri of spaces and learning experiences engaged with the community [Zevallos et. al. 2021, p. 180]. Furthermore, this school, besides being located at the geographical center of the village, has some specific qualities that are relevant to mention. The school is made out of an ensemble of four buildings arranged in a flat basing of the landscape. Although there is a canal that crosses this ensemble, paths, bridges, and a network of public spaces structure a permeable, walkable area. The local library, café, restaurant, city hall, and church, as well as the main shops of the village, are located in the vicinity of the school. In addition to that, there are no school walls or fences. In contrast, the school offers gardens, benches, terraces, and a pretty transparent façade on the ground floor. It establishes a dialog with the nearby public spaces, making it a livable space, and in a village this size, it becomes the heart of the village. Moreover, it is thanks to digital tools that the school can break its physical barriers and expand throughout the virtual world. Consequently, the spaces where the pupils can learn go beyond the school walls, to the local library, to the bench at the park, etc. [Zevallos et. al., 2021, p. 184]. The whole village becomes part of the school.

Outlook
This study demonstrates the importance of architecture, the city, and the environment in supporting learning settings and processes. It demonstrates how a school with a fully digitally structured pedagogical concept focused on self-organized learning requires specific learning settings that translate into specific architectures designed for specific body-space interactions. Moreover, it confronts notions of educational institutions rendered irrelevant by digital learning (applications, software, and virtual worlds) and challenges conventional school environments characterized by routines, uniformity of classrooms, and repetition, which may ultimately be the ones that vanish. As already discussed by Marc Prensky, "not to eliminate schools, but rather to eliminate the classrooms..." [Prensky 2015, p. 1]. While traditional classrooms may have served a useful role in times when individualization and personalization were not as important, nowadays, the classroom, as the heart of the learning experience, has become ob-

solete [Zevallos 2021, p. 185]. In this context, it is a call to rethink possible cooperations for schools from different urban areas, where usually there is more infrastructure such as museums, parks, and libraries, to create a more dynamic and interactive learning environment for students. By expanding the learning experience beyond the traditional classroom walls, students can engage with real-world resources and experiences that enhance their education in a more meaningful way. This shift towards collaborative partnerships between schools and other institutions can lead to a more holistic approach to education that better prepares students for the challenges of the 21st century. We need to focus our attention on school spaces and think of them as public spaces and infrastructure for our communities.

ENDNOTES

[1] The Learning Landscape mapping workshop was conducted at AWS in November 2023 to visually document and analyze pupil´s learning environments like libraries, parks, and public spaces. Mapping these spaces revealed patterns, trends, and correlations between the physical environment and learning situations throughout the day.

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Belen Zevallos, *Learning Spaces at ASW, 2023, Digital Photo Collage, 15x15cm*, Wutöschingen.

FIGURES

Fig.1 Belen Zevallos, Learning Spaces at ASW, 2023, Digital Photo Collage, 15x15cm, Wutöschingen.

Srivastava Siddharth
Mysore, Wadiyar Center of Architecture
siddharth07srivastava@gmail.com

The body and its urbanity.
Cities in India

Key Words
Enactivism, Bodies, Cities, Rituals, Social space

The assumption of consistency in the affective qualities of the visual order has persisted through the last few decades of architectural discourse. We often face significant difficulties when confronted with the challenges of articulating spatial experiences of places that are not (visually) ordered, but their experiences are deep and immersive. A good example is the streets of Varanasi, which are incredibly narrow and often turn after short intervals. They seldom allow you to fathom the form of the buildings lined up along them. However, the experience is both engaging and overwhelming. Attempts to explain such experiences with the help of prevalent themes such as views, vistas and promenades typically fall flat. Often, the first response that architects and urbanists make to questions pertaining to these issues is the Eurocentric frame through which we look at our cities. Arguably, some early disquisitions of the CIAM congress on the issue of planning focused on the efficiency of productivity, leading to functional segregation as the broader spatial theme. This advocated for urban planning as a discipline to reorganise rural and urban spaces. However, further studies, many of which were done in the last decade and a half or more, provide enough evidence that a large chunk of the problem can be homegrown. The modern ideas of urbanity are weaved around the rhetoric of development, "right" based activism, upliftment of the "ordinary", and a promise for economic growth. On the other hand, the rather poetic and seemingly romantic narrative of the "chaos" of the city, the ad-hoc nature of its growth, shared neighbourhoods with houses extending into shops, is fast losing its ground, both physically and in popular perception. The fixation of land, public administration and economy has seen a major push in the heavily funded government schemes (Benjamin,2020). Instead, studies reveal that it is essentially this entanglement of shared spaces, coming together of houses, and workplaces and the "messy" bazaar that forms the lifeline of a city. Shetty, Gupte, and Khanolkar suggest the concept of the chaos of a city being spaces of perpetual becoming, a contrasting idea from that fixation. They propose that a city is

"place of practice" where people thrive to socialise, economise and weave a complex structure of life which is reinforced and defined by shared practices, habits and multidimensional historicities [1]. I strongly believe that we need a nuanced discourse and articulation of this hidden order of the cities which otherwise, due to lack of evidence and strong references, are rejected as accidental and matters of "chance".

Such places do not necessarily lack order but arguably possess a different kind of underlying order. I argue that the structure of the Indian cities is governed essentially by an order that is performative in nature. They are not only perceived in performance but are also created by performances. They emerge from a continuous process of negotiation between their built forms and their inhabiting, acting bodies. Lefebvre argues that the social space emerges only when there are bodies. Bodies have their material (physiological) realities, and they are capable of moving. There is a direct relationship between the deployment of bodies in space and its occupation of space. It can be said that the body produces the spaces by being in the space. And thereby, by moving in the space, the body produces and reproduces the space to accommodate itself. Thus, it is in the ad-hod gestures that the body becomes both the producer and the consumer of the social space. However, the awareness of the materiality of self means awareness of the materiality of the other. This means that, in the process of movement, we are responding to the other material bodies (Lefebvre, 1974).

He makes an essential distinction between how a spider creates a space in its web and how humans create spaces with their bodies. In the case of the spider, the intentionality is limited to the efficiency of catching its prey. The spider is also aware of entities such as direction, materiality, and temperature. In the case of human bodies, apart from the awareness of the physicality of the inanimate things, there is an awareness of other moving bodies. This is a critical point, as we know that the other (human) bodies moving in space share a similar awareness. At this point in the discussion, two important questions should be considered. One is what it means to be aware of one`s own materiality and how it manifests in our perception. The second is the similarity in the awareness of the bodies moving in space and what impact this has on the social space. The second point holds significance as I have argued for shared habits, rituals and repeated actions of the inhabitants of a city that shape it.

Body`s materiality and its tactile undertones

We recognise the affective qualities of materials and mass as we carry weights on our shoulders and feel overwhelmed when they exceed the limits of our strength (Woelfflin,1886). Many scholars have proposed that certain qualities of a space, such as texture, depth and form, are recognised by the vision as affordances to act upon (Noë, 2004). This hints towards a recognition of the attributes of spaces that the body has experienced in the past. For example, the depth of space, as we see it, directly induces the feeling that it needs bodily movement to be measured. The other qualities of the place, such as texture and form, may likewise appeal to the affordance that the body may act on because of an earlier association. For example, steps may induce an urge to go ahead and occupy them to sit or climb. Merlau-Ponty calls such an experience a "grip of the gaze"(Merleau-Ponty, 1945). Noë argues that we "see" spatial qualities such as shape and depth by interpreting visual qualities as having spatial significance due to the fact that we have learned to associate visual qualities with tangible ideas about possibilities of movement (Noë 2004).

Civic Bodies

Elizabeth Grosz states that the cultural practices of societies do not just play a role in the production of encultured spaces but also in the production of encultured bodies. These bodies "reinscribe and project themselves onto their sociocultural environment so that this environment both produces and reflects the form and interests of the body" (Grosz, 1996). Even though the inhabiting bodies of a city may be physiologically distinct from each other, they are performatively connected to each other through the shared values that manifest in habits and rituals. The order is a complex one. The outcome is from an interplay between enactivism and culturally habituated bodies. Therefore, within a social space, it can be said that the awareness of other bodies not only creates contingencies but also connects them to each other in habits, rituals, and repeated actions. This creates patterns in which bodies move and collectively create social spaces. Simple examples are processional spaces where liturgical rituals are performed. There is a clearly defined pattern, such as circumambulation or that of the salutation of the sun with water which shapes spaces. However, such repeated actions can also be seen in processional spaces such as a street corner where people have tea. The collective act of converging towards a space, sitting in a way that closed conversations

can happen while allowing the pedestrian and vehicular movement are collective gestures that shape the space.

Conclusion

It is undeniable that many modern Indian cities are the result of industrialization, and they are designed within the framework of efficiency. However, this does not imply that they are consumed in the same way. The idea of "representational space" that Lefebvre talks about discusses ways in which the human bodies collectively shape social spaces and also consume them This can be seen in the small social pockets of the city which we perpetually mould and transform according to our needs. Therefore, the complexity of Indian cities can be looked at through the lens of bodies and enactivism. It will be of great value to relook at some existing literature on Indian urbanity which propose alternatives based on interesting ideas such as territorial memory, shared actions and "addas"[2]. A superimposition of the idea of performance and embodied cognition may greatly help to generate a more profound discourse on Indian cities.

ENDNOTES

[1] Gurgaon Glossary 2017 https://bardstudio. in/gurgaon-glossaries/
[2] See for instance Prasad Shetty, 'Ganga Building Chronicles', The Caravan, 1 May 2012

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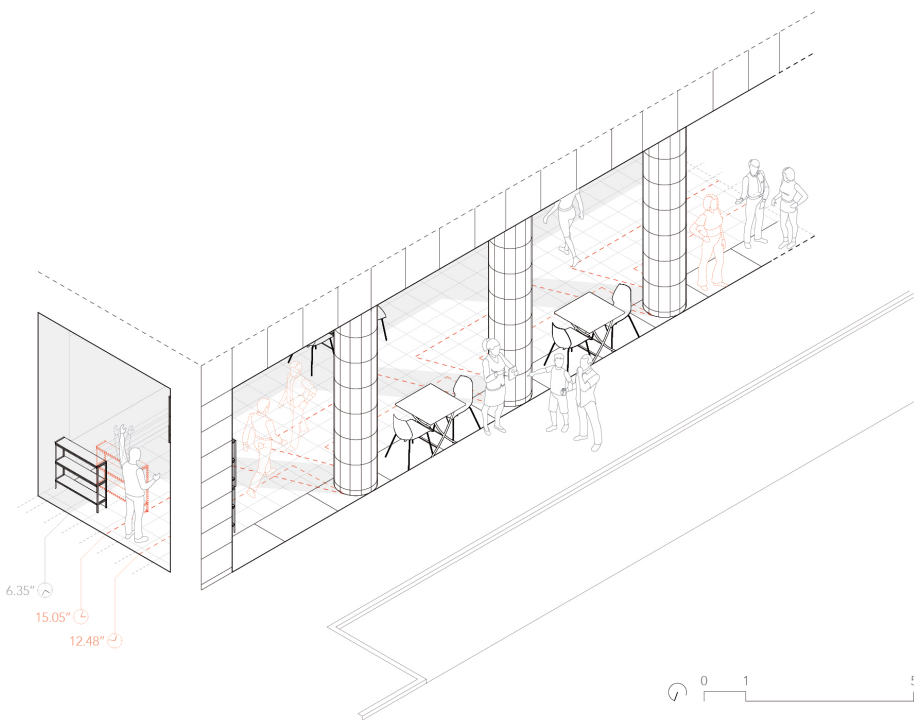
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Youri Spaninks-Amaro
Universidade de Lisboa, CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture
youriamaro@edu.ulisboa.pt

The body is the machine. Interpreting Lisbon's threshold spaces through corporeity

Key Words
Corporeity, Urban porosity, Threshold spaces, Interpretative drawing, Lisbon

Synopsis
Considering that the experience of spatiality depends on the interplay of human and architectural bodies, the role of corporeity becomes key to translate architecture in terms of human existence. As Maurice Merleau-Ponty pointed out, our bodies allow the recognition of ourselves and, through haptics, to perceive the spaces we live in [Merleau-Ponty 1945/2005, pp.238]. Human bodies are the machines that decode architecture and its spatiality. Porous transitions, from one space to another, are perceived by the acknowledgment of thresholds – spatial configurations that mediate distinct realities – making of human bodies the main perceivers of this state of liminality. The present research focuses on the interpretation of threshold spaces using drawing as a research tool, framing man-made spatial compositions during a certain period, enhancing the role of human bodies as shifters of architectural configurations, that contribute to their extension and compression. Lisbon emerges as main case study, within the scope of the Portuguese urban context, being the most representative city of this phenomena, with a vast array of examples, such as passages, galleries, platforms, plinths, stairs, awnings, to refer a few. This extended abstract aims to signal corporeal actions on threshold spaces as essential for the mediating role these spaces play in activating today's cities urbanity.

Introduction
Since Walter Benjamin and Asja Lacis wrote their essay about Naples [Benjamin & Lacis 1925/1978, pp. 163-173] the term porosity entered the *milieu* of urban studies, referring to both physical and social spaces of cities, opening architecture to the urban environment [Wolfrum & Janson 2019, pp. 91-94]. Thus, threshold spaces appeared from this interpenetration of architecture and urbanism, portraying material urbanity as the outcome of the convergence of

buildings and people [Solà-Morales 2008, pp. 11-14], acting as mediators of fluxes and tensions in our daily lives. Porticos, galleries, steps, platforms, awnings, among others, are threshold spaces experienced by the human body, which seeks either shelter or to inhabit them in motion [Boettger 2014, p. 19], defining their spatiality and significance. In-between body, human, and body, architectural, threshold spaces depend on both to be defined, the first as the experiencing machine and the latest as their structural reality. This space-body continuum [Janson & Tigges 2013/2014, pp. 293-296], as a reversal of figure ground relationships, depicts these phenomena of reciprocity, in between architectural spaces, and architectural bodies, opening the possibility for relationships among human bodies and architecture to be recognized. The human body, as an interpretative machine, experiences and defines space, leaving its trace in this ever-changing spatial configuration, enhancing the role of drawing as an effective tool to represent such ephemeral condition.

Bodies as space makers

The relevance of the human body in spatial organization depends on different cultural backgrounds, making of this classification a challenging endeavour, that is in constant development. Attempting to illustrate the organizational aspects of space, Edward T. Hall based the study of space anthropology on three types of spatial resultants: fixed-feature space, semifixed-feature space, and informal space [Hall, 1969/1990, pp. 103-112]. Fixed-feature spaces tend to define and be defined, moulding human behaviour, expressing the human will to last. Semifixed-feature spaces can be described as more adaptable, depending on body interactions and dynamism. Informal spaces depend on the human body exclusively, defining critical distances of intimacy. The acknowledgement of this organizing model of space leads to the recognition of relationships that flourish from the interactions among architectural spaces and human bodies, and among human bodies themselves. Terraces, showcases, displayed goods, advertisings, are relevant examples of the human body expression on architectural space. Within the urban environment such relationships can be noted according to their potential and/or wealth [Kretz & Salewski 2014, pp. 170-173], describing the possibilities of relationships that can be established, and the existing number of relationships that characterize a given space. Therefore, corporeity assumes a key role to enrich spaces by allowing their redefinition creating distinct uses, practices and spatial organizations that depend on certain periods, either daily or historically speaking. The human intervention of acting bodies shapes the architectural bodies of threshold spaces, giving meaning to the liminal state that represents them, making of these acted bodies places where friction and interpenetration reveal conflicts and exchanges of daily urban life. Such relations represent real life and therefore real spaces, contrasting with the virtuality of their representation [Summers 2003, pp. 43], as a tool that depicts the impact of human bodies, the catalysts of urban environment.

Interpreting threshold spaces and their configurations

Threshold spaces allow transitions, promoting a state of liminality where friction occurs, generating territorial passages [Gennep 1960, pp. 15-25] that become meaningful spaces. Their ambiguity hosts diverse practices and actors, making of these architectural devices catalysts, built bodies that resume their adaptability through the acting bodies that inhabit them. For this reason, threshold spaces host different configurations in urban context, shaped by the arrangement of furniture, human physical activities, or the influence of weather conditions. Therefore, to interpret threshold spaces is necessary to understand their material reality, as architectural bodies, and their use and appropriation in everyday life. Architecture and urbanism have been highly centred in the discourse of built form, leaving the actant bodies of people apart, in favour of aesthetical, normative, and capitalist principles. To confront this tendency new approaches, as the Transitory Urbanism, proposed by Manuel Bailo, have been seeking to enhance the non-physical characteristics linked to public spaces, which are transformed by people's actions [Bailo 2017, pp. 35-38]. Similarly, this research is focused on the role of human bodies as main catalysts of threshold spaces, aiming to decode this body-to-body relation through interpretative drawing, framing diverse moments of spatial appropriation and reconfiguration. The applied methodology is based on the interpretation of corporeal action - identifying cyclical patterns – on threshold spaces through photographic repetition, working on the hypothesis that these spaces are catalysts of the urban environment. Drawing emerges as the tool that bridges the real space occupied by people and the virtual representation of their actions and outcomes. Lisbon stands as the main case study where a myriad of examples can be found, in one hand due to the persistence of its historical urban tissue, and in the other by its characteristic topography, challenging the confrontation of architectural and urban projects.

Open conclusions

If the human body is the decoding machine of architecture how does corporeity play a role in activating the urban environment of our cities? Which is the impact of threshold spaces on the urban environment and how can they catalyse it? To what extent does the role of corporeity determine the liveability of threshold spaces? The importance of a flexible and porous border becomes crucial to this dialectical relation between inside and outside, enhancing the important role of thresholds [Bachelard 1994, pp. 215] as hinging devices in the urban environment. Without the existence of this mediating entities urban life would seem automated and urbanity, as main quality of cities, would be stripped of its meaning. The same urbanity depends on actors, acting bodies that activate spaces, without this interplay of humans and architecture spaces like thresholds would become obsolete and considered as leftovers of a built world in decline. This research intends to extend its interpretation to a variety of exemplary cases in the city of Lisbon, using a type-morphological approach, to create an atlas of this urban phenomena, decoding the acting bodies – human and architectural - that shape public space. Further interpretative drawings will be made on a second phase of the research to be presented during the conference, illustrating the role of corporeity in the mediation process that threshold spaces play in-between the public and private spheres of today's cities.

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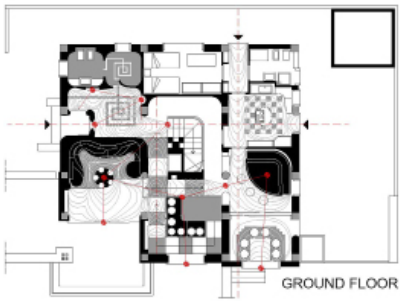
FIGURES

Fig. 1 - Avenida Almirante Reis gallery, drawing by the author

FIRST FLOOR



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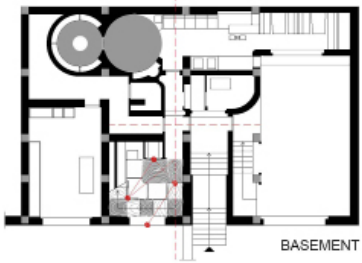

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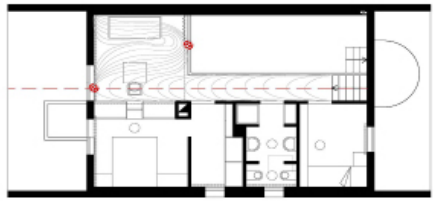

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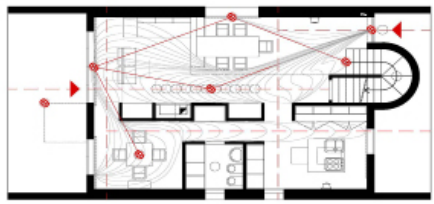

GROUND FLOOR

VILLA FONTANA 0 1 2 3m

TWIN VILLAS 0 1 2 3m

Directional axes Visual focus Energetic charge-pressure

Carola D'Ambros
Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
carola.dambros@polimi.it

How body shapes architecture.
The immersive experiences of Villa Fontana and the Twin Villas

Key Words
Embodiment, Atmospheres, Domestic interiors

Considering architecture as a polysemic place that represents, through forms and spaces, a perceptive and immersive experience, there emerges the need for an interdisciplinary approach to the project that investigates both its tangible and verifiable characteristics as well as those more ephemeral and linked to the phenomenology of space. The paper aims to extrapolate interpretative keys from research in the fields of psychology, neuroscience, philosophy and cognitive science that open up new horizons in architecture.
Alongside Rudolf Arnheim's better-known approach to analysing architectural expression, takes root the concept of "affordance" theorised by the psychologist James Gibson [Gibson 2014]. This theory is based on the consideration of perception as a collection of information available in the environment – relating both to the characteristics of the environment itself and to the observer and his/her movements – that the perceptual system extracts from receptive stimulation through the act of viewing. The human-environment relationship is thus connected to the perception-action link as a function of the information gathered. It is therefore hypothesised that, by designing a building with specific formal configurations and "affordances", the architect has the possibility of triggering behaviours and emotions in the user: changes in direction, variations in the travel speed, choice of preferential routes, contemplation, bodily stasis.
In parallel, the neuroscientist Antonio Damasio repeatedly devotes his research to proving the repercussion that emotions have on the behaviour of the percipient subject [Damasio 2003]. Depending on the situations offered by the environment and the emotional inducers present, the organism, interacting with the environment itself, associates certain emotions with action. This conditioning induces, consciously or unconsciously, to adapt one's movements and state. Thus, during the exploration of a building, it is this conditioning phenomenon that causes several types of emotions.

The neurophysiologist Otto Grüsser also formulates a theory of the human-environment relationship according to which the integration of the various senses (visual, tactile, vestibular, auditory, olfactory and motor) enables the organism to perceive the sensation of space and to create a close relationship between one's body and space itself [Grüsser 1991].
The relationship between human spatial cognition and architectural conception has been widely studied since the 1970s. Emerging theories teach how, when experiencing, bodily and sensory, an architectural work, the first reaction is an emotional one, which is followed by physiological and homeostatic responses. The most important conclusion that can be drawn is how much the judgement of an environment can be conditioned by the emotional and bodily activity derived from experience and, from this, how much the architect must consider and prefigure, in the design process, the possible emotional responses and behavioural repercussions of the individual who will inhabit the spaces he/she designs.
Spatial perception, proprioception – i.e. the perception of one's body in space – and emotion are all mechanisms that can be interrelated within a spatial "atmosphere". A concept made explicit by the philosopher Gernot Böhme with the term "affective situation" [Böhme 2010], i.e. a connection of the percipient subject between "feeling" and "being" in a place, through the interweaving of experience of existence, experience and perception of the world. By composing objects, it is therefore possible to create atmospheres that are experienced through the perception of the presence of the objects themselves. A complex procedure that is based on the one hand, on the theory of "how one feels" in an affectively connoted space and, on the other, on the creative possibility of an aesthetic work such as architecture aimed at generating atmospheres.
Numerous studies in the field of neuroscience have recently highlighted how new and complex environments are able to sensitively, cognitively and physically stimulate neuronal and vascular development, promoting comprehension and memory and consequently reducing feelings of anxiety. In others, it appears how the experience of monotonous spaces devoid of sensory stimulation can cause boredom, depression, fatigue and mood swings. It is therefore possible to confirm the hypothesis that architecture could profoundly influence the human being. Its experience is conceived down to the visceral level through a response of the organism.
Being emotionally and bodily involved during the perceptual process introduces a further fundamental concept in the perceptual analysis of architecture: the embodiment. It occurs when the percipient understands the intention behind another's action by mirroring or simulating that action in his or her brain (Rizzolatti and Sinigaglia 2006). The characteristic aspect is that the phenomenon of mirroring does not only arise through the sense of sight, but through the entire sensorimotor system – i.e. when both sensory and motor functions are involved – [Gallese 2005] and that, even more relevant to the application to the field of architecture, the same mechanism also occurs when observing inanimate objects being touched [Ebisch et al. 2008]. Thus, if the human being responds "neurologically" to the interactions of animate and inanimate objects, then it is possible to infer that he or she is also able to "respond" to the forms and materials of an architecture or a work of art by simulating the experience bodily, emotionally and physiologically.
All these considerations should "frame" architecture as primarily a holistic experience, experienced with the senses, the body and its physiological and emotional responses. In this perspective, the design process must consider the two sides of the same coin: "how we engage with or enact the built environment, and conversely how the built environment in turn shapes us" [Mallgrave 2018, p. 43].
The critical reconsideration of the theme of "designing" in this perspective lays the foundations for the analysis of two domestic interiors conceived by architects who conceived the interior space not only as a physical holder but as an interiority, that feeling obtained by "spacing" the body in space [Argan 1948]: Villa Fontana by Ico Parisi [Lenno, 1967-1968] and the Twin Villas by Alberto Salvati and Ambrogio Tresoldi (Toscolano Maderno, 1970-1971).
The former, perceived internally as a shell in the manner of Gaston Bachelard (1957), is an organic sculpted space carved out of matter by subtraction and plastically modelled. Here, Parisi's work alongside the interventions of the artists of Group T led to an exceptional design concurrence between the artistic disciplines. Parisi proposes an artistic integration that consider the mutuality of the arts in the perceptual process. Architecture, painting and sculpture come together in Villa Fontana with the aim of moving, cooperating in sensory stimulation through perceptual synaesthesia. Their essentially cognitive and emotional content is conveyed to the inhabitant through different materials, colours and forms.
The second, the Twin Villas, are conceived starting from a compositional dynamic which creates a "force field" generated by the opposition between the centripetal pressure exerted by the furnishings and the centrifugal force derived from the irradiation of space [Arnheim 1977]. Salvati and Tresoldi, introjecting a design method learnt from attending the Concrete Artists'

circle, modulate the perception of space, studying the articulation of the volumes in relation to the arrangement of furniture, combining the use of elementary forms with primary colours and conceiving atmospheric generators. They finally add some works of art that in their reciprocal correlation and connected with the surrounding environments are capable of producing effects in the perception of space.
These two projects exemplify a cooperation between disciplines that has been able to establish a fruitful dialogue not only between painting, sculpture and architecture, but above all between the inhabitant and the space that surrounds him/her, involving him/her perceptively and emotionally in immersive atmospheres where space is no longer only an expression from an aesthetic point of view, but also in its deepest meaning of manifestation, that is, how it gives itself to perception, how it "comes out of itself", presents itself, interacts.

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FIGURES

Fig.1 - Floor plans of *Villa Fontana* and the *Twin Villas*. Drawings and schemes by the author.
Analysis of the "pressures" and movements induced in the inhabitant, depending on the shape of the space in relation to the layout of the furniture system and visual axes and focuses.

Silvia Sfligiotti
ISIA Urbino
silvia.sfligiotti@isiaurbino.net

The art of arriving.
A somatic approach to a critical understanding of the built environment

Key Words
Somatics, Perception, Design education, Intersubjectivity, Critical spatial practice

While in the history of architecture some authors have claimed the need to conceive architecture as a discipline engaging all the senses [Pallasmaa 2012], « [...] we still face a knowledge gap in architectural theory because we lack pragmatic methods of studying the body and applying bodily knowledge in design practice.» [Skrzypczak 2021, p.52].
Body-based training in architecture and design is still the exception more than the norm, but some noteworthy cases can be mentioned: the "Experiments in Environment" by Anna and Lawrence Halprin (1966), which united dancers and architects in multi-sensorial explorations and, more recently, M. Auxiliadora Gálvez Pérez's PSAAP (Platform of Somatics for Architecture and Landscape), based on the Feldenkrais method [Gálvez Pérez 2018], and the Association for Body Conscious Design, founded in 2022 by Galen Cranz, Nelleke Don, Martha Eddy and Jader Tolja.
A somatic approach is concerned with the first-person experience of movement and perception [Hanna 1986]. This means not simply "using" the body but being aware of it, of the knowledge it provides, learning to direct our attention and understand our direct perceptual experiences. A number of somatic practices exist: some of them are closer to the field of dance and performance, while others are self educational practices that can help any human being in developing a deeper awareness of the experience of being alive in the world. These practices use "a variety of skills and tools, including diverse qualities of touch, empathic verbal exchange, and both subtle and complex movement experiences" [Eddy 2009, p.7].
In this paper I argue that a somatic approach is relevant not only for a deeper, situated and contextual knowledge of the built environment, but also for a critical engagement with it.

A somatic approach to spatial experiences:
Spatial orientation is usually based on visual reference points [Lynch 1960]. As opposed to this,

I use the somatic concept of "arriving" to refer to a full and open sensorial engagement with an environment or situation [Olsen 2015, Koteen and Stark Smith 2021]. This requires going beyond the traditional concept of the "five senses" and using the full capacities of each body as key tools for understanding space in all its dimensions and manifestations. For instance, proprioception, the ability that allows us to know the position of our body in relation to space, is rarely considered as a valuable design tool. And when it comes to vision, it's essential to remember that seeing is a deeply embodied experience, and cannot be separated from nerves, muscles, tissues, brain and previous experiences of the person who is seeing. There are several ways of seeing, ranging from focused vision to peripheral vision, all of which provide different information about space. The examples could be manyfold, but it is essential to remember that only constant training can transform these possibilities in actual practical ways to transform the way we design. The inclusion of somatic movement education in design curricula is the best way to respond to the lack of practical methods pointed out in the quote by Skrzypczak mentioned earlier.
Skrzypczak also presents some principles of a somatic design practice, which involve, among others, observing oneself and one's psycho-physical states at work and in spaces, including posture, movement, sensorial stimuli, behaviors. He invites to notice and question working patterns, and to pay attention to "how the practice changes you" [Skrzypczak 2021, p. 58].

Somatics for critical understanding of the built environment
My proposal is to use a somatic design approach not only to become more sensitive in our design practice, but also as a ground for developing a critical perspective on the built environment.
Critical thinking is rooted in the conscious body. Somatic practices are based on developing the capacity to discern and compare, and to develop our understanding of the world from this: this is not a mere physical experience, it is a practice of knowledge-production.
By training our capacity to fully engage with built spaces, we can learn to ask ourselves a wider set of questions about them: Whom was this place conceived for? Which bodies can have access to it, and feel welcome in it, and which don't? Could this place be different? How would a different space invite different uses? "Arriving", in the somatic sense, can open up to new ways of interrogating, questioning and imagining a space, which in turn can support a critical and political interpretation of its meanings and possibilities.
This kind of perspective is not new to people who face obstacles and discrimination in the built environment. It's not surprising that some important criticisms of architectural and urban space come, for instance, from disabled [Giessen 2023] and feminist scholars [Kern 2021]. These and other groups have a direct embodied experience of what it means to be excluded, threatened or not taken into consideration in the design of a place. Their perspective as critical explorers of the built environment shows that re-thinking spatial design should not simply focus on expanding physical access, but should include totally new approaches and methodologies, that in turn could change the experiences of all users.
In order to make this understanding possible, it's essential to accept and embrace discomfort and unsettlement. In somatic movement education, the focus is usually on "ease, support and pleasure" [Eddy 2009, p.6]. But Ann Cooper Albright invites us to experience "falling" and "disorientation" as part of a series of somatic experiences that can help us in "finding ground in an unstable world" [2019]. By getting used to finding ourselves and observing our reactions in uneasy situations, we can learn to recognize the precious information we can get from this unusual point of view on the world, and learn to include it in our design practice.
Including somatic training as part of design and architecture education could be a way to allow all designers, including those living in privileged bodies, to develop a critical understanding of built spaces and of the political relevance of all design choices.
It's important to be aware that each somatic experience is different, and that individual perspectives need to be included in an intersubjective one, in order to avoid universalizing the individual: design is not about "one" body as a measure of space but about a multiplicity of bodies that should all have the same rights to live in it. Intersubjectivity is a key factor in somatic education, where sharing experiences and impressions at the end of each practice is an essential step of the learning process [Eddy 2017]. Thus, somatic practice with an intersubjective approach can help every individual to understand that spatial experiences can be strongly different from one another. To avoid somatic disciplines to become individualistic practices geared only towards individual well-being and reinforcing existing inequalities [Teste 2023], it is essential that their collective and political dimensions remain central.
As a conclusion, I invite readers to consider collective somatic movement education as an enrichment to all kinds of design practices, including those who shape the environment we – and other forms of life – live in.

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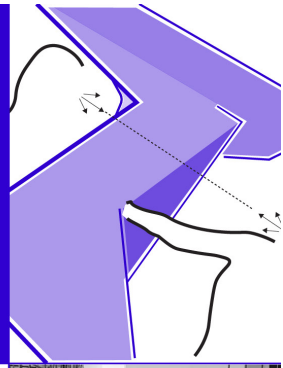
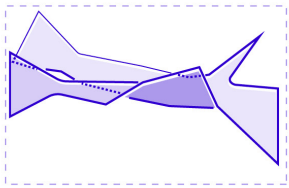
instantaneous spatial formations

DYNAMIC INTERACTIONS BETWEEN BOUNDARY AND THE BODY: INSTANTANEOUS SPATIAL FORMATIONS



MUTUAL STATE
*1,3,4,7,8
INDEPENDENT STATE
*2,5,6,9

boundary



3

dynamic interactions

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Collage, 15x24cm, Photo
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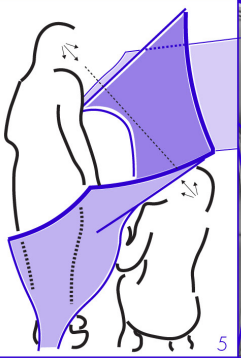

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void

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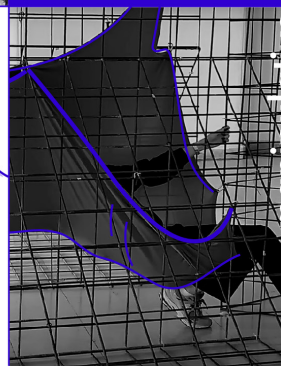

Buket Samancı [1], **Irem Sütçü** [2]
[1] MEF University, Faculty of Arts, Design and Architecture.
[2] Isık University, Faculty of Arts, Design and Architecture.
[1] samancib@mef.edu.tr, [2] irem.sutcu@isikun.edu.tr

Dynamic interactions between boundary and the body:
Instantaneous spatial formations

Key Words
Boundary, Void, Dynamic interactions, Manipulative body, Instantaneous spatial formation

The research aims to explore the potential effects of the boundary by using the body as a tool and to discuss the instantaneous spaces generated by alternating actions and possibilities of the bodies. The usual perceived state of the boundary, which is dividing the voids statically, is challenged by considering it as space-producing ability and by using the boundary itself. Within this dynamic approach, the dual nature of the boundary and the potential of revealing voids are discussed with an installation designed for this research. In this discussion, the spatiality of the voids formed as a result of the interaction between the body and the boundary, with the possible advantages of the flexible material used, is questioned. This inquiry is structured within three stages: introduction, dialogue, and analysis. The introduction involves a literature review, the dialogue focuses on the dynamic interactions of the body, and the analysis discusses the outcomes of the research. The spatial voids created by the deconstruction of the boundary due to interaction within the body are examined. The scope of the dual nature reflects the ability of the boundary to both prevent and create a dialogue where encounters can occur. In this respect, the installation is to discuss the complexity of the boundary and the exploration of the multiple and various possibilities of void(s). Ultimately, this research will explore the formations of instantaneously occurring void(s) into performative spaces through the body's awareness of the potential diversity of actions.

Greetings: the perspective of the boundary, body and voids.
Boundary is the static value defined as the limit to which something can spread. However, going beyond the boundary can serve as a way to generate new meanings and explore some potential. In this context, it is not an instantaneous state of presence where the end and the beginning of the boundary occur, but rather a spatiality of flow where formations take place. The boundary is characterized by ambiguity, containing pores within. As Aydınlı [2002] states,

the boundary begins to reveal boundlessness beyond restriction and to create new relationships of intertwining and overlapping.
A void, or the anticipation of being filled is often discussed as a negative phenomenon. However, it is a space that can host new possibilities. The continuous change at the boundary can break constraints by transforming it into a void of encounter or by experiencing the void as a space. As Koolhaas [1995] emphasizes, emptiness is not nothing; it is also not a lack. In a place where nothing exists, everything is possible. While the space attempts to confine voids with its elements, void, as an energy cluster, endeavors to fill the space [Ka, 2005]. The state of possibility contained within the void, according to Milicevic & Dadic [2015], is a prerequisite position with its unique creative potential for the emergence of any formation. Instead of filling the void, continuously conceptualizing new creations enables the possibility of instantaneous spatialities and dynamic formations. At this point, the necessity of void for any motion, interactions, or dialogues is exposed.
The body, addressed by science, is perceived and manipulated as an object that looks the same to everyone [Ponty, 1996]. In contrast, the experiencing body is in a position not only manipulated but also manipulating one. The body's instantaneous interventions with the boundaries or void(s) defining the space give rise to multidimensional, dynamic formations. The alternative void(s) created by the dynamic boundary formed through the intervention of the experiencing body evolve into instantaneous spatial formations for the manipulative body. Therefore, "...a being who can only get to the truth of things because its body is, as it were, embedded in those things." [Ponty, 1948; 2004, p.56].
The living body is in a constant state of motion, incorporating every new acquisition it perceives, and experiences. The body not only constantly perceives its surroundings through its senses but also influences its environment through actions [Grosz, 1998]. Moreover, Merleau-Ponty [1948] emphasizes the inseparable relationship between space and the body, stating that we can only access everything outside ourselves through our body, highlighting the intertwined nature of space and the body itself. By doing so, moving away from the perception of the body as solely a physical entity opens up discussions about manipulative bodies. According to Bachelard [1969], abandoning the usual sensitivities to space reveals a spiritually renewed connection with space. This stage implies that considering bodies solely in spatial positions goes further, suggesting that bodies undergo essence transformation rather than mere location changes. In this manner, the manipulative body becomes a reflection of an inherent power that goes beyond physical existence and dialogues under imaginative concepts.

Dialogues: dynamic interactions of the boundary and body
Within the framework of the method, a flexible fabric is used as a metaphor for the boundary, and an installation the manipulative body will encounter is created. The components to be analyzed are the fabric, the body, and the voids created by it. The relationships between these three components and the actions they perform will be discussed within the context of mutual and independent states. The flexible material, moving away from the familiar concept of a fixed and stable boundary, is aimed to encourage exploration of the body and allows it to become intertwined. The fabric, initially forming a vertical surface, will undergo some actions through the intervention of the body. Thus, the voids it creates will transform into instantaneous spatial formations. The installation aims to enhance the potential of the boundary through the interaction with the manipulative body and discover the multiple formations of voids that may emerge. Accordingly, individuals (un)consciously create instantaneous spaces for their bodies within, above, and below the boundary by interacting with it.
As long as they stayed within the installation, participants were told that they could explore the potential of their bodies and the created spaces without any restraint. The experiment began with the experience of two bodies, referred to as mutual state, positioned facing each other with fabric in between. As another state, which is referred to as the independent one, it continued with the reactions of multiple bodies to previously created voids and their subjective interventions into the system.

Analysis: explorations of the components
In the mutual experience, the bodies are set free to deform the boundary and establish their limits, and the following outcomes are observed.
As a result of mutual manipulation:
- Exploring the potential of the boundary by touching the boundary
- Transforming the boundary line above, triggering a bending reflex
- Subjecting the boundary line below to deformation, creates an obstacle that needs to be overcome by jumping over
- Creating a deformation on the surface of the boundary, forming a space where the

body can bend inside

- Initiating deformation in the perception of the boundary due to over-manipulation
- Merging the two separate voids into a single large one; transition between the axes, bodies were able to lie under
- Being initially vertical, the boundary gradually became multiplane state.

The independent state is a phase where bodies freely experience the outcome of the previous stage and perform their deformations.

As a result of independent manipulation:

- Transforming the boundary into space, the experience of the manipulative body lying on the suspended fabric with its body
- Acting body as part of the system by using its hand as an anchor
- The boundary manipulating the body vs. body manipulating the boundary
- Referencing routines in daily life, metaphoric relationships between opening & closing the boundary such as a door.

Discussion

To sum up, the actions of the manipulative body in the instantaneous spaces created by deforming the boundary have been brought into discussion. In the mutual and independent states, the dynamic boundary has at times disappeared and reappeared in the flowing void(s) of the sequence, creating a sense of being together in a common space, the horizontal-vertical boundary dynamics have continuously changed, bodies have confined other bodies with moves, and not only prompted bodies to be in the same void but also revealed different postures of the bodies. Actions such as passing underneath, jumping over, entering, lying beneath, being trapped, embracing, etc. were facilitated by the boundary, which is transformed from a monotonous single surface separating two voids into a dynamic and diverse formation. This dynamic relationship formed a narrative on instantaneous spatial formations. Throughout experiential research, the boundary is transformed from single flat and ordinary surface to its appealing multiplane variations. Although the boundary still exists in a very complex situation, spatial experience is rather different. Bodies, thanks to multiplane variations, distort the static perception of the boundaries and interact with it in various ways. Consequently, the body can redefine its surroundings since it is able to exist in the boundary. All discussed conditions bring up a potential in architectural design, in which there are multiple space definitions, redefining the voids, design parameters, constant dynamism, etc. Considering all, it is possible to create spaces with the bodies rather than placing them into the spaces.

ACKNOWLEDGEMENTS

The installation work in the research was carried out in the course MTS 532 "Body and Space" at Istanbul Technical University.

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FIGURES

Fig 1-9 Samanci, B. & Sutcu, I, Dynamic interactions of the boundary and body, 2023, Photograph, 4,7x5,7 cm, Istambul

Susana Ventura
University of Porto, CEAU - Centro de Estudos de Arquitectura e Urbanismo
FAUP - Faculdade de Arquitectura da Universidade do Porto
srodrigues@arq.up.pt

The composition of architectural sensations:
Blocks of intensive body-space and their potential to transform environmentally-sensitive architecture

Key Words
Architectural sensation, Intensive body-space, Percepts and affects, Deleuze, Zumthor

In contemporary theory of architecture, the problem of sensation is commonly approached through architectural phenomenology. However, there is often a confusion between sensation and the impact that a specific object exerts on the senses. Drawing inspiration from Deleuze (and Deleuze & Guattari), this paper proposes an alternative interpretation of sensation as a block of percepts and affects [Deleuze & Guattari 1991]. These are beings in their own right that should not be misunderstood as perceptions and affections. Instead, they are extracted from those and exist independently of the experiencer. For example, colours are painting's affects. They imply a process of transformation of the lived body into an intensive body or body without organs [Deleuze 1981]: an intensive plane populated by velocities, intensities, gradients, recalling Spinoza's idea of a body. Here, senses are mixed up. For instance, a visual sensation is created by sound, as it often occurs within music. Consequently, percepts and affects should not be equated with bodily reactions in the presence of an object, whether it be a painting by Francis Bacon (one of Deleuze's examples) or a building. Rather, they are complex compounds of elements contributing to the aesthetic composition of the work itself, expertly crafted by the artist or architect (at times, this pursuit may bring the artist or architect close to death or even result in death). A sensation, therefore, constitutes a heterogeneous and irreducible compound of elements—from visible to invisible, evident to obscure, and untraceable—that undergo metamorphosis within the aesthetic composition. If an element changes its position within the compound, sensation changes its nature.
This understanding of sensation brings about an inevitable transformation in the relationship between the body and space within the realm of architecture. The question posed by Deleuze in the spirit of Spinoza about what a body can do actually pertains to the ability (or potency, using a Deleuzian term) of the physical and lived body to transform itself into an intensive body—a consideration often overlooked by traditional phenomenology, as critiqued by Deleuze.

For an architectural sensation to materialise, both the body and space must undergo a transformation into an intensive body-space, where both elements become intensive, forming an indivisible block. One illustrative example is the classical Loosian Raumplan. The desired sensation of comfort is actualised only when the body, its movements, postures, and gestures (not its senses, but the dynamic forces at play within the physical body), are intricately encoded within the properties of each space. This is exemplified through the window-sofa device, where elements such as light, sofa position, body position and movements, wall partitions, wooden panels and ceiling heights are defined in a manner that envelops and protects the seated body (for instance, in Lina Loos' bedroom, a similar sensation is composed with other elements). The body, including its movements, postures, and gestures, becomes an integral part of the code of spatial composition, persisting within the space even in its absence—an enduring sensation that transcends time (and inhabitants). Consequently, the space must be delineated based on the maximum intensity of the forces in play. For example, the selection of a specific material, coupled with the manner in which the material is manipulated and applied, along with its interaction with all other elements, may generate a potent force that either envelops a particular sensation or not. Loos understood, for instance, how the color of a particular wood combined with the morning light's reflection could alter the sensation on space.

> "On ne passe d'un matériau à un autre, comme du violon au piano, du pinceau à la brosse, de l'huile au pastel, que pour autant que le composé de sensations l'exige. Et si fort qu'un artiste s'intéresse à la science, jamais un composé de sensations ne se confondra avec les 'mélanges' du matériau que la science détermine dans des états de choses" [Deleuze & Guattari 1991, pp. 157,158].

Within architecture, the body engages in a dual role. It becomes an integral part of the aesthetic composition of space, functioning as an intensive body—a compound of percepts and affects (or as a material or element of the sensation). Simultaneously, the body acts as an inhabitant and experiencer of the space. In the case of an intensive space populated by sensations, the experience of the space by the inhabitant's body provokes a transformation of the latter into an intensive body as well. This is why, in many overwhelming spaces, words and tangible explanations often prove inadequate (Le Corbusier referred to it as *espace indicible*).

In the current era, this conceptualisation of architectural sensation has the potential to shape a distinct approach to environmentally-sensitive design. Recent research by Jobst and Frichot (2021) sheds light on the insufficient recognition of Deleuze & Guattari's ecological perspective in architecture. However, the authors choose to emphasise the concept of affect, due to its geopolitical implications. They also highlight how understanding the interplay between affect/affection and distinctions like affect versus feeling versus emotion could serve as a crucial corrective to the longstanding dominance of architectural phenomenology.

Connecting these two perspectives, we argue that the transformation of the intricate and interconnected environmental components of territories on the brink of the ongoing climate crisis into matters of expression or expressive qualities (ultimately forming blocks of percepts and affects or blocks of intensive space-body, where every percept and affect implies all the metamorphoses within both body and space, transforming them into intensive planes) within the architectural sensations or aesthetic composition of the built architectural work leads to a sensory architecture that encourages sustainable living. And consequently, a dramatic shift in the relationship between the body and space.

Using Peter Zumthor's Allmannajuvet Zinc Museum (2001-2016), situated in the municipality of Sauda in Norway, as an example, we can observe various metamorphoses at play to create distinctive spatial sensations. In this built work, both the body and space undergo a transformation into an intensive body-space, enabling the potential for each individual to experience a becoming-landscape. Importantly, some of these metamorphoses involve the transformation of the milieu's components into matters of expression or expressive qualities within the composed architectural sensations. Alternatively, we can argue that the percepts and affects composing the spatial sensations within this work are extracted from the landscape (both natural and cultural) where the museum stands. For example, the harshness of the landscape and the violent conditions faced by the mine's workers, as documented in the museum's historical narrative, are not conveyed in the architectural work through the use of symbols (despite the temptation among critics to interpret elements such as the use of zinc in the roofs and doors as recollections of the metal extraction from the former mines or the use of black in the walls representing the darkness of the grottoes). Instead, they are metamorphosed in the composition of the sensation. This process, as observed in Zumthor's other works, entails material experimentation combined with an insightful interpretation of the different strata within a territory and a thoughtful understanding of the body's movements,

postures, and gestures. In this case, the latter extends to the scale of the landscape where the four small buildings appear to stand freely. The choreography of the body walking through the landscape and the four buildings, the movements and postures imposed on the body to the views observed from inside each building, unveil varying degrees of intensity within the spatial sensation formed. This sensation enables each individual to become a landscape, one infused with a potent force, in contrast to a sensation of contemplation or even comfort. Among various features to be explored, the wooden structure of each building is anchored on the rocky, accentuated terrain with metal footings, challenging the notion that the wooden structure seamlessly blends in with the tall, slender-trunked trees of the surrounding landscape or that it springs from the soil. The way the buildings interact with the soil speaks to the profound gap between nature and man-made structures. From afar, the elegantly designed wooden structures of the buildings may be mistaken for the tall, slender-trunked trees. However, as one moves from one building to another, this illusion is demystified, revealing that enduring disjunction. The use of metal, as a vital material in the composition of the sensation, creates a sound that remains unheard but is present between rock and wood as a vibration that inevitably accompanies the bend of time. Similarly, when snow covers the rocky mountains and a portion of the wooden structure at the base of the buildings' feet, the metal roofs echo the distant extraction time, soaring over the landscape.

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FIGURES

Fig.1 - Study Models of the Wooden Structure of the Allmannajuvet Zinc Museum, 2004, Peter Zumthor's Büro Archive.


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Christina Georga
National Technical University of Athens, Department of Architecture.
christinageorga48@gmail.com

When cinema introduces the new embodied spatial experience.
Regaining hapticity through the cinematic lens of Michelangelo Antonioni

Key Words
Embodied spatial experience, Antonioni, Touch, Haptic cinema, Haptic images

Introduction
From the beginning, cinema was fascinated by the modern city, and the city was fascinated by its cinematic representation. Oculocentrism characterized modern Western society, and cinema turned out to be the only reliable medium that had the perceptual equipment to grasp the complexity of urban phenomena [Berger, 1972; Debord, 2000; Jay, 1994; Penz & Lu, 2011]. According to theoreticians, cinema trained citizens to experience urban life mainly through their vision by forming an optical type of sensorium. Citizens turned into passive spectators, maintaining a cautious and emotionless attitude toward each other and provoking the pathology of modern times, alienation [Simmel, 2017; Pallasmaa, 2012]. Nevertheless, newer scientific essays suggest that cinema besides its audiovisual nature, has haptic qualities too and could also train viewers in a new type of sensorium [Marks, 2000; Sobchack, 2004]. This assumption could introduce a new embodied spatial experience.
Haptic cinema is an approach in cinematography that creates multisensory images, specifically, known as haptic ones. Haptic visuality differs from optical visuality. Haptic visuality is not based on distance or the representation and supervision, of the object. Instead, it focuses on intimacy, and coexistence, ultimately referring to more tactile connections on the surface plane of the image. Haptic visuality requires participatory and embodied spectatorship, leading the viewers to adopt a multisensory type of sensorium in perceiving the contemporary spatial experience. [Marks, 2000; Bruno, 2002; Deleuze, 1989; Sobchack, 2004; Merleau-Ponty, 1992]. A haptic image forces viewers to contemplate the image itself instead of pulling them into the narrative. Therefore, viewers become active participants in constructing an interactive spatial experience. Such images are created most commonly in two ways: a) by denying optical completion which challenges the viewers to draw upon their sensory memory to synthesize the image. In this case, the viewers realize that the object escapes from their sight, and they let the other senses

take control; b) by applying synesthesia, meaning the perception of one sensation by another modality. Sounds that evoke textures or sights that evoke smells are used to appeal to the viewers' senses. A noteworthy example of haptic cinema is the work of Michelangelo Antonioni. Antonioni's cinematic style is characterized by the unconventional use of cinematic language and techniques, which leads to a haptic approach in moviemaking. The scope of this paper is to investigate the concept of haptic cinema and this new embodied spatial experience through the cinematic lens of Antonioni.

Methodology
In Antonioni's tetralogy (L' Avventura/1960, La Notte/1961, L' Eclisse/1962 and Deserto Rosso/1963), he establishes a distinct cinematic perspective, with a characteristic emphasis on the themes of alienation and spatial disorientation. One of the most representative films of Antonioni is La Notte/The Night. A film concerning alienation, urban space, and haptic embodied experience. The 24 hours of the life of a married couple in crisis is documented. The movie's location is Milan, where the female character, Lidia, is wandering in despair. Antonioni attempts a parallelism between the destruction of the old city of Milan and the collapse of the couple's marriage. As the new city arises, alienation is also arising in contemporary society. This paper focuses on analyzing Lidia's flânerie scene in the urban landscape. To discern hapticity in the above scene of the film, certain haptic spatial qualities must be present. The haptic spatial qualities of discontinuity, twist, corporeal exaggeration, projection, absence, and memory are the research tools that will expose the tactile side of a movie. Each quality is produced by cinematic techniques such as change of focus, close-up, wide shot, slow motion, graininess, blurring or blossoming colors, under-over exposure, reflections, sound, camera movement, and montage.

Outcomes
Analyzing Lidia's flânerie scene in the urban landscape, the following haptic spatial qualities are revealed. The first haptic spatial quality is the discontinuity since Lidia's flânerie is a set of fragmentary scenes from various parts of Milan, with no apparent connection between them. Discontinuity, achieved by the montage, creates a condition of spacetime disorientation and disrupts the narrative flow. In that way, the viewers are forced to create their own spatial and narrative liaisons using all of their sensory systems. The second haptic spatial quality, that keeps viewers sensorily alert, is the twist, meaning mainly the plot twist. It counters viewers' expectations of informative or exotic visual spectacles. While Lidia is wandering in the city of Milan, she meets various people along the way and interacts with them in unexpected ways, leaving the viewers confused by the turn of events.
The third haptic spatial quality is corporeal exaggeration. An unexpected circumstance occurs when Lidia finds herself in the middle of a fight, while she is walking by a group of men. The cinematic lens focuses on the bodies of the two men, who savagely fight. The use of close-ups on the bodies, which experience extreme physical conditions, helps to emphasize the corporeal exaggeration that viewers are experiencing. The projection is the fourth haptic spatial quality. The use of wide shots, where the bodies are almost indistinguishable in the urban space, is changing the focus from the characters to the landscape. In that way, it brings the background into the foreground. The viewers cannot project themselves on the cinematic bodies, since the urban landscape becomes the protagonist, absorbing the bodies in it. An instantaneous deletion of depth occurs, creating a two-dimensional haptic image. Another haptic spatial quality that is present in the flânerie scene is that of absence. Through the change of focus, extreme close-ups, and blurring colors, bodies are hiding behind railings, suffocating through narrow openings, or even being vanished by smoke and dust. The viewers have to make an effort to distinguish the existence of the human body from the urban scenery. The absence of the body paradoxically reinforces its presence. The last haptic spatial quality is memory. The presence of materiality is also intense in the scene, and generally in the movie, as evidenced by the extreme close-ups on surfaces of the urban environment touched by the hands of Lidia. The highlighting of materiality appeals to viewers' embodied memory through synesthesia.

Conclusion
Observing and analyzing the former scene and, in general, Antonioni's cinematic style, it is obvious the presence of all the above haptic spatial qualities. Discontinuity, twist, corporeal exaggeration, projection, absence, and memory reveal the hapticity in Antonioni's films. He calls on the viewers for participatory embodied spectatorship, provoking them to change their sensory organization into a haptic mode of a new embodied spatial experience. Antonioni's cinematic representation of the modern city leads us to new ways of experiencing and perceiving the contemporary urban spatial condition. Classical narrative cinema is based on

optical visuality which results in a superficial and distant interaction of the urban environment. However, it is illustrated that haptic cinema may offer an enhanced experience. Via haptic visuality, more sensorial mechanisms are stimulated and embodied interaction with the city emerges. The way the cinematic haptic experience of urban space could be transfigured into a lived haptic experience of it, using the multisensory perceiving skills of the new haptic sensorium, remains a challenge and needs further research.

ENDNOTES

[1] Gurgaon Glossary 2017 https://bardstudio. in/gurgaon-glossaries/
[2] See for instance Prasad Shetty, 'Ganga Building Chronicles', The Caravan, 1 May 2012

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FIGURES

Fig.1 - Haptic images from Lidia's flânerie scene in Antonioni's film *La Notte*. Michelangelo Antonioni, *La Notte*, 1961, collage, 15,97x17,13cm, Milan.

Raffaella Cavallaro
Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani.
raffaella.cavallaro@polimi.it

The pedagogical value of the body in the design of contemporary learning spaces. Giving the child back his ninety-nine worlds

Key Words
Body, Experience-based learning,Informal space, Learning spaces, Movement.

"[...]
cento mondi
da scoprire
cento mondi
da inventare
cento mondi
da sognare.
Il bambino ha
cento lingue
(e poi cento cento cento)
ma gliene rubano novantanove.
La scuola e la cultura
gli separano la testa dal corpo.
Gli dicono:
di pensare senza mani
di fare senza testa
di ascoltare e di non parlare
di capire senza allegrie.
[...]"
[Malaguzzi, 1996]

One of the most critical shortcomings in school contexts nowadays is students' lack of relationships with their bodily dimension, with movement and other people, made up of authentic physical contact and sensory relationships. The emphasis on new technologies -

aided by the health emergency that has made us dependent on them - goes along with the tendency to consider 'ordinary realities' as not sufficiently challenging, and not complex enough to build the educational environment of the future [Serres 2013]. In this sense, the spread of immersive technologies and virtual realities contributes to the pauperisation of the direct experiential dimension.

The context within which today's pedagogical debate is developing, in a similar way to the early 20th century, endured by the return to in-presence teaching after the recent pandemic crisis, is characterised by a new revolution, previously defined as Copernican by John Dewey, in which once again a radical transformation of the educational model is taking place, prompted by a change of vision aimed at rethinking the organisation of didactics, time and space of learning in a knowledge society in constant evolution. This transformation offers an opportunity to challenge the anachronistic transmissive scheme of the 'toxic' classroom [Steward, 2021], whose logic produces domesticated bodies, by adopting as a method the application of open, active teaching strategies as a means to engage corporeality and the multiplicity of ways of being of the body in space in the architectural design of learning spaces.

Architecture for education is directly involved in innovative research and pedagogical practices that outline a new way of conceiving the learning process. This short text aims to investigate how the pedagogy of the body [Gamelli 2011] integrates traditionally separate knowledge - namely that of the word, with that of movement, gesture, the gaze and the senses - and makes it a central aspect of the pedagogical-didactic and architectural design of educational spaces [Weyland 2019]. Therefore, this research explores scenarios that better reflect the needs and requirements of the new generations of students by reading and comparing the characteristics of innovative school models.

The school buildings assessed, both new and existing, were carefully selected to search for educational spaces capable of stimulating and fostering, through space, the rediscovery of an up-to-date relationship with the corporeal sphere, both singular and plural. The architectural approach to the renewed forms of learning translates into learning spaces that can be experienced without prejudice, opened to individual interpretations, and allow pupils to investigate the richness of informality [Hertzberger 2008]. A tool for spatial discovery and appropriation, the body, through movement, thus assumes the essential role of a didactic medium [Tornieri, Zancan 2022], capable of conforming the surrounding space: the body, in a certain sense, designs its spatial extension, as a model of formal measurement, first, and then as a perceptive system.
In rethinking spaces and places according to the nature of the body, the architectural forms are tuned in equal measure to the proportions of the body and the laws of the senses through flexible solutions capable of accommodating multiple activities, modular and easily configurable to meet ever-changing contexts. Compressions, expansions, level changes, and material and colour variations blur the boundaries between spaces, and the transition takes place through sequences of different environments and mediating spaces between inside and outside.

All these factors lead to an enrichment of the formal vocabulary of learning spaces, which certainly require increased articulation, seeking to offer alternative readings concerning a conventional idea of a school, which disrupts the hierarchies to which we are accustomed but no longer correspond to contemporary learning modes. Instead of a diagram of a sequence of functions ordered along a corridor, learning through movement leads to dealing with more complex diagrams, giving rise to a more significant number of bodily experiences and the possibility of getting information from what surrounds those who inhabit the space with their bodies.
The introduction of open learning devices, with which the body is called upon to interact, makes it possible to put the vital energy of children and young people, which is expressed precisely through their free bodies, back at the centre of the educational scene. Starting from different assumptions than the 'standard' ones, the aim is to give shape to space, starting from observing the body, how it moves and how many and which spaces it has available to express itself and give voice to multiple intelligences [Gardner 1983].

The spatial fluidity induced by the spread of the thematic classroom concept and the logic of clusters, the inclusion of socialising spaces and the extension of the outdoor teaching area using outdoor spaces and roofs of buildings are strategies also formulated in reaction to the results of the Organisation for Economic Co-operation and Development (OECD) PISA tests, which measured the educational levels of students in many western countries. As some recently

implemented school projects reveal, some European countries, such as Denmark [2014], are beginning to recognise the significance of movement at school and education systems are adopting it as a national strategy to support changes related to new ways of learning. The embracing of contemporary pedagogical projects and design strategies that encourage movement emphasises the value of the body in the learning process. It allows for innovations in educational spaces, stimulating the development of children's psychomotor, cognitive and emotional skills: the experiences of the body complement those of the mind.

Designed by Henning Larsen to promote physical activity, the Frederiksbjerg School in Aarhus is an experimental and innovative project to provide active learning spaces. It is one of the first schools designed in Denmark in answer to the new requirements of the national reform of state schools, which encourages active forms of teaching based on movement - at least 45 minutes a day - and sensory perception. The building is therefore conceived as a dynamic playground: physical activity areas are everywhere and thematic clusters ensure that it is not the teachers but the students who move around. The central hall is a meeting place - including a climbing wall - and the terraces, equipped with sports fields and seating, ensure that teaching can also occur outdoors, bringing school life into the urban landscape. In Boulogne-Billancourt, on the other hand, bodily experience becomes central to ecological learning. Indeed, the morphology of the École des Sciences et de la Biodiversité, designed by the French architectural firm ChartierDalix [2019], brings together children's lives in the school context and the natural environment, enhancing the great potential of outdoor spaces. In this case, the body is called upon to interact with nature and the living world: the roof of the building, a teaching environment equal to the indoor one, is an invitation to take a walk. Ramp, staircase and green space at the same time, every day the students take care of their vegetable gardens, learn to recycle the cafeteria waste and directly observe the flora and fauna, the growth of the forest and the meadows where insects collect pollen. Finally, the Meltopee School, quoting the XDGA office architects, is "a project" that "proves that schools can become wild and adventurous places that stimulate the imagination of their inhabitants". In addition to the formal learning spaces, many informal outdoor spaces are included, such as a sloping vegetable garden, a sand pit, a sunken seating area and slides connecting the ground and first floors.

The architectures mentioned above deploy design strategies and best practices to return the ninety-nine worlds stolen from him to the child [Malaguzzi 1996]. There was a time when learning was essentially body-based. Product of static, authoritarian and monodirectional didactics for a long time, the body is now taking back its starring role, a formal and perceptive unit of measuring, in the pedagogical-architectural design of active learning spaces. The widespread sense of fragility that seems to characterise our time opens the way to new possibilities but, sharing the thought of the French sociologist and philosopher Edgar Morin [2000], the most demanding challenge awaiting complex societies - the "challenge of challenges" - will involve, even before the reforms of time, space and ministerial programmes in schools, a total 'reform of thought'.

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FIGURES

Fig.1 - Kinold Klaus, Ecoles Apollo, 1980-1983.
Informal spaces in Herman Hertzberger's Apollo schools - Montessori school and Willemspark school, Amsterdam. January 14, 2024, Retrieved from https://www.ahh.nl/index.php/en/projects2/9-onderwijs/113-apollo-schools

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Roberto Juan Cardini
Universidad Politécnica de Madrid,
Escuela Técnica Superior de Arquitectura de Madrid
rjcardini@gmail.com

Interactions in the processes of occupation and appropriation of space. Interpretation of practices in the Mercato Sonato, Bologna

Key Words
Temporary occupation, Production of space, Local scale, Unused buildings, Differential subjectivities

Currently, the occupation of abandoned buildings, conceived as spaces of uncertainty, generates opportunities for interaction and produces self-organizing structures that, determined by the occupants, can lead to significant spatial changes on a small scale [Miessen 2011, p.68]. These space transformation practices constitute processes linked to the body and use, serving as an alternative to pre-determination and consolidated functionality [Lefebvre 1991, p. 153].
This is the case of Mercato Sonato, the collective occupation of the old market in the San Donato neighbourhood in Bologna, Italy, by the Senzaspine group, agreed upon in 2014 by the city council of the same city via the 'Incredibol!' contest. Senzaspine, initially established in 2013 as a youth orchestra by Tommaso Ussardi and Matteo Parmeggiani, successfully occupied the old market building in 2015, transforming its central space into a concert hall and peripheral spaces into classrooms, laboratories, and a bar. Consequently, they formed a new cultural hub around music, integrating into a broader network of cultural and social promotion through their initial participation in a plan aimed at revitalizing degraded areas by occupying abandoned buildings. They later became part of the ARCI network for cultural and social promotion at the national level. Senzaspine founded a children's music school, and through the group's identity and the occupation of a formerly abandoned building designed for a different purpose, they developed transformation practices in the space turning it into a cultural reference for the neighbourhood and the city [T. Ussardi, personal communication, November 23, 2023].
Based on the exchange between space and social practices [Bourdieu 1989; Giddens 1994; Gieryn 2002], where buildings are both the structural cause and consequence of practices, I propose, through the analysis of Mercato Sonato as a singular case study, to revalue the actions of occupying and appropriating existing buildings, giving rise to bottom-up spatialization processes that shape a re-signification of space through face-to-face group practices.
The mutual and ongoing transformation between people and spaces, extending beyond its

impact on buildings as determinants, also validates social practices as a subject of study in architecture. While the predominance of processes based on techno-aesthetic representation systems emphasizes the position of practices conditioned by the material object and disregards the influence of social practices, we can reconstruct the chain of practices involved in shaping a space and we can observe that local-scales interactions have the power to concretely synthesize a critical position against architectural abstraction, effectively materializing and linking spatiality to the lived experience of bodies. This perspective aims to broaden the disciplinary vision of architecture, understanding space not only as objects designed from technical and power positions but also as a process that occurs through a chain of practices mediated by objects and bodies, sustained by interactions [Collins 2005; Fine, 2012], and validated by experiences shared by individuals and groups [Lussault 2015].

From the case analysis, three different and correlated spatialization processes can be identified, synthesizing a chain of practices mediated by an object. The first is the design and construction of the original building for a specific function, the market, and its subsequent disuse. Next, there is an occupation and appropriation of space through group interaction that re-significates, forming its spatial identity. Finally, a new project resets spatiality from a disciplinary technical position, demolishing the old building but partially maintaining the function contributed by the occupation. It is these latter two processes that comparatively reveal different tools, methodologies, and resources.

The occupation of Mercato Sonato has significant characteristics regarding group value and local scale in processes where space transformations are produced not through modes of representation but through practice itself [Miessen 2011, p.102]. The actions carried out by the Senzaspine group are understood within a micro-context, where a set of shared understandings emerges from continuous interaction, providing the cultural foundation for action that shapes the space [Fine, 2012, p.160]. This process reflects how interaction provides dynamics for social life, and the group forms a structure at the local scale. Both factors are the basis for occupying and appropriating a space redefined and re-signified by transformative practices. These practices, which require the co-presence and interaction of bodies in the space, stem from the group's identity and its specific variables. Collective activity, primarily focused on use, transforms the place into a process that combines group practices and characteristics. The value inscribed in space is shaped through group practices and adds to the dependent variables of the group acting on space. The place, in turn, will redefine the group through the material footprint produced, revealing different levels of relationship between the group's identity and its spatial identity. This directly depends on the level of appropriation produced by the practices.

In this particular case, the level of appropriation and the generated spatial identity demonstrate that continuous group relations, empowered by occupation, sustain collective effectiveness in spatial transformation practices. Today, the Senzaspine orchestra has about 500 musicians, the music school has around 400 children, and Mercato Sonato has approximately 8,500 members. Through their initiative and within an unplanned space, they revitalized an abandoned building, consolidating the music culture in Bologna on a neighbourhood scale. This validates that, with collective action emphasizing the local context, structure, and interaction can be interconnected through culture [Fine 2012, p.172].

The temporary occupation of the market reactivated and strengthened the new program by its use, thus revealing the significance of social practices and interaction in the production of space. What makes this case unique is that the effectiveness and value of the occupation were such that it led to a project to construct a new building with the same program, entirely demolishing the existing one. This time, the process is antagonistic; a blank slate and a predetermined design. Abstract and canonical, the newly planned building, grounded in technical-instrumental foundations, remains distant from reproducing the value and identity of the original central space that was able to represent the experience of use and bodies in occupancy. Based on the conception of space (i.e., the imagination of an idealized space), the new building, in contrast to the first, proposes a standardized, generic, and controllable use, justified by regulations and opposed to what was achieved through the occupation.

At this stage, by not considering social practices as fundamental in the production of space, the new project fails to analyze, enhance, and guide occupation and appropriation. The observation of these actions is not recognized as a tool to identify how subjectivization processes, in constant transformation and becoming, are situated, generated through practices as interactions, and shape spatial identity. As an independent variable within a collective, Senzaspine makes transformations through use, ultimately gaining recognition and identification within the given space. Not considering occupation and appropriation processes as fundamental dismisses and commodifies how groups produce space on a local scale via cultural meanings and their normalized practices [Savransky 2012, p.197], and how that space, in turn, is part of a

subjectivization process.
Besides the value inherent in the analyzed case, where local contexts shaped the action [Fine 2012], and local interaction structure generated and shaped the situation's energy [Collins 2005], Mercato Sonato also highlights the absence of tools and methodologies to validate these differential processes in the production of space. Ultimately, these processes are instrumentalized and utilized to implement representation systems that mould and structure everyday life from an abstract and normative position, rejecting the value of practices as a primary factor in experiential spatiality.
Reclaiming the value of these influences is essential to encourage, activate, and emancipate our bodies from pre-established design and structured relationships. This means assuming and reaffirming that, from the grassroots, at local scales, and through group social interactions, differential subjectivations occur in the production of space.

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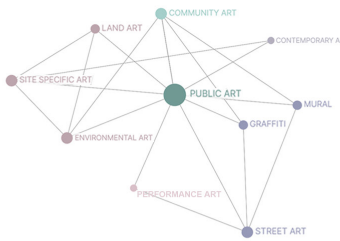
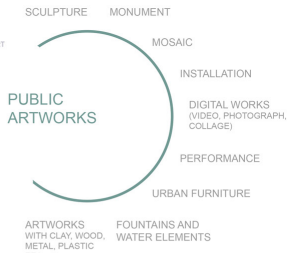
FIGURES

Fig.1 - Author: Gfoto (20th century news, second half), main photographer
Place and date of filming: Bologna (BO), Italy, third quarter XX
Material/technique: gelatin silver bromide/paper
Measurements: 18 x 24
Location: Sesto San Giovanni (MI), ISEC Foundation Institute for the History of Ages Contemporary, photographic archive collection Unità Edizione Milanese, UNT_ISEC_ST_02252
Retrieved December, 16, 2024 from: https://www.lombardiabeniculturali.it/fotografie/schede/IMM-5w050-0000262/
Fig.2 - Author: Senzaspine
Place and date of filming: Bologna (BO), Italy, 2023.
Retrieved December, 16, 2024 from:
https://www.pilastrobologna.it/2023/10/21/a-che-punto-siamo-con-il-mercato-sonato/
Fig.3 - Author: Settanta7 Group (https://www.settanta7.com/)
Retrieved December, 12, 2024 from:
https://zero.eu/en/luoghi/38754-mercato-sonato,bologna/

PUBLIC ART
PERFORMANCE
INSTALLATION
BODY - PLACE - REMEMBRANCE



Özer, İ. (2024) Art Types Related with Public Art



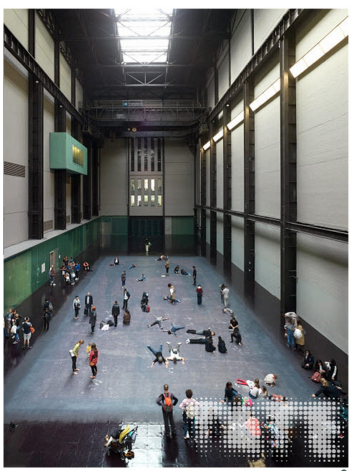
Özer, İ. (2024). Public Artworks (edited from Kurt, 2007 and Çağlın, 2010)

Parkour of the performance (Dorner, 2014)

1

BODIES IN URBAN SPACES Willi Dorner
New York, 2010

body - neglected intermediate spaces - notice the place and **remember change in perspective**



2

3

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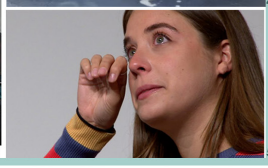

5

10,148,451
Tania Bruguera
Tate Modern
Turbine Hall, 2018-2019

heat sensitive floor and **body interaction**

crying room - sensorial experience

Özer, İ. (2024). Collage, 24x16cm

Ipek Özer
Isık University, Faculty of Arts, Design and Architecture
ipek.ozer@isikun.edu.tr

Reading body and place relationship through public art

Key Words
Public art, Body, Place, Remembrance

Introduction

In this study, the aim is to explore how art and space in public and semi-public areas are perceived by the audience and to examine them in the context of memory. In the course of the study, public art and public artworks are initially discussed. Subsequently, the relationship between temporary public art productions and the spaces where the production takes place with the body and remembrance is examined. To concretize this topic, two example works have been selected. The first is the performance work titled "Bodies in Urban Spaces," which took place in public areas in New York and was choreographed by Austrian choreographer Willi Dorner. The second example is the installation titled "10, 148, 451," by Cuban activist and artist Tania Bruguera. Bruguera's work took place in the Turbine Hall within the Tate Modern Museum that is evaluated as a semi-public area. These examples were chosen because they allow the relationship between the human body and space to come to the forefront and creating opportunities for different perceptions.

Concepts of public art, place and body

The production of art and the display of the artworks in public spaces constitute a relationship with urban spaces and a part of this relationship can be seen as public art. Public art is sometimes considered as an artistic element or event displayed in public space and sometimes even as the entirety of public space. The presentation of thoughts and interpretations in an aesthetic manner might be the definition of art and design. When art and design is accessible to everyone in a public space, it is considered as public art [Worth 2003]. In this regard, open public spaces such as streets, squares, university campuses, and the semi-open areas of museums, are some venues where public artworks can be exhibited [Benn and Gaus 1983]. As long as art is accessible to the public, it can be considered as public art [Phillips 1988].

However, considering public art only from a spatial perspective is not sufficient to understand this art form. Phillips [1989] argues that public art is not merely a type of art that takes place in public spaces or that is understandable by everyone. The publicness of it comes when artistic activities see publicness like an idea and research topic [Phillips 1989].
At the same time, public art has a very broad scope and is intertwined with many different types of art. It can be said that public art is related with community art, land art, site-specific art, performance art, conceptual art, contemporary art and street art etc.[Çaglın, 2010]. Alongside the art genres associated with public art, the question arises as which artworks can be considered as public art. Public art encompasses numerous artworks created from different perspectives and techniques. However, based on the literature review, it has been observed that public art works can be classified as sculptures, monuments, mosaics, installations, graffiti, digital works, performances, installations, urban furnitures and art products [Kurt 2007, Çaglın 2010].
When the relationship between public art and the body is examined, it is observed that the body plays the most crucial role in the perception of art and space. People perceive their environment and interact with it through their bodies and senses [Adıgüzel Özbek, 2018]. The interaction between body and space sometimes happens only with sight and sometimes it becomes more sensorial while involving other senses. Pallasma [2005] mentions that spaces are often designed with a sight-centric approach and neglecting other senses like hearing and touch. However, the holistic perception of space can only be achieved by maximizing the interaction with whole senses. The mentioned relationship between the body and space is particularly evident some types of public art such as performances or installations. In these areas, visitors can be transformed from mere spectators into participants focused on bodily experiences. The viewer becomes a participating observer contributing to the creation of art [Aksoy 2014; Martinez and Demiral 2014]. At times, the level of participation reaches its peak and the creation of artwork becomes possible only through the active participation of the audience. Also, it can be said that the mentioned audience participation and body interaction are related to the remembrance of space and art. The act of remembering occurs as the body experiences the space and art. The more senses are included during this experience, the higher the likelihood of the experience being remembered because an experience that appeals to multiple senses tends to stay in the viewer's memory for a longer period [Kayaduran Akkavak 2017]. Additionally, Öymen Özak and Pulat Gökmen mention that the place's position in memory is shaped according to the its context. When place has a rich context, it becomes more permanent viewer's memory [Öymen Özak, Pulat Gökmen 2009]. In this regard, looking at performance art and installations, in spite of their temporary nature, they can continue to be remembered by the audience due to their multi-sensory and bodily experiences. This remembrance also includes the place because all these artistic activities also influence the viewers' perspectives on the space. In this article, the performance work named as "Bodies In Urban Spaces" and the installation called "10, 148, 451" are considered in the context of body, art, place and remembrance.

Discussion
When we look at the performance work titled "Bodies In Urban Spaces," the choreography of the performance was prepared by the Austrian choreographer Willi Dorner in 2010. The performance was carried out by a group of dancers, artists, and parcours runners while following a route that focuses on predetermined intermediate spaces the city (Url-1). Throughout the performance, certain positions take place rapidly at these intermediate locations. After staying in the same position for a while, the group breaks their poses and moves quickly towards the next point on the route. During the performance, it is possible to see the group bent or piled up at entrances, between buildings or on benches in the park. The main goal is to make the neglected and vacant intermediate spaces more visible and to explore how human body can interact with these spaces in different ways [Dorner 2014].
Second example is also making human body the main element of the artwork like Dorner's performance. Cuban artist and activist Tania Bruguera's installation named "10,148,451" was held in the Turbine Hall of the Tate Modern Museum between October 2, 2018, and February 24, 2019 and the installation focuses on the migration issue. A heat sensitive material is placed on the floor so that when visitors gather and lie on the floor, the portrait of a Syrian migrant is revealed (Url-2). Additionally, there is a place inside the hall called crying room. Visitors entering this room are made to cry due to a chemical in the air that activates tears. Thus, a "forced empathy" environment is created regarding the issue of migration (Url-3).
In both examples, the relationship between body and space comes to the fore but the techniques are different. Performance in the first example makes places that people do not notice in daily life visible again through body interaction. Thus, people look at the city, buildings and everyday

objects with a new perspective. In Bruguera's installation, visitors were able to perceive the space directly with their bodies, thanks to the heat-sensitive floor and the crying room. It can be said that such a high level of physical interaction increases the likelihood of remembering both experiences.

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Fig.1 - 1 https://www.amusingplanet.com/2010/09/bodies-in-urban-spaces-by-willi-dorner.html (accessed 21 May 2023).
Fig. 2 - https://www.tate-images.com/100653-Tania-Bruguera-10-148-451-Hyundai-Commission-2018.html(accessed 21 May 2023).
Fig. 3 - https://www.smithsonianmag.com/smart-news/im-fotally-not-crying-new-art-exhibit-guaranteed-make-you-weep-180970450/(accessed 8 January 2024).
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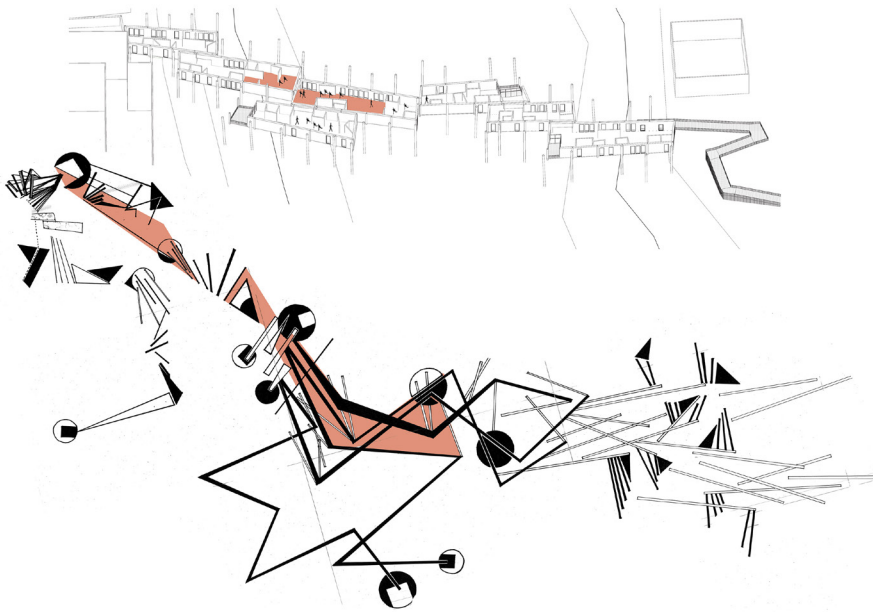

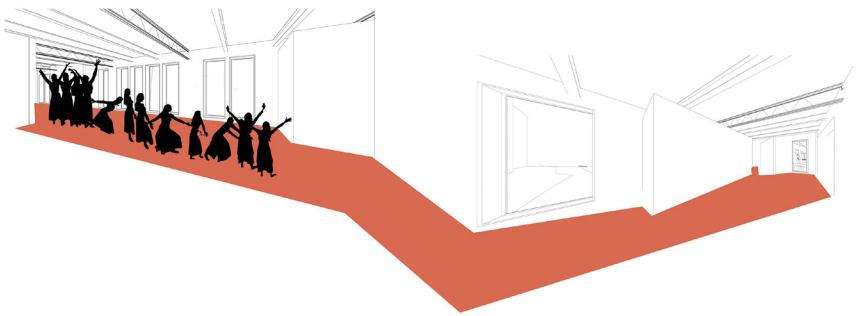

Seçil Yatan Gül[1], Aslıhan Senel[2]
[1,2] Istanbul Technical University, Department of Architecture
[1] yatansecil@gmail.com

Notational Drawing.
A study of an embodied knowledge of architectural space

Key Words
Embodied knowledge, Chora, Dance notations, Representation methods

The representations of body in certain abstractions in architectural drawing are in contrast to the complexity of our bodily knowledge of architectural space. Our research focuses on embodied knowledge which has been developed by feminist philosophers since the last decades of the twentieth century [Grosz 1994; Haraway 1998]. We propose to probe the body and its representations through an embodied kind of knowledge that is associated with a non-dichotomous and relational understanding of space. This research aims to problematize the representation of the body in architectural drawing through practices that produce alternative representations that consider the complexity of the relationship between body-space-place. As a method of this research, we propose that dance choreography suggests alternative ways of approaching architectural representation.
By drawing on theories of 'embodied knowledge', we reveal an embodied, situated, subjective time-space-specific understanding of the body rather than an objective one. Especially, feminist philosopher Donna Haraway's [1988] definition of 'situated knowledge' suggests that knowledge consists of subjective, located experiences. Feminist philosopher Elizabeth Grosz's [1994] 'body image' may also be read to understand further the relationality of the body and its knowledge as embodied. In her book *Volatile Bodies*, where she emphasizes the multiplicity of body definitions, Grosz discusses variable and mobile corporeality that is affected by external factors such as nature, society, and culture. Accordingly, body reacts with emotions that is produced by this corporeality. Architectural theorist Jane Rendell [2010] suggests 'site writing' as a situated practice in order to acknowledge an embodied kind of knowledge and she explains a kind of critical practice of writing space with subjectivity and location.
In order to explore the possibility of embodied knowledge dormant in theories of architecture, we suggest investigating the term *chora*. The term *chora* mentioned in Plato's *Timaeus*, refers to 'ground' where objects are created. Yet architectural historians and theorists, whom will be

referred to in this paper, suggest that the variations of the word *chora* and *choros* may offer a multi-layered understanding. This multi-layeredness will connect to the embodiment discussion in this research. For example, Grosz [1994] suggests that the concept of *chora* is used to describe chaos and the universe, yet a disembodied approach. For architectural historian Ann Bergren [2008], *chora* may refer to a pre-Platonic active space. Architectural theorist and historian Lisa Landrum [2016] offers another term, *choros*, which is phonetically similar to *chora* yet etymologically different to refer to the singers in Ancient Greek theater. This term, Landrum suggests, may be useful to develop a discussion around an active un derstanding of space.

Within the scope of our research, exploring the dance notations, movement drawings and their reflections on spatial drawings allow us to pursue an experimental methods of representation in offering a dynamic understanding of architectural space. As mentioned above, learning from the interdisciplinary focus in theory, dance notations will be scrutinized as written/drawn translation of movement and spatial drawings as the translation of the imagined, remembered, and lived space. Examining dance notations allows us to analyze the movement specific to the activity, situation, speed, volume, emotion, and relation with the ground of the movement rather than understanding the movement as standard or generic. As architectural theorist Stan Allen [2009] points out, the interdisciplinary role of notation has the potential to relate events and spaces.

As a practice of this research, certain notation drawings focus on the translations of movement to drawings and offer to produce a fragmented but continuous flow that follows the movement in space. One of the notational drawings experiments with translations inbetween body, space, and representation. In this notational drawing, shapes follow each other and differ according to the characteristics of the movement (image). These shapes include both the movement of the body and the representation of space. As part of a design project, movement determined the boundaries of the space such as circulation, the depths and heights of the volume. The moving body contributed to the project as a design participant crossing the thresholds between these different spaces. While the movement of the dancing body allowed us to imagine the space, and was translated into a notational drawing in order to lead the decisions regarding spatial imagination in the drawing. This practice allows us to analyze the relationship between the moving body and its representation through the notation technique.

Investigating the definitions, drawings, and practices of embodied knowledge allows us to explore the agency of the body in architectural design. In this research, we argue for multilayered and hybrid representations of bodies as a way of understanding and presenting space through embodied knowledge. Imagining and re-imagining space through embodied knowledge has the potential to transform our understanding of architectural space.

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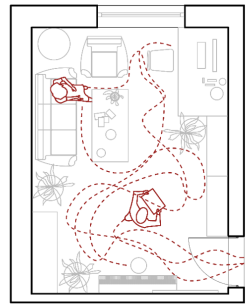
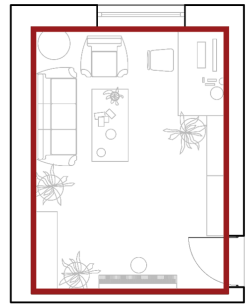
FIGURES

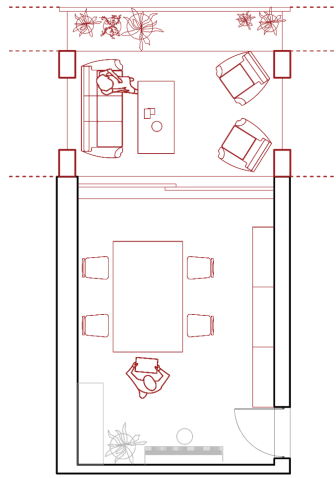
Fig. 1 - The design practice through movement drawing.



The interaction between the inhabitants and the space
The daily life in the flat



The design solution
The need to expand the space



The renewal of the flat

Francesco Iuliano
Università degli studi di Napoli Federico II, DiARC - Dipartimento di Architettura
francesco.iuliano3@unina.it

The interaction inhabitant-space as a design tool.
How an inhabitant-centred design approach can shape the renewal of the existing building stock

Key Words
Adaptive reuse, Inter-active design process, Lacaton&Vassal

The present is characterised by major crises [1], but also by major innovations: the economic crisis, the climate crisis and not least the pandemic crisis, together with technological breakthroughs, define the contemporary condition in which change is needed, as the French sociologist Jean-Louis Violeau pointed out: "the question of the [present ed.] time is not: what kind of architecture do we want to build? but rather: how, with whom and for whom do we want to build?"[Violeau 2020, p. 20].

Violeau's questions about the role of architecture are a warning about the need to define new paradigms [Ricci 2012] which to act on space and transform it: we're living in a historical moment where architecture is defined by technical (or technological) solutions generated through virtual model in order to control dimensional or climatic or economic parameters aimed at reaching certain thresholds imposed by the regulatory framework for the renewal of the obsolete existing building stock as demonstrated by the recently-published EU Renovation Wave Strategy that concentrates only on technical, material and economic questions of reuse, with no mention of the social and cultural aspects [2].

Working on single problems may not be the answer to the complexity of the present time: one should not look for a single innovative technology or prodigious remedy, but for a change in the relationships between objects [3]. This contribution aims to probe the possibility of reconciling social and technical aspects in the regeneration of the existing built environment.

To do so, we must acknowledge those architectural practices that react to the contemporary challenges by placing the inhabitants with their movements, daily routine and needs at the center of the design process [4]; after all, "living is acting" [5], "it is to organise one's own

wellbeing, to mark space with one's own imprint, to adapt it, to make it an expression of ourselves and of those who live with us."[Nouvel 2022, p. 1] ; in fact, "when people act in their habitat, they transform it, modify it, and finally make it better, because they create a syntony between their life project and the built object"[5] . This syntony that Christophe Hutin speaks of occurs as an autonomous and unconscious action of the inhabitants that develops, above all, when they try to adapt the existing living spaces; a way of acting by transforming that Hutin himself studies and from which he learns the real needs of those who inhabit the building in order to seek a possible meeting between the architect's skills and the "performance of the inhabitant"[5] .

Several years earlier Giancarlo De Carlo, who hoped for an awareness on the part of the authors of the decision-making and design processes, stated the idea that the construction of space had always been a "common heritage" [De Carlo 2002] as " there is an extremely intense relationship between physical space and those who inhabit it"[De Carlo G. 2002, p. 120]. However, as De Carlo himself points out, considering the needs of those who live there does not mean transcribing them; operating in this way is a trait of those designers who do not believe in architecture or compensate for not being able to produce it. [De Carlo, Buncuga 2018]

This approach may prove useful in facing one of today's greatest challenges: the regeneration of the existing building stock. The present "has only one building material: the existing"[6]. The redevelopment and reuse of the built heritage are issues on which much attention has been focused in the last decade, especially in European countries: a study conducted by the European Commission revealed that in Europe more than 88 million housing units were built before the 1960s [7] before the most advanced standards on energy efficiency and seismic risk and, above all, made to outdated comfort standards.

The research conducted by the French architects Anne Lacaton and Jean Philippe Vassal, with the collaboration of Frédéric Druot, represents a possible manifesto of such an approach: *Plus - Les grands ensembles de logements - Territoires d'exception* focuses on the quality that can be found in modern residential production (Parisian *Grand ensembles*), and then defines a catalogue of operational solutions for adapting existing spaces to the needs of its inhabitants, by showing the possibility to continue the design of the Modern.

The work of the French duo shows this kind of awareness of the subject: an emblematic case is the project for the transformation of 530 flats in Grand Parc Bordeaux in 2017 in France. The building, built in the 60s, was originally supposed to be demolished, but "any demolition destroys a great deal of information, knowledge, layers, materials and memories" [Lacaton, Vassal 2021a, p. 3]. The designers therefore propose an alternative solution. In the preliminary stages of studying the project, the two architects have met people and families, who were attached to their housing, even if the situation was not the best. They then proceeded to focus "on daily life, on what the inhabitant produces, and to invent from these sensible variations" [Lacaton, Vassal 2021a, p. 3]. The small living space and the exaggerated use of rooms suggest to designers the need to expand the flats by means of a façade addition. This had the effect of doubling the initial area and was achieved at a much lower financial and environmental cost than would otherwise have been incurred by the demolition and reconstruction of the building.

The addition consists of winter gardens that have been imagined as spaces for creativity or appropriation, deliberately undefined spaces that residents can adapt to their own needs. The intervention also has energy implications: the winter gardens improve the microclimate of the flats and reduce energy consumption for heating in winter and cooling in summer. Built using a prefabricated system of reinforced concrete and glass, the addition is a tangible translation of the principle dear to the two architects of Cheap is More [Lacaton, Vassal 2015]: the cost of renovating three flats is equivalent to the cost of demolishing and rebuilding a single one.
The work of Lacaton&Vassal shows the effectiveness of "placing people, and not just technology, at the centre of a project [...] whether you like it or not the people living inside give these buildings value"[8]. In the words of the two designers : "We begin by building a relationship with the people, and what we learn from them changes our design for the better" [6] realizing what they call the Architecture with empathy [Lacaton, Vassal 2021b].

One answer to the challenge of contemporaneity is to regenerate the existing starting from the inside: from people and their daily needs; and then transforming the outside, the apartment and the entire building. A process in which the interaction between inhabitants and the space

they inhabit becomes a design tool to hold together the economic and social dimensions, ensuring the implementation of technological solutions capable of solving the problems of the existing built enviroment.

ENDNOTES

[1] As stated by Jacques Herzog in Letter to David Chipperfield. *Domus*. https://www.domusweb.it/en/architecture/2020/10/13/jacques-herzog-letter-from-basel.html (accessed 13 January 2024)
[2] *A Renovation Wave for Europe – greening our buildings, creating jobs, improving*, European Commision, 2020. Available online: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0662 (accessed 13 January 2024)
[3] As stated by Keller Easterling in *Medium Design: Knowing How to Work on the World* published in 2021 by Verso Books
[4] The generation of designers defined by Zaera Polo of post-capitalism in his essay *Well into the 21st Century,* which appeared in *El Croquis* magazine No. 187 in 2016, are characterised by an attitude that the author himself calls 'cute activism'.
[5] As stated by Cristophe Hutin in the Frochaux M.'s interview *L'architettura come improvvisazione* released in June 2021
[6] As stated by Maria Giuseppina Grasso Cannizzo at the lecture given during the lecture series *The Present of the Present* - May 2020 at DiARC. Edited by Izzo F. and Multari G. Available online: https://www.youtube.com/watch?v=vlDBBBw7wQM&ab_channel=ArchetipiAssociazione). (accessed 13 January 2024)
[7] The report is available online https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52020DC0662 (accessed 13 January 2024)
[8] As stated by Anne Lacaton in the Holcim Foundation interview *"Demolition is probably the worst thing you can do in terms of sustainability"*. Available online https://www.holcimfoundation.org/media/news/foundation/anne-lacaton-always-transform#openVideo=B7HtHGMxYDc (accessed 13 January 2024)

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FIGURES

Fig. 1 - Author's image, *The design process of the transformation of 530 flats in Grand Parc Bordeaux.*

Natalia Matesanz Ventura
University of Alcalá Madrid, Architectural Projects Department
n.matesanz@uah.es

Affecdent bodies and spaces in the reshaping of the estabilished city. Urban communes and counter-drag in the free city. San Francisco, 1966-75

Key Words
Affect, Dissent, Bodies, Drag, Urban communes

In the late '60s and early '70s, San Francisco's counterculture devised underground, self-organized do-it-yourself (DIY) urban networks of communal survival. Since the appearance of the first communes between September 66 and April 67, through meetings and community life, a pacifist movement had been organized and raised awareness of civil rights, feminist and racial movements, sexual liberation and, above all, against the consumer and imperialist society. The hippies sang and danced in the parks, hung out in the Haight-Ashbury, and lived in occupied buildings of the city where "streets were paved with flowers, grass and acid, and music grew on the trees" [Gamson 2006, p. 46].
During the summer of 1967, in a climate of political violence and social discontent, more than 100.000 people converged in San Francisco [1], in seeking to find a new life out of parental control and consumerism, escape the draft due to Vietnam war, and also, create a new pacifist and anti-imperialist society.
As a response to the growing influx to the city, in the spring of 1967, was founded the Council of The Summer of Love. The Council was formed by several collectives such as The Family Dog, The Straight Theatre, The Diggers, The San Francisco Oracle, and approximately twenty-five other groups.
With no help from the city council, in a total self-organized way, they created a network of interconnected urban communes where all the functions normally provided by the established city could be acquired. The Council assisted a Free Clinic and organized housing, food, sanitation, music and arts, as well as maintaining coordination with local churches and other social groups. The philosophy of the Free city[2] was born [Steele 2020]. A great community network made up of micro-communities of 10 or 20 people shaped a domestic and anti-urban ecosystem.
The Free-City network generated its own resources and created its own supply sources using

whatever the normative city discarded. This interconnected everyday network that rose as an alternative to the consumer city explored the significance of sharing not only on the housing scale, but also on the scale of bodies and their power within the urban fabric.
By the time, the city was facing the results of a strong urban renewal [3], which encouraged Victorian houses to be abandoned or demolished in the area.
This article reflects on the influence in the city of these emotional communities [Rosenwein 2006], whose material and imaginary resources, managed to propose an urban alternative to the norm, reinventing urban typologies, identity codes, and revolutionizing the spaces of the city with their bodies and their androgynous drag. Bonded by ideology and love, they undertook practices and performances through their bodies with "actions, gestures and clothes" [Butler 2002] that were dissident, ambiguous and excessive, and generated innovative urban out-law models of everyday live based on affect and dissent.
Affect and dissent are understood in this framework as analytical and theoretical tools, but above all as architectural and spatial ingredients that enable the transformation of public, physical and virtual space of contemporary cities. From this perspective, the combination of these two terms -affect and dissent- leads to coining a new term that offers a theoretical and graphical specific spatial notion: *Affecdent* spaces. [Matesanz 2021]
Through Affecdent spaces, rebel bodies are empowered and lead to reinvent the *normal* city through collective action and critical performance. In the case of San Francisco, the interaction between bodies and between the bodies and the city creates their own and independent codes, networks, and artifacts. Through symbolic reuses and occupations, transformations of daily life, and the implosion of gender barriers they enabled the incorporation of collective subjectivities in urban transformation. Their radical androgyny, sexual freedom, and inclusivity infused public performances that appropriated private and public space, setting new limits in the built environment.
The Angels of Light, an acid-drag commune of free-theatre performers, not only transformed the buildings, but also recycled urban waste for props, and performed in the streets, often on the hallucinogenic drug LSD [Tent 2004]. Their understanding of the body and its transformation also transcended to the public space outside in the streets, squares and parks of Haight-Ashbury. They radically confronted the status quo within the established city itself, creating a synergic and enriching coexistence between urban innovation and the normative built environment through their bodies.
The urban communes studied, established by the Angels of Lights on Oak Street, and The Cockettes [Shepard 2010, p. 179] on Divisadero Street, are fine examples of how to implement and transform a 19th century house to meet collective non-binary heterodox coexistence needs. The group knocked down walls, restructured and reconfigured the inside of their houses, as well as transforming their bodies, and the relationship of the body with domestic space, intimacy, share and care [Brooks, Nicoletta 2008].
From everyday urbanism and the lens of the feminist discourse, the paper supports the idea that *Affecdent spaces and bodies* redefined the built environment of San Francisco, making it less androcentric and exclusive. Also helping to preserve many victorian houses that otherwise would have been demolished due to segregation and redlining.
Affecdent spaces interfere and hack the categories of public and private space, in which is based the categorization of the western normative city [4]. This is, subverting time and space management, altering use and urban programs, and changing the rules of accessibility of the traditional city.
Combining affect and performance/dissent theories within a Situationist framework, this paper approaches counterculture drag activism through graphic productions, standing mid-way between cartography, models and diagrams. The method combines field work, visual ethnography, interviews and documentary archives to unite a variety of data and research formats in drawings labelled *Traceographies*, which establish unexpected relations and trigger new lines of thought and innovation, hence revealing spatial relations missing from social and cultural history scholarship.
As a conclusion, it will be drawn how due to their capacities to fight androcentrism and exclusiveness in the city, *Affecdent* dynamics from the late 60s can be seen today as contributors in the creation of a neo-public, cyber-feminist, and subjective sphere that keeps on transforming the stablished city, today post-capitalist fluid and virtual.
This sphere is also more resilient and flexible than traditional public spaces and brings new senses of corporality and intimacy. Values like the need for empathy, reproductive, and care principles, a heritage of that time, are incorporated today in our collective imaginaries, but were not at the time.
Learning from some of these achievements and urban innovations of the *Affecdent* spaces created in San Francisco in the late 60s can increase tactical urban resources to live in a world

of uncertainty. Also, it will lead to a more inclusive and flexible understanding of urban space and to building a more equal and healthier city which remains also fluid, unmaterial, and cyber-feminist.

ENDNOTES

[1] Hippies also gathered elsewhere in the United States, Canada, and Europe but San Francisco was then the most publicized location.
[2] Manifesto of the Free City "The Post Competitive Comparative Game of a Free City (1968)" can be found in The Diggers Papers.
[3] Joseph L. Alioto (1916-1998) was mayor of San Francisco from 1968 to 1976. He worked for the Redevelopment Agency and his policy was based on drawing real estate agents to the city at the expense of neglecting underprivileged districts and properties.
[4] The Athens Charter (1933) and the rationalism impacted in the rebuilding of western cities after World War II. Effectiveness and replicability were prioritized over inclusiveness and accessibility to public space.

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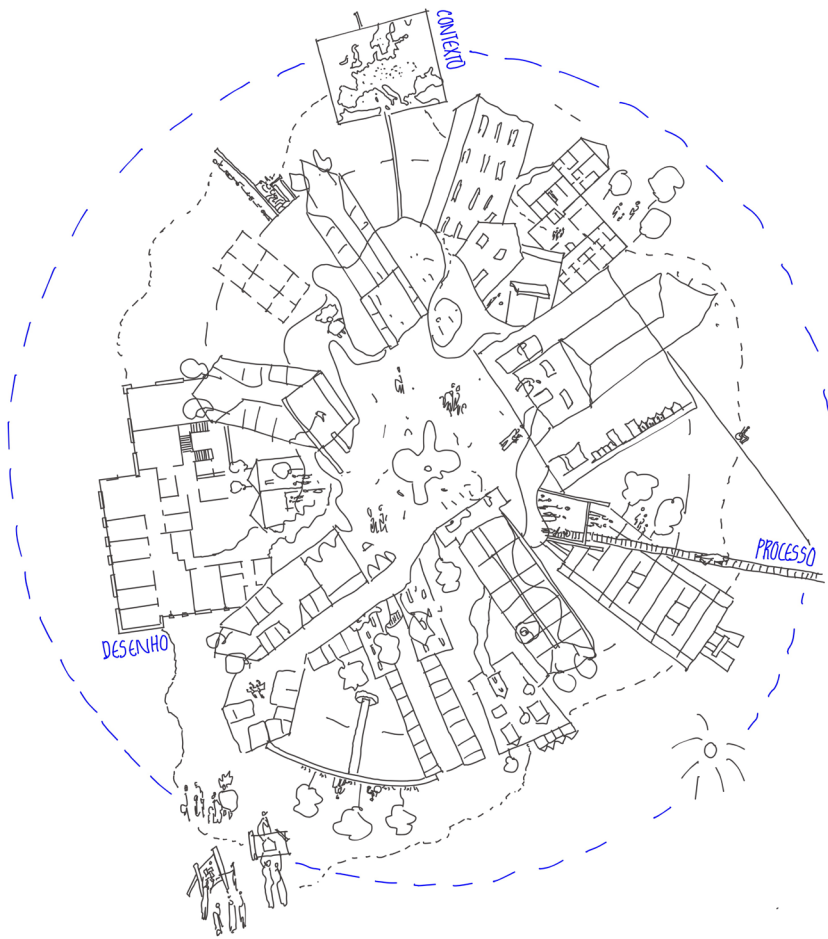
FIGURES

Fig. 1 - Matesanz Natalia, *Affecdent bodies and spaces: The Angels of Light, San Francisco 1968*. 2018, Collage, 12 x 6 cm, San Francisco. Image source: Collage made by author. Map from author and Image from author unknown.


CONTEXTO
PROCESSO
DESENHO

Inês Salema Guilherme[1], Rui Jorge Garcia Ramos[2], Gisela Lameira[3]
[1,2,3] University of Porto, Faculty of Architecture
[1] ines.cls.guilherme@gmail.com

Everyone and everywhere.
Intergenerational practice as evidence of the bodies in the space

Key Words
Intergenerational Practice, Contemporary Vulnerabilities, Context, Process, Architectural Design

Introduction
The present essay proposes a critical analysis of intergenerational practices as evidence of bodily interaction in living spaces, addressing contemporary housing and urban vulnerabilities, resulting from recently finished research on the subject [1].
Acknowledging the new challenges resulting from global demographic changes, urban transformations, or the evolution of practices regarding housing [Scott 2010, p. 458], the relevance of this study lies in addressing the growing ageing population and lack of affordable housing, especially in European countries. Thus, the research question of this article is defined: how do we design a space that, in its general organization and inhabitancy, contributes to a better life through intergenerational dynamics?
To understand the conceptual corpus of intergenerationality, a qualitative methodology [2] was defined to collect, interpret, and systematize data from digital archives, libraries, interviews, or conferences. This critical strategy of rethinking and reorganizing questions, concepts, and experiences represented an indispensable opportunity to structure and enhance the research narrative.
In this paper, the main objective is to share the principles of the context, process and design of intergenerational spaces observed in the literature review and case studies assessment. Additionally, the secondary objective includes presenting the inventory [3] developed during the underlying research, with a corpus of 155 architectural projects. This resource has a crucial operational value, as it enhances the reliability and support for the current analysis of the principles that promote mutual interaction, dialogue, and cooperation among multiple bodies with distinct needs and demands, in shared environments.
Although, due to the size of the original inventory, it was established four reduction criteria

to manage the analysis of each case study. Therefore, this essay focuses only on 64 collective housing projects in Europe, constructed between 2000 and 2020, intentionally designed to promote intergenerational dialogues.

Intergenerational Evidence

The reduced dataset proved that, as new modes of sharing and engagement in non-familial spheres were introduced during the last century [Ramos 2010, p. 71], there is a significant plurality of architectural narratives and experiences related to intergenerational practices [Dove 2020, pp. XI-XII]. Indeed, emphasizing the geographical context, 53% of the case studies selected are concentrated in Germany, Austria, and Switzerland, while only 13% are situated in Portugal, Spain, and Italy. It was also noted that 41 are inclusive for all life stages, likewise the *Giesserei* project (2013, Switzerland) conceived to integrate diverse spaces of living for everyone. Similarly, 23 cases are designed for specific generations, such as the *Senior Cohabitation* (2020, Spain), exclusively for older people.

This apparent disparity shapes the implementation and dissemination of intergenerational practices. Specifically, in Nordic countries, where factors like family and domestic groups emancipation [Afonso 2000, pp. 153-162] [4], or isolation prevail, the intergenerational concept is operational in cohabitation thinking. In contrast, in Southern countries, possibly influenced by dynamics such as full property ownership coupled with economic and societal contexts, these principles are more inherent in family life, resulting in more age-inclusive space solutions and mixed-use programs that support social networks.

Based on the produced dataset, several insights also emerge regarding the methodological process of the projects that actively engage generations and space. Collaboration, participation, and social inclusion can be identified as transversal strategies that contribute to the success and resilience of the diverse case studies. Through the integration of multiple agents, the practices can foster the commitment of future inhabitants to both the space and the community itself. The articulation between different programs (e.g. homes and schools or housing and commerce) was also an important tool founded in the intergenerational processes, due to the spontaneous design of new opportunities and adjust actions to the local interaction between bodies.

In terms of architecture design, it was clear that "though space and interstices, architecture can be simultaneously determinative and deliberative in its expression – and can therefore promote specific types of behavior among the people who use it" [Schoble 2017, p. 306]. In this logic, (un)tangible systems emerged and shaped the body-space experience, on different scales: the place, the form, and the unit. In fact, notions of flexibility, appropriation, sharing, and accessibility were decisive in the *development durable* (sustainability) between people, architecture, and the surroundings. "After all, it is about creating a space for living that not only allows intergenerational contacts but also establishes sustainable supports to integrate these relationships into the residents' everyday life in the long term" [Métrailler 2021, p. 189].

Final Notes

In summary, this essay aims, through the flagship of the dialogue between generations, to promote awareness and recognition among architects, builders, residents, researchers, and students regarding how the design of spaces is intrinsic to people's lives and, consequently, to their challenges and successes over time. Moreover, the conflicts and interactions between multiple bodies in spaces demand a holistic approach, not only among practical and theoretical experiences, but also an integral and complete perspective of space conception, considering its context, process, and design.The role of the architect emerges in experimenting and innovating within the physical, and political context of intergenerational materializations. Undoubtedly significant, the attitude in the context, process, and design of intergenerational practices represents a noteworthy opportunity to encourage dialogues, inclusion, and values of well-being in society. Thus, the meeting between different generation evidences the responsibility and virtue of every architectural space in contributing to and implementing good practices for the inhabitancy of all.

ACKNOWLEDGMENTS

This research was developed within the research project *HoTT: Housing Think Tank: Knowledge Integration on Multi-Family Residential Buildings* (CEAU, FAUP, Portugal), that addresses a wide range of key subject of contemporary housing structures, bringing together, in a cooperative data repository, scattered scientific information on built experiences in several countries.

ENDNOTES

[1] This paper was developed following the research that resulted in the master's degree dissertation *Intergenerational Housing. Contributions to Good Practices* (2023), within the research project *HoTT: Housing Think Tank: Knowledge Integration on Multi-Family Residential Buildings* (CEAU, FAUP, Portugal). This academic and research context was essential in framing the study and defining Intergenerational Housing as its subject.
[2] A qualitative methodology was adopted during the literature revision and study cases analysis. Using an inductive approach, a set of empirical data and materials related to human behavior were recorded. This process led to several questions that were recorded and systematized in a *Reflective Portfolio*. This method led to three categories of analysis – Context, Process, and Design – that structure the narrative of the current investigation.
[3] The inventory. For each study case, a datasheet was developed to analyze its context, process, and design, considering the multiple operative concepts related to ageing (Lameira et al, 2023). Redrawing and sketching were fundamental tools for recognizing and interpreting the diverse materializations of intergenerational practices.
[4] In the present article, as Ana Isabel Afonso (2020) states, the terms family and domestic group, although referring to a formal definition, reveal in most situations two distinct organizational aspects: the first linked to kinship and the last to the residence. The connection to a residential criterion is not enough to define a domestic group: the set of activities shared in a common space (the domestic space) must also be considered.

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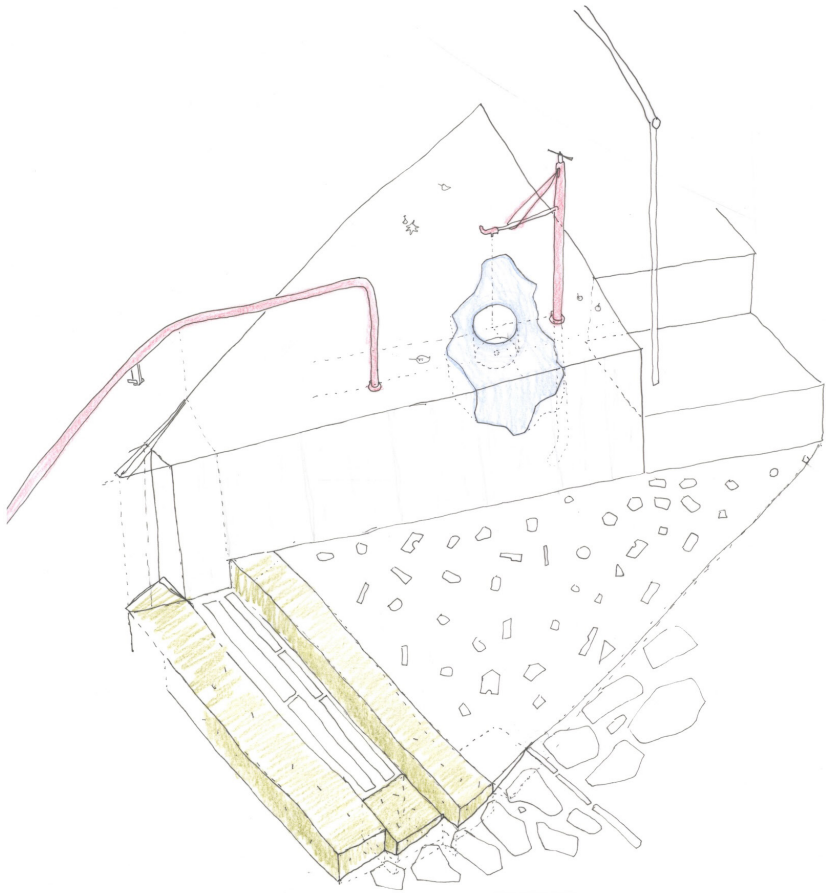
FIGURES

Fig. 1 - Inês Guilherme, *Everyone and Everywhere*, 2024. Sketch developed by the author about contemporary transformations inherent to the diversity of inhabited space, in a holistic logic of sharing and coexistence.



Giulia Azzini
Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
giulia.azzini@polimi.it

The human scale of riverscapes.
A body-centered perspective for fragile territories

Key Words
River system, Body-centered perspective, Regeneration, Fragile territories

This contribution explores the meaning of a body-centered approach to the design of river systems in fragile territories: often associated with marginal areas and mountain or rural settings, these are characterized by risk, depopulation, and precarious social and economic conditions [Carrosio, Faccini 2018] [1]. Both a valuable endangered resource and a risk factor for these places, nowadays the river system represents an interesting field of investigation: in fact, it hardly constitutes an integral part of the landscape, but rather a "neglected area" [Clément 2004, p. 4] [2]. This transition within the collective imagination, together with the set of interventions that over the centuries have reduced the physical complexity, biological variety, and regeneration capacity of the river ecosystem, has forced renewed questioning about its management and use, orienting design strategies for its renaturalization and recovery [Oldani 2016, pp. 72-74].

Within this framework, a body-centered design perspective considers the river as a complex ecosystem that interacts with the surrounding environment and its users, and it implies two relevant design actions: the first rethinks the human scale of architectures for water use and management, emphasizing the ways by which water and body can dialogue within the space; the second involves both the physical and intangible connections of smaller interventions on a territorial scale, to build a single riverscape for the sensory experience [3]. Focusing on the latter, which is essentially bodily [Chiodo 2011, p. 93] [4], means highlighting the verbal nature of architecture and space: briefly, conceiving it through situations in addition to the forms [5].
A body-centered perspective in fragile territories seems essential for two main reasons: the first is the considerable environmental and natural heritage linked to the river ecosystem, which requires sustainable strategies for its preservation and, at the same time, its enhancement as a collective resource; the second is the general abandonment process that affects fragile

areas, which makes it urgent to develop projects which foster their re-habitability and take into account the needs of their inhabitants.

To bolster the argument, the current contribution delves into a curated selection of European case studies: these show how designers meticulously select, reimagine, and interconnect significant focal points within expansive water systems, all while prioritizing the human scale of spaces and nurturing the dynamic interplay between water and the human body. These examples, with their strong public vocation, represent an interesting point of view that can inspire design actions in fragile contexts, and bring out a methodology that unfolds in two distinct phases: a critical-interpretive one and a design one.
Starting with the former, the objective is to provide a reading of the place focused on the bodily experience. During this stage, it is necessary to discern and categorize various architectural elements that reflect the convergence of space and the human form: infrastructure geared towards overcoming physical barriers and managing water flow, alongside smaller features like fountains or water troughs, exemplify two interesting typologies characterized by very different scales. Yet, they collectively encapsulate the intricate web of human interventions aimed at regulating and distributing water across the landscape.
The second phase, the design one, consists of site-specific projects as occasions for new balances in the place, with particular attention to the human body as a yardstick of the space. Here, it will be necessary to evaluate how the typologies mentioned above can be systematized and rethought to build a unique riverscape in which the bodily experience plays a central role.

By using the methodology previously described and the case studies to validate the principles assumed on a theoretical level, a new semantics for fragile areas will be defined: it is conceived as the codification of a renewed language developed, firstly, from the recognition and systematization of the essential territorial components and, lastly, from the attribution of new meanings to them.
From this perspective, architectural design can trigger virtuous dynamics for the re-habitability of these territories and their waters, through a reading of the river system that considers its multiscalar declinations by bringing them back, finally, to the scale of human experience. Thus, it will be possible to move away from a paradigm of water as a resource to be exploited, to embrace instead a vision that sees it as a fragile and collective heritage to be preserved, a territory of refuge and possible invention [Clément 2004, p. 14] that evolves in biological dependence, unpredictable and unstable by its very nature [ivi, pp. 26-27].
This new approach seems particularly important and urgent, especially in light of the depopulation processes affecting the inner areas: the rediscovery of margins, diversity, and residual spaces makes it possible to deal with the co-evolutionary gap between communities and territories and to enhance, ultimately, the fragmented and plural nature of the Italian territory [Lantieri, Simoni, Zucca 2021, p.40].

ENDNOTES

[1] In Italy, the fragile areas are characterized by a marked territorial polarization, due to the significant distance from essential services, poor socio-economic opportunities, low income and productivity levels, environmental and seismic risks, and poor maintenance of buildings and landscape: all these factors represent concatenated causes at the origin of increasingly intense abandonment and depopulation phenomena.
[2] According to Clément, neglected areas are marginal spaces that have been abandoned following their exploitation.
[3] Authors such as Kevin Lynch and later Christian Norberg-Schultz propose an investigation of the relationship between space and bodies based on the information that the individual acquires through the senses and, then, processes cognitively: Kevin Lynch, in particular, theorizes how individuals perceive space through common mental schemas (Lynch 1981), while Norberg-Shultz, based on Heidegger's philosophy, argues that 'inhabiting' is the purpose of architecture, and that humans 'inhabit' when they can orient and experience the meaning of a certain place (Norberg-Shultz 1979, p. 5).
[4] According to Chiodo, the human body is the conditio sine qua non of the spatial experience.
[5] The idea of situation evokes the interplay between two tangible bodies: the relatively static one of architecture, and the dynamic one of human presence. In this context, humans can be viewed as acting objects, and their mutual interaction with architecture defines the unique circumstances set by a certain space.

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FIGURES

Fig. 1 - Studioser Architects, *Redevelopment of the public spaces in Monte. Design of a fountain*, 2020-2022, Monte (Castel San Pietro, Canton Ticino). Source: Studioser.

Nesha Naidoo
University of Melbourne, Melbourne School of Design
neshanaidoo@hotmail.com

Interactive designed public spaces: Shaping Melbourne's general markets through performativity and performance

Key Words
Marketplaces, Performativity, Placemaking, Interactivity

Relationships between bodies and space in the context of "marketplaces" [1] have been explored by historians, sociologists, anthropologists, cultural geographers, and other disciplines, yet the question of how market designs have discouraged or sustained certain spatial practices is under-researched [2]. The lack of interest in the social impact of market buildings and their open spaces stems from the assumption that market users are the only active agents in the process of authentic placemaking. For example, Kirsten Seale argues that "place in the market is made through ongoing participation, intervention, and improvisation in, and with, the materiality and phenomena of the market" [Seale 2016, p. 5]. She claims that today's planned markets, which have been revitalised, recreated, or relocated as part of major urban renewal schemes, tend to be monocultural, static spaces, not emergent places, or embodied events [Seale 2016, pp. 69-88]. As Seale explains, imposed market settings fail to exhibit the social density and richness apparent in ordinary marketplaces because their designers attempt to control "heterogeneous urban flows" [Seale 2016, pp.1, 11-13]. Pointing to the temporal nature of Antwerp's Vogelenmarkt in the public square of Theaterplein, she advocates for "design that neither inhibits extant processes of making place, nor fetishizes place" [Seale 2016, p.108]. Although persuasive, Seale's perspective may be challenged if one reconsiders placemaking as a two-way process where design may draw from, and influence, the everyday practices which support market atmospheres. Reframing the making as interactive where designers are social agents (albeit with limited agency), opens new avenues for investigating body-space relationships.

In this paper, I argue that it is possible to create lively, engaging marketplaces over time through iterative spatial arrangements which are highly responsive to contemporaneous spatial practices. Given markets must meet collective needs and expectations— yet are highly contested sites which generate both compatible and incompatible social activity— repeated design interventions

are warranted. When such alterations attempt to purge markets of all surplus practices, market activity usually deteriorates; on the other hand, when interventions fail to address alternative routines, rituals, acts and actions, such practices may eventually displace the market itself. The most enduring and successful spatial configurations, however, have two major qualities. First, they visually frame and/or physically contain the multifarious quotidian activities which may slip into performance (conforming acts) or performativity (non-conforming, unpredictable acts). Second, they are sufficiently porous to enable flows of visitors (spectators) to move through the site in specific ways and potentially co-perform in shared space [3]. Thus, market users are thoroughly immersed in the setting, and experience the sensory qualities of the market; however, their sightlines and circulation pathways are directed towards the primary actors or goods. In this theatral approach to designing public space [Naidoo 2023], designers organise the most fundamental social relations— commercial exchange between buyers and sellers— leaving users to interpret the spatial order and act/interact within those parameters. Since theatral frameworks reduce the major spatial conflicts by enabling mutual visibility, further modifications can concentrate on supporting any performance or performativity conducive to trade. In other words, designers may not be involved in the "micro-processes" of creating social space as Seale [2016, p. 5] suggests, but do participate in ongoing macro-processes. Designed settings are manifestations of these processes, but also subject to transformations through everyday use.

To illustrate my argument, I will discuss the body-space interactivity evident in three nineteenth-century city markets in Melbourne, Australia: the Western Market, Eastern Market, and extant Queen Victoria Market. These sites were examined as part of a larger study which aimed to reveal the social reality of designed public spaces [4] in central Melbourne, from 1850 to 2000. The research focussed on the material evolution of each setting in relation to any associated social behaviours, shared values, and patterns of use. Henri Lefebvre's triadic model of social space (comprising the conceived-lived-perceived dimensions) served as an analytical framework [5] to collect and organise the data [6], and the evidence for each site was framed by relevant social theories.

Of all the case studies analysed, the general markets best demonstrated how designers responded to social ideals and spatial practices. Each scheme was adapted from enclosed British models with the dual purpose of improving the appearance of the streetscape and minimising the disorder associated with undeveloped market sites. Although dignified frontages were welcomed by the public, buyers overlooked the most concealed marketplaces, which in turn reduced commercial activity and/or attracted unwelcome reappropriations. Noting that trade appeared to thrive in the more open, accessible arrangements, designers then introduced greater permeability to their enclosures.

The Western Market's perimeter wall of commercial buildings (1856-1871) effectively controlled itinerant hawkers on the site boundaries, yet simultaneously decreased access to the central open-air trading area. At the other extreme, the sheds of the Eastern Market which opened onto two major thoroughfares (1859) invited leisure-seekers and political activists in addition to regular shoppers. In response, the architects of the second Eastern Market (1879) added numerous formal entrances to their multi-storey market hall enveloped by shop-dwellings; however, the design still failed to attract sufficient buyers and wholesalers due to poor access and egress. Furthermore, as the retail market activity dwindled due to its dependence on wholesale trade, the market hall was reappropriated by Melbourne's working-class youth. Ultimately, the evolving and pervious spatial arrangement of the Queen Victoria Market (1868-1936) proved most fruitful with its parallel arrangement of open sheds separated by laneways, numerous site entrances, accessible market halls, and double-fronted shops [Lovell Chen 2017].

By 1928, when most of the key structures were in place, the Queen Victoria Market resembled Richard Sennett's open city, with its "porous walls" providing both resistance and passage, and its "borders" enabling zones for exchange [Sennett 2016]. Such qualities ensured that any loitering or hawking was countered by visitors drawn through the open sheds and market halls, or around the perimeter shops. Upon arrival, visitors encountered merchants putting on "a bit of an act" within the frame of their enclosures [McCaughey, Hoban 1999, pp. 11-12], or were presented with goods behind shop windows; visitors could simultaneously perform for others against these backdrops. Although mutual exposure discouraged a range of inappropriate actions, visitors still experienced the market's sounds, smells, and peripheral sights, in varying intensities depending on the scene they inhabited and the route they travelled.

Continual improvements to the Victoria Market have responded to social change and spatial

practices by increasing the permeability to existing buildings and defining the boundaries between certain buyers and sellers, without eliminating proximity or the capacity to interact. These subtle changes have therefore supported the cumulative social connections, memories, and improvisations which contribute to the intangible values of the place [Sumartojo et al. 2017].

ENDNOTES

[1] "Marketplaces" are physical spaces which accommodate regular public events involving the sale of fresh produce and other goods.
[2] For example, James Schmiechen and Kenneth Carls detail the broad economic, political and social forces which produced various British marketplaces since 1750, as well as the design strategies to control social behaviour [Schmiechen & Carls 1999]. Nonetheless, the authors provide little insight into how such designs supported complimentary practices such as social meetings.
[3] "Porosity" in this context has a physical dimension.
[4] Designed public space is any accessible, state-owned physical space, intentionally shaped for a social or civic purpose.
[5] According to Lefebvre [1991, p.16], a marketplace is a distinct social space corresponding to a "specific use of that place and hence to a spatial practice that (it) expresses and constitutes". However, he claimed the interrelationship was only evident in the earliest porticoes, basilicas, or market halls produced by merchants and their gestures [Lefebvre 1991, p. 216-217]. Since Lefebvre recognised the potential of the built environment to be intimately connected to practice and express itself symbolically, his spatial triad was an appropriate analytical tool to investigate how Melbourne's market structures shaped, and were shaped, by citizens.
[6] Evidence was drawn from diverse archival records, supported by secondary sources and direct observation. Maps and drawings represented "conceived" designs; artwork captured the "lived" realm of the imagination; and newspapers provided the "perceived" record of historical scenes or events.

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Cassandra Cozza
Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
cassandra.cozza@polimi.it

Children Architectures.
Spaces for discovering and caring inhabited by different and changing corporealities

Key Words
Body, Experience-based learning,Informal space, Learning spaces, Movement

Contemporary children's architectures, like kindergartens, must be conceived on specific requirements dictated by different and changing corporealities. Indeed, children have bodies that are continuously changing due to the growth process; they are active users of architecture, exploring space with their bodies, improving their autonomy and competencies, and needing care and discreet protection. Moreover, these spaces host the co-presence of different bodies: the children of various ages and the adults who form the school community inhabiting the same spaces due to their different roles (educators, employees, parents, and so on). A body-centred approach to the architectural design of children architectures can lead to learning environments based on updated pedagogical requirements, respecting the different needs and measures of the various users.

Bodies, Measures and Sensories

Children's architecture must be carefully designed to organise the various spaces of the program due to the needs of different subjects. They relate to the space and each other in complex ways. Indeed, designing architecture for children involves simultaneously integrating different scales and themes based on contemporary architectural and pedagogical needs. They are spaces for learning and discovering but also organised and high-performance workplaces that interface with the outside world through well-established thresholds and boundaries.
The users of these architectures are not only distinguished by a variety of needs described by numerous regulations and norms, but, more importantly, they are physically very different from each other. Indeed, children and adults also differ in physical and mental perception, language development, and cognitive development. Preschoolers grow and acquire skills and abilities by relating to adults and space in these unique places dedicated to them. Therefore, the design of children's architecture – whether a playground, kindergarten or nursery – implies

the integration of different scales and issues to be addressed simultaneously in an integrated way. These places, dedicated to children, the educating community, and the families, are real "life containers", a term that Gonçalo Byrne uses to define spaces "designed to be fully lived in their spatial, sensory and material qualities." [Cozza and Toscani 2016, p. 17]. Moreover, they must improve inclusivity and host special needs. For this reason, children's spatial perception – how children see, perceive, relate, and orient themselves in spaces of different sizes, geometry, colour and materiality – is an important design tool both for improving general well-being and for relating to children with special needs by using innovative sensorial design features.

Children Caring Spaces. Body Protection and Spatial Active Interaction

Architecture, as a form of care, has the capability to protect both the environment and our bodies. It can act at different scales, from the city's public space to architectural typologies (architecture, interior and outer spaces, furniture). Caring architecture must also protect people's bodies from potential dangers by promoting risk-prevention features for architecture and more liveable public spaces, slow paths, and safe shared roads. According to Krasny,

> "Architecture sits at the interconnectedness of bodies and environment; it is part of the environment, it shapes the environment, but of course, it also creates an environment for human bodies [...], so I think this dual responsibility for human life and the environment is precisely what makes care such an interesting perspective in order to develop it, to investigate critically but also critically practice architecture" [Krasny 2020].

Indeed, the theorist quotes the following caring definition:

> "a species activity that includes everything we do to maintain, continue, and repair our 'world' so that we can live in it as well as possible. That world includes our bodies, ourselves, and our environment, all of which we seek to interweave in a complex, life-sustaining web" [Fisher and Tronto 1990, p. 40].

At the city's public space scale, for example, design actions for improving decarbonisation and sustainability involve strategies to counteract the urban heat islands acting on the city's climate. Protection and climate adaptation actions impact the city's spatial quality, improving its environmental performance and sociality. Programs include more livable places for people, especially providing care for the more fragile ones, the elderly and children. One important topic is the relationship between architecture and ecological sustainability; it plays a double role in caring for people and the environment at different levels. The most updated open public spaces show new design directions where people's needs are at the centre. Livable environments with complex programs based on the users' needs, controlling the local climate with impacts at the city's scale where the accessibility – like step-free paths – and additional facilities – like drinking fountains and public toilets – are available digital information (for example, see the more recent public spaces of London like Granary Square and Regent's Canal Towpath or Tate Modern Garden).

Urban heat islands are worsening due to climate change, and European cities like Vienna and Milan are strongly affected by this phenomenon. Architecture can act on public space livability as demonstrated by the Viennese best practice of Esterházy-Park, where the design team of Carla Lo (on behalf of MA42 Stadtgärtner), Breathe Earth Collective and Green4Cities GmbH redesigned the eastern area of 2.400 square meters in 2019-2022. The project took part in the research project Tröpferlbad 2.0 by testing a cool spot of about 30 square meters capable of cooling down the surroundings by up to 6 degrees Celsius on hot days. The project uses low-tech measures, promoting the increase of water permeability, special tree assortment, and concrete and asphalt surface unsettlement. Moreover, vegetative and hydrological elements of cooling provide shade through a mix of artificial shading and vegetation and cooling by spraying water [Green4cities 2022]. It has plenty of facilities, including different playgrounds, and children can use the serpentine benches designed to accommodate an entire school class. Over 30 new benches and chairs create additional seating for all the other visitors.

Another best practice, explicitly designed for preschool children, is that of Parisian Rues aux Écoles, a school street initiative to create child-friendly public spaces that are aimed at pedestrianising and restricting motorised traffic in the streets around the capital's nursery and elementary schools:

> "The goal is to imagine how people can reclaim public space so that the city becomes a highly walkable place. The idea is to create an ecosystem where school streets provide favourable conditions for various uses and can accommodate different profiles at different moments of the day" [AREP 2022a].

The project proposes new codes for learning outside the class, blurring the boundaries between educational and public spaces and greening the reclaimed spaces. A parallel initiative included in the resilience strategy of the City of Paris is the transformation of the schoolyards of the 11th arrondissement into "oases" (AREP 2022b), cool islands with unsealed soil and massive planting for diversified uses and outdoor classes.

Learning Environments. Design features for Life containers
The kindergarten typology represents a caring architecture where different learning environments are located in outer and interior spaces. The complex program is based on a daily schedule (routine) where different corporealities – the children and the school community – use the same spaces differently. Kindergarten is a real "Life container" (cit.), full of spaces where children make their discoveries and learnings guided by adults who care for them and protect them with discretion.
Space hosts educational activities and, at the same time, promotes autonomy (free playing, eating, changing clothes, washing hands, using the toilets, etc.) and social interaction.
Contemporary kindergartens are flexible in order to promote diversity; they offer various types of spatial environments capable of hosting different activities, states of mind, groups and behaviours. The main change is the attempt to open the section toward the exterior spaces and to blur the boundaries between the closed corridor systems and the agorà. Exterior and interior spaces are strongly interconnected and can offer unlimited spatial experiences (livable threshold, lighting, filter, openings, etc.). Boundaries and limits are crucial for organising the fluxes and distributive system because safety and control are important issues.
The full paper will provide a detailed description of specific requirements for architectures hosting different and changing corporealities described through case studies/best practice and design research (AUID School, Laboratorio tematico Architetture scolastiche contemporanee, a.a. 2021-22, a.a. 2022-23):
- Playing with different views: transparency, different perceptions and discreet control (Studio HGAA, My Montessori Garden Preschool, Vietnam, 2020)
- Inclusivity and senses (SEA LAB, school for the blind and visually impaired children, India, 2021)
- Sustainability and Inclusivity through material and/or spatial reduction (Elisa Valero's Schools, Spain, 2006-11; El Equipo Mazzanti Schools, Colombia, 2011-16)
- The flexibility of spaces and furniture (Herman Hertzberger Montessori Schools, The Netherlands, Nineteen Sixties and Seventies et al.).

Conclusions
A body-centred approach to architecture is necessary for children's architecture because of the peculiarity of their fast-growing corporeality and peculiar capability to establish spatial relationships with the environments that they inhabit. The simultaneous presence of the adults in the same spaces implies dealing with different measures, scales and points of view. Although these spaces' design is body-centred, digital media can provide helpful information to facilitate their livability and accessibility, especially in public spaces.

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FIGURES

Fig. 1 - Arianna Scaioli, *Open Exams. End-of-semester exhibition.* Kindergartens designed by the students of Laboratorio Tematico Architetture Scolastiche Contemporanee, 14 February 2023, Picture, Politecnico di Milano, Campus Leonardo


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Gianfranco Orsenigo
Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
gianfranco.orsenigo@polimi.it

"You must have been there". Designing re-socializing spaces within prisons

Key Words
Prison, Action research, Prototype, Embodiment

Inmate bodies: beyond the quantitative dimension
On November 30, 2023, 60,116 people were detained in Italian prisons compared to a regulatory capacity of 51,272 [1]. The data photograph the crowding in the 189 Italian prisons, a persistent problem with varying statistics [2].
Prison overcrowding is just one challenge highlighting the intricate tension between space and the individuals confined. This situation not only compromises the physical aspects but also affects the psychological and social well-being of inmates.
There is a growing consensus that the prison system should prioritise principles of humanity and rehabilitation. However, the modern notion of prison as a place to "discipline the bodies and minds of prisoners" [Foucault 1975] still stays. The French philosopher places prisons among the heterotopias of deviation [Foucault 1967]: it is a physical place, but it is also a symbolic place, representing punishment, justice and social control. Heterotopia is a useful way of assessing how, still today, it is a complex and contradictory place that requires constant "project thinking" [Di Franco 2012] capable of tensioning the spaces and bodies that inhabit it.
Italy's prison system has undergone a significant transformation since the implementation of Law No. 354 in 1975. This law aimed to reform the system by focusing on reeducation and social reintegration of prisoners. Key principles of the law include the re-educational purpose of punishment, respect for human dignity, the importance of work, and prisoner participation in institutional life. Law has been amended in recent years, particularly to address overcrowding. Despite these efforts, the physical conditions of the prisons continue to hinder the realisation of these principles. The prison remains a forgotten and separated place from the rest of society [3]. Although new institutions have been built since the law came into effect, often replacing ex

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Although new institutions have been built since the law came into effect, often replacing existing facilities, these have not been able to translate the intentions of the reform spatially [Bozzuto 2020]. Although new institutions have been built since the law came into effect, there has been a persistent failure to overcome the organization of the institutions based on containment and limitations on inmate movement. The situation in Italy appears to be trapped in a state of perpetual crisis due to overcrowding and the poor living conditions endured by those incarcerated. The European Court of Human Rights (ECHR) has repeatedly condemned these conditions [4].

As pointed out by Alessandro Albano "[with its rulings, not only against Italy] the Court, starting from a problem perceived as only one of space, contributes to re-designing a general model of detention" [5]. Starting with the dimensional issue of overcrowding, the ECHR's pronouncements over time help to develop a model of detention that shifts the focus from being in prison as 'empty time' to building the conditions for space to be a "factor in the co-construction of a vital time, which is the intrinsic connotation of a designed place" [Palma 2020, p. 20].

The quantitative request of the 3sq. m. per inmate has been surpassed, prompting the need for a spatial arrangement that facilitates the daily activities of prisoners. Hence, there is a need for designed places where "the inmate can find some indication of possible well-being despite the difficult contingency of the situation experienced" [Palma 2020, p. 8].

Spaces of confinement, designing the presence

To truly address the issue of "space as a problem" [Viganò 2023, p.12], we must explore its intricate and complex nature. It is crucial to take a flexible approach when dealing with space, recognising its autonomy and, at the same time, its connection to the various practices of use that shape our experience and understanding of it.

In the necessary renovation of Italian detention facilities, it is essential to move away from a regulatory perspective that has neutralized bodies and reduced inmates, as well as police officers and operators, to "a single role" [Bianchetti 2020, p.65]. It is necessary to move away from predetermined spaces and roles to open up to potential uses and of space capable of activating relationships between its physical consistency, possible use, and its meaning. A design of space that can "determine a field of action on which the capacity to inhabit the world and take care of oneself is exercised" [Leveratto 2018, p. 113]. Designing spaces that serve the purposes of containment and control, as well as the principles of humanization and socialization, is challenging. This is no easy path and cannot be accomplished through technical skill alone. To succeed, the design process must consider the perspective of those who inhabit these spaces. The perception of space differs between those who experience its limitations and those who designed it, both in theory and physical construction.

Laboratorio Carcere: research by presence

In 1949, Piero Calamandrei, an Italian legal expert and politician, wrote "one must have seen" in the magazine Il ponte highlighting the importance of firsthand experience. He emphasised the need to witness the incarcerated's living conditions personally to make fair and forward-

thinking decisions. Embracing this call for direct involvement to understand the daily reality of an "other world", such as prison, *Laboratorio Carcere* – a multidisciplinary research group – has been actively engaged on the topic at the Politecnico di Milano for several years, working within Milan's prisons. This group is dedicated to exploring architectural design methods and tools that can contribute to the development of a meaningful "prison project".
The intent is to produce usable knowledge [Lindblom, Choen 1979] that supports and materialises the transition of prison architecture from a space of detention to a place of relationship. The objective of achieving "tangible change" has prompted the research to develop spatial prototypes: the *Casetta Rossa*, a wooden pavilion designed for the meeting between inmates and their children [6]; the *Action Track*, a running track that safely connects two courtyards opening in the dividing wall [7]; a pergola that welcomes clients of the *InGalera* restaurant in the Milan-Bollate prison, are just a few examples. These targeted initiatives, which hold great symbolic significance, serve as the means to venture into uncharted territory and transform punishment spaces. By focusing on the everyday life within these spaces, the prototypes serve as tools that keep researchers grounded in reality rather than abstract notions.
Through the implementation of these prototypes, whether through self-construction or other means, the research situates itself within a specific location, physically experiencing it and engaging in multiple interactions with its inhabitants. This activates an interactive and social learning process, where the recognition, formulation and handling of problems abandon linear cause-and-effect processes to adopt rhizomatic trends driven by the formulation and verification of a series of design guesses.
The research is structured as an exercise of "testing the possible" of making punctual changes to build the conditions for a broader transition. Change can be achieved by activating new imaginaries for prison spaces, including the projects of its inhabitants and haking intervention procedures that tend toward inertia in complex institutions. By developing prototypes, the research seeks to go beyond functional and security considerations, experimenting with different materials, colors, and allowing for unexpected uses.
Designing "transition prototypes" is centered around experiencing and understanding problems firsthand, by physically engaging with them. Researchers have the opportunity to "perceive or inhabit a built environment, we simulate the forms and materials with our bodies, we empathise with them physiologically and emotionally, and only later do we form an accomplished awareness" [Mallgrave 2015, p. 177].
Through "doing together", the research team seeks to share the knowledge they have gained with the community. This not only benefits the participating members by enriching them with a new look to apply in their daily management of the prison spaces, but also serves as a means of showcasing alternative approaches to design thinking in different contexts of punishment.

ENDNOTES

[1] Source Ministry of Justice.
[2] See the reports of the Antigone Association https://www.antigone.it.
[3] See the reports and recommendations of the National Guarantor of the Rights of Persons Deprived of their Liberty https://www.garantenazionaleprivatiliberta.it.
[4] One of the most significant is Torreggiani et al. v. Italy in 2013.
[5] [Albano 2020, p.36]
[6] https://www.youtube.com/watch?v=Dm6pcY8SjBY
[7] https://www.acts.polimi.it/

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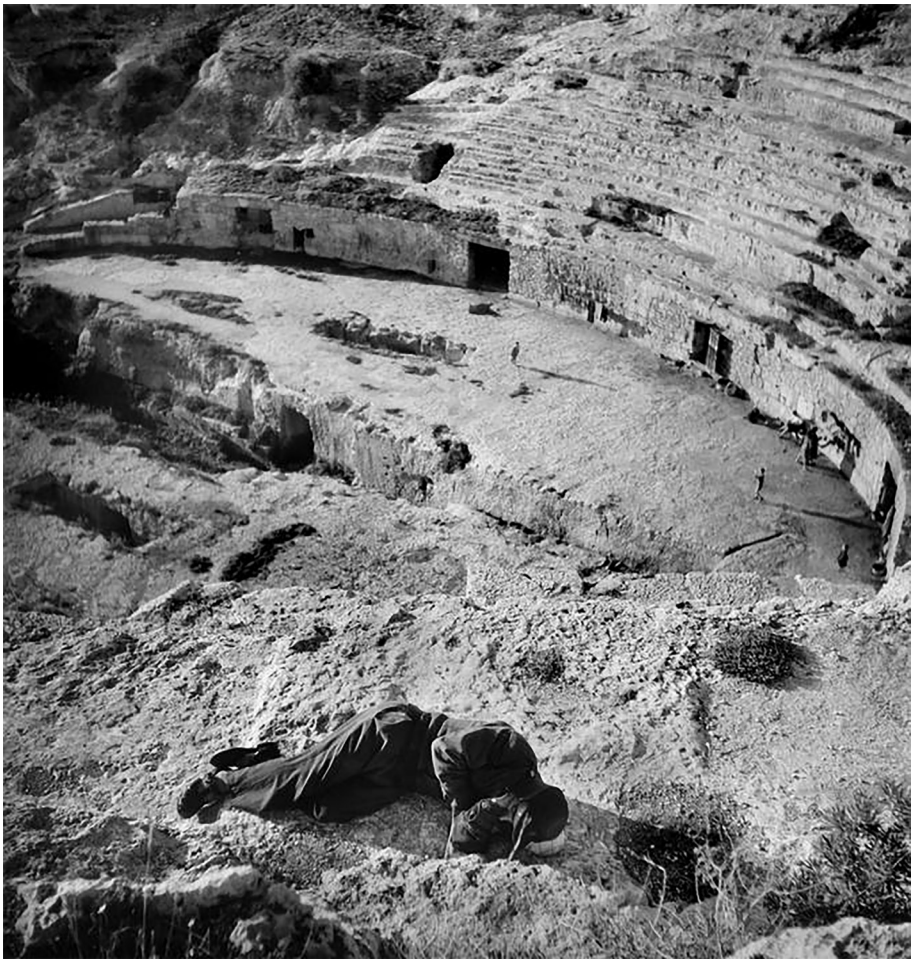
FIGURES

Fig. 1 - Prototyping day at the Milan Bollate prison. Simulation of the "walking corridor" in the female ward.



Francesca Musanti [1], **Andrea Manca** [2], **Claudia Pintor** [3]
[1, 2, 3] University of Cagliari, Department of Civil, Environmental Engineering and Architecture
[1] francesca.musanti@unica.it, [2] amanca@unica.it, [3] claudiapintor81@gmail.com

Sensitive places. A phenomenological perspective for accessible design

Key Words
Phenomenology, Accessibility, Archaeology, Design

The urban archaeological heritage is made up of intrinsically fragile places, due to the formal incompleteness of their state of preservation and the fragmentary *corpus* of information that conveys their cultural-historical values, which increase both the necessity of valorisation and protection and the complexity of interventions aimed at fruition. The vulnerability of such contexts is metaphorically reflected in those who are responsible for their richness, in other words, in the people who are defined by the Faro Convention as the 'heritage community' [Faro Convention 2005], a variegated and distinct user group in terms of age, gender, education, disability, culture, which needs inclusive and non-differentiated strategies to resonate with its heritage: not simplistic responses to normative impositions but rather new perspectives and new methods through which it is possible to achieve not only physical and perceptive accessibility, but also the highest form, called appropriational, which describes the bond and emotional investment of the users in relation to heritage [Deffner 2015, pp. 830-844].
Although the fragility of the body assimilates the human being to the archaeological heritage, there is an unnatural affective distance that still keeps them apart, establishing a clear physical and emotional separation.
Heidegger argues that

> "the relationship between man and space suggests that man stands on one side and space on the other. Instead, space is not something that is in front of man. It is neither an external object nor an internal experience. There is neither man nor space. When we enter a space, the space penetrates us, and experience is, essentially, an exchange and fusion of subject and object" [Heidegger 1976, p. 104].

This type of sensory interaction is referred by Bachelard as 'polyphony of the senses' [Bachelard

1971, p. 6] and consists in overcoming the figure-background duality, which is particularly prevalent in modern architectural culture, which, over time, has contributed to the artificial and improper separation between man and the spaces that have been specifically designed for him. This separation has been further amplified by the election of sight as the principal and hegemonic sense, whose dominance has reduced the role of the other senses, transforming the surrounding world into an image to be observed from a distance, rather than a space we can relate to.
Maurice Merleau-Ponty, in agreement with Bachelard's thought, affirms that 'perception is not a sum of visual, tactile, auditory data, I perceive undividedly with my total being, I grasp a unique structure of the thing, a unique way of existing that speaks simultaneously to all my senses' [Merleau-Ponty 2004, p. 71].
According to the concept of atmospheric perception, in fact, our relationship with the surroundings is not reducible to an ordered sum of data, but rather to a succession of sensory and emotional perceptions through which we are able to construct knowledge and a sense of belonging. Emotions, especially, have the capacity to influence our primordial cognitive capacities, collaborating in the construction of personal memories that constitute the basis of our sense of appropriation. Pallasmaa observes in this connection that 'landscape and architecture, besides being instruments for memory, are amplifiers of emotions; they reinforce the feeling of belonging or alienation, invitation or rejection, tranquillity or despair' [Pallasmaa 2011, p. 12].
Starting from this framework, the proposed contribution illustrates the assumptions, development and results of the workshop "Sensitive places. A phenomenological perspective for the accessible project" [1], an experimental didactic activity aimed at reflecting on the modifying and narrative capacity of the phenomenological approach to the project, in order to respond to the multitude of characteristics of the enlarged public and its relative needs, turning the concept of limitation into opportunity, in order to reinterpret places in a proactive manner.
The selected architectural object is the Roman Amphitheatre of Cagliari, an ancient place of entertainment built between the I and II century B.C. in a landscape context of great importance, close to the historical city centre. Here, the building rises from the limestone ridge of the Palabanda valley, partly by subtraction, carved into the same rock, and partly emerging with its convex façade created by the addition of the same quarried material. Centuries of activity, abandonment and spoliation have returned a lacunose monument, hidden by vegetation and totally imploded in the hard rock, which has seen its perceptive relationship with its surroundings change, where it seems to fight to maintain a leading role on the city stage and re-establish physical and meaningful relationships capable of protecting and preserving its values. The identification of a single case study on which to test and implement the methodology aims to highlight the dual nature of the architectural project as a product and, above all, as a research process [Amirante 2018].
The students were guided through three stages during the lessons: Description, Interpretation and Projection. This process takes the form of a methodology that adopts the teaching of Sola-Morales: "to draw is to select, to select is to interpret, to interpret is to propose" [De Sola-Morales 1979, p. 32], because the very posture we use to observe the objects that surround us, as well as the selective act that the description and representation of them imposes on us, are themselves actions of design.
After sharing the theoretical assumptions, the first phase solicited the students' capacity for synaesthetic perception within the archaeological space, overcoming the oculocentrism typical of the contemporary world [Pallasmaa 2008, p. 13], in the simple idea that what we pay attention to in the analytical phase can also be emphasised in the design phase. What emerged in the direct contact with the place, then flowed into the description of the experience, conducted through different tools of representation, helped by the categorisation in the nine points through which Peter Zumthor summarises and explicates the bodily knowledge of architecture [Zumthor 2007].
The synthesis of this phase was structured on the selection of elements considered of greatest interest, to be recounted by means of an imaginative act founded on the recognition of analogies; in fact, in the interpretative phase, students were encouraged to select certain dialectical pairs, suggestions and similarities useful for triggering the definition of the project theme, in which the third and final phase is substantiated. Avoiding pure functionalism, it was thus possible to define "the conception, content and artistic expression of architecture" [Ungers 1982, p. 10], seeking in the relationship between man and the environment that creative force capable of supporting the uniqueness of this place, which has remained unheard of for too long, so that, the 'projective' phase can outline the first design lines on which to develop all the transformative interventions, in coherence with the identified theme.
Each step required the use of different representational tools, suggested by the teaching team or proposed autonomously by the students, in line with the communicative needs that each selection and interpretation called for, from drawing, to model, photography and video.
The general objective of the experimentation was the improvement of awareness on the theme of accessibility, through simple, but not obvious, attention to the subject and the promotion of new

interpretative and design tools to deal with it. This translated into the definition of a specific objective related to the case study: the search for thematic readings that, moving from the phenomenological approach, would lead to design proposals useful for improving the accessibility of the Amphitheatre. The results converged with six interpretative and design proposals which, emphasising sensorial aspects directly experienced in contact with architecture, explore its spatial and symbolic implications and project modifying actions, sometimes circumscribed - such as the simple introduction of a bench, a handrail or a fence - other times concerning the entire architecture, interpreting it as a sound device or multi-sensorial space. The themes traced act according to different logics that can be grouped according to the prevailing sensory plane, design attitude and level of action.
The results have shown how the simple phenomenological posture, elected from the outset to guide the process and applied in all its phases, can also offer unexpected solutions for the project on pre-existing buildings, naturally also meeting the needs invoked by accessibility, according to the widest range of meanings that the noun contains, and at the same time restoring to it all the dignity it has lost in the frequent and limited meaning attributed to it.

ENDNOTES

[1] The workshop, which took place between November and December 2023, was promoted by the Interdepartmental Centre Cagliari Accessibility Lab for the bachelor's and master's degree courses in Architecture. The activity was carried out, under the scientific responsibility of Prof. Giovanni Battista Cocco, Prof. Caterina Giannattasio and Prof. Francesco Pinna, by PhD and Arch. Claudia Pintor, with the assistance of the contributors, PhD and Arch. Andrea Manca and PhD student and Arch. Francesca Musanti.

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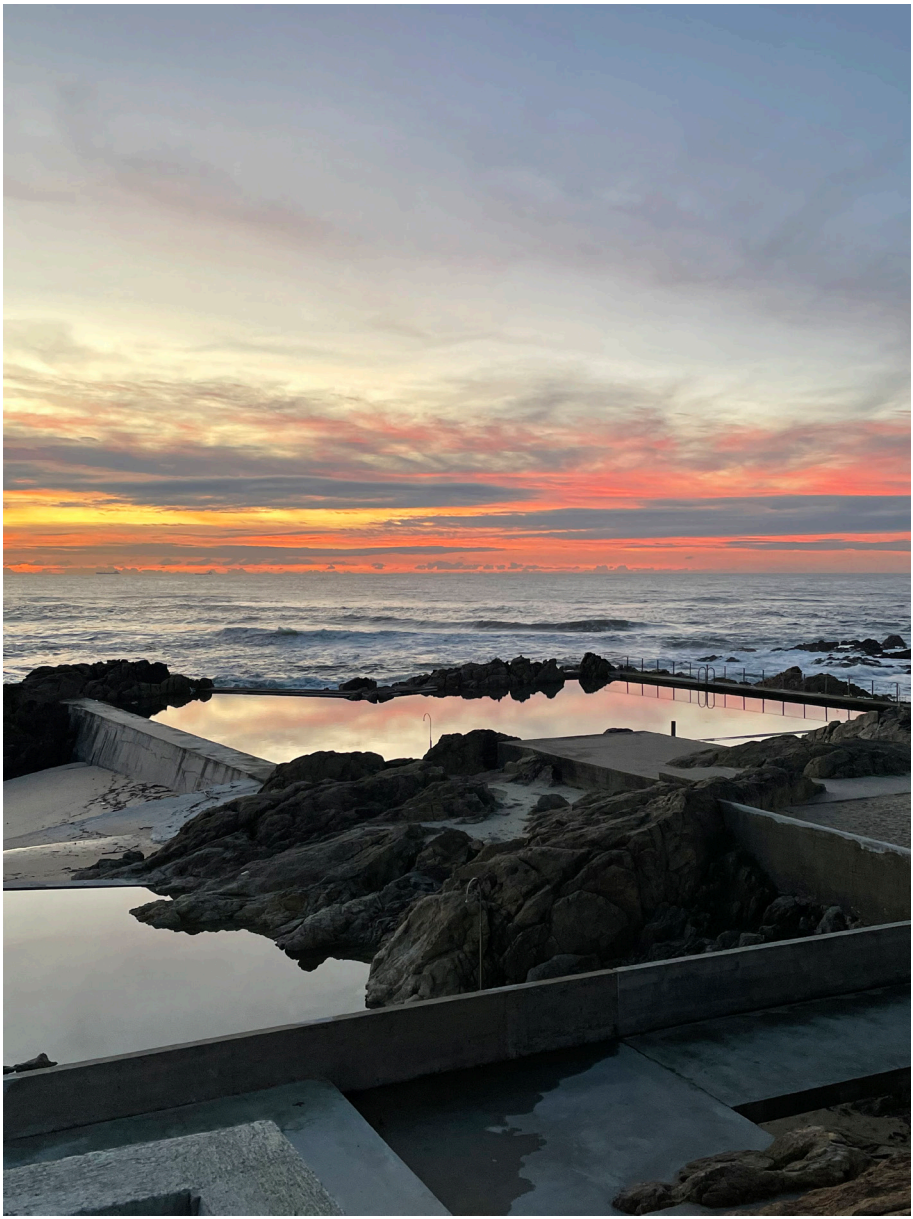
FIGURES

Fig. 1 - Werner Bischof, *Anfiteatro romano di Cagliari*, 1950, Vintage gelatin silver print. Retrieved January, 15, 2024 from https://librando.carlodelfinoeditore.it/lanfiteatro-romano-di-cagliari/



Mahdi Alizadeh [1], Clara Pimenta do Vale [2], Anastasiia Kholopoca [3]
[1, 2, 3] University of Porto, Faculty of Architecture
[1] up201802608@up.pt, [2] clara_vale@arq.up.pt, [3] up202300630@up.pt

The pursuit of presence in Siza's architecture.
A phenomenological narrative of Piscina das Marés

Key Words
Presence, Multi-sensory, Nature, Embodied, Experience

Synopsis
Architecture, in its essence, has the ultimate capacity and capability to move us and shape our emotions. This is arguably the determining difference between constructing a building and architecture. The art of constructing a building, if done accordingly, has the ability to offer an existential experience. The sense of an embodied presence in space is an evident element of Alvaro Siza's architecture. An architecture that not only responds to the functional needs but goes beyond the mere questions of functionality and allows us to have an existential sense of the artifact, as in the case of Piscina das Marés.

The renowned French poet Jean Tardieu, delicately raises an essential question when he asks, "Let us assume a wall, what takes place behind it?" [Jean Tardieu, as quoted in Georges Perec 1992, p. 72], recognizes the necessity for meaning to seize behind mere construction. Likewise, Merleau-Ponty, in his book *The Phenomenology of Perception*, highlights the limitations of a mere visual approach to space and calls for a bodily experience [Merleau-Ponty 1945, p. 26]. It is our embodied experience of the world around us that is the root of our knowledge, and hence, he argues in a provocative way that "We know not through our intellect but through our experience" [Merleau-Ponty 1945, p. 298]. It should be mentioned that perception is not merely an observation; in fact, perception is the constant state of consciousness in an embodied manner [Alizadeh 2022, p. 88]. There seems to be a fundamental challenge, or rather a problem, which reduces and limits architecture merely to the domain of vision. At the end of the day, contrary to what Le Corbusier sought, architecture is not a play of forms in light and is a multi-sensory reality, as Pallasmaa argues [Pallasmaa 2011, pp.40-49]. The human memory and understanding of the surroundings are not bound to one of the senses and should be comprehended in a holistic manner, including our experience in an existential

sense [Pallasmaa 2011, pp. 40-49]. Hence, also the necessity for an approach to architecture in a multi-sensory manner, and to design spaces that will be perceived holistically. As Merleau-Ponty argues, "My perception is therefore not a sum of visual, tactile, and audible givens: I perceive in a total way with my whole being; I grasp a unique structure of the thing, a unique way of being, which speaks to all my senses at once" [Merleau-Ponty as quoted in Juhani Pallasmaa 2021].

Having said so, the architecture of the renowned Portuguese architect Alvaro Siza is arguably an architecture of seven senses. It is perhaps the personal characteristics of Siza, reflected in his oeuvres, that create a sense of presence in his architecture. Alberto Campo Baeza, emphasizes three characteristics that distinguish Siza and his architecture, arguing that Siza is a Poet, a Creator, and a Researcher [Campo Baeza 2010, p.121]. The profound professional life of Siza has produced various works of architecture, differing in function and scale, yet what unites these works is that Siza's architecture moves us, his architecture is to be understood in an embodied existential sense. One of the prominent early works of Siza is the Ocean Swimming pool situated in Leça da Palmeira, commonly known as "Piscina das Marés". As described by Ana Tostões, "Siza had seven top seeds, that is, seven turning points in his own works and Portuguese architecture," and certainly Ocean Swimming Pool is one of these top seeds according to her [Ana Tostões in conversation with Teresa Cunha Ferreira 2023, p. 151]. Yet unlike many other sports complexes, which are in constant contradiction with the surrounding built environment, Piscina das Marés is an artifact that converses with nature, though it does not merge with it, which is how architecture should relate itself to nature [Campo Baeza 2014, p87]. Though the pool does not imitate the surrounding nature, it interprets it, in the same manner, Osip Mandelstam suggested that "with chilling freedom, architecture situates itself in a field of action interpreting nature"[Mandelstam as quoted in Campo Baeza 2014, p.84]. In his own words, Siza emphasizes his intention to create a dialogue with the rocky nature, as he states, "not ignoring [nature] but rather dialoguing, a built-nature dialogue" [Siza 2022, p.135].

The general plan of the pool, consisting of a rectangular layout, though has the clear footprints of an artifact, and human expression, but is in a metamorphosis of nature. So much so, that arguably, it seems that the pools have always been a part of the rocky seashore "as if the artificial was normal to nature" [Alves Costa 2004, p. 23].

When considering the landscape of the Acropolis of Athens, arguably, it is hardly possible to imagine the landscape in question, without the presence of Parthenon. The relation that Parthenon establishes with the surrounding nature is so delicate and profound that it is as if architecture has always been a part of nature. In the same way, today, having passed decades since the construction of the pool, one could not imagine Leça da Palmeira without Siza's pool. In the recent interventions that were done with the objective of rehabilitating parts of the project, Siza, contrary to many other architects, decided to preserve some of the marks that were left on the building due to the impact of time. This is a deliberate decision to manifest what Ana Tostões calls the "wrinkles of the body" of Siza's architecture [Ana Tostões in conversation with Teresa Cunha Ferreira 2023, p. 153]. Moreover, the Pool, though has passed the test of time, is not of the past, nor is it of the future, it is of the nature of presence.

In addition, it is not only the imperfect marks of time on the body of architecture made of exposed concrete that Siza preserves, but also his architecture embraces the geometrical imperfections of nature. Being able to accept imperfections is a virtue, but more importantly, it is an attempt to remain truthful. As John Ruskin argues,

> "Imperfection is in some sort essential to all that we know in life. It is the sign of life in a mortal body, that is to say, of a state of progress and change...and in all things that live there are certain irregularities and deficiencies which are not only signs of life but sources of beauty" [Ruskin 1960, p. 172].

It is the play between the perfect geometric forms and the imperfections of the site, which reveals to us the true essence of space.

When arriving at the site, it is as if the building was invisible from the street view, in fact, very silent. As explained by Siza, he "didn't want to block the sight of the sea...[he] wanted that even those people sitting in the car could see the skyline [Alvaro Siza in conversation with Luis Urbano, p. 137]. It is this silent nature of the Ocean Swimming Pool that indeed prioritizes its presence. It is there, silently without any extra, unnecessary architectural gesture, just like a

tree is beautiful yet silently present. Peter Zumthor argues, "The tree does not want to sell me something. The tree won't say to me - 'look at me, I am so beautiful....' It's just a tree - and it's beautiful" [Zumthor 2013]. Likewise, Siza's architecture, by its silence, manifests the self-evident essence of its presence.

The project's relation with nature is not the only parameter that defines the various dimensions of experience in space. One could refer to the truthful expression of the concrete as an "artificial rock", the compatibility of the used materials in the project, the play of light, the perception of the weight of architecture, and the questions of scale. All of the mentioned factors are valid since an embodied experience is rooted in a multi-sensory encounter with space.

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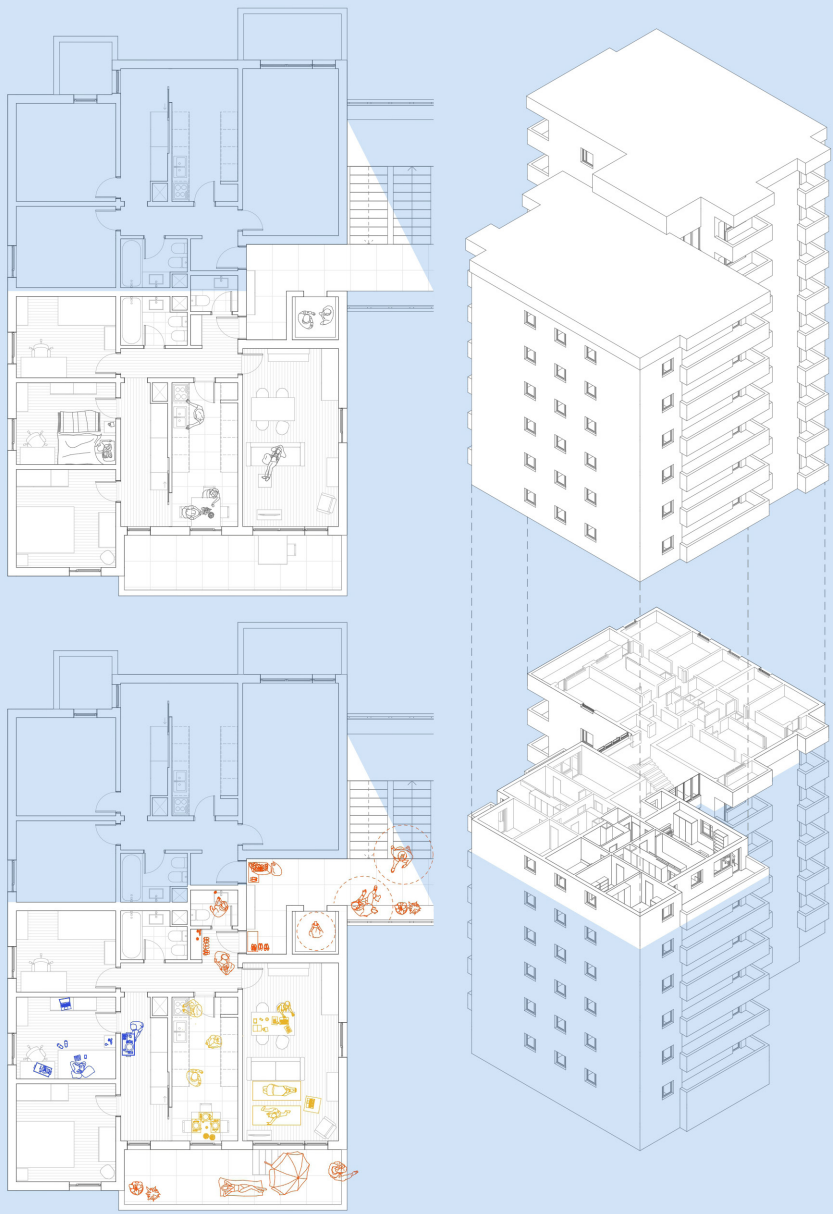
FIGURES

Fig.1 - Anastasiia Kholopova, *Photo of Piscina das Marés*, 16th December 2022, 12cmx16cm



Franca, Maria Oliveira Epifânio. *A Journey Around My Apartment - The relationship between Dwelling and the COVID-19 pandemic lockdown*. 2023.
Plan and axonometric view of the author's personal apartment, before and after the pandemic.

Maria Oliveira Epifânio da Franca[1], **Ana Sousa Brandão Alves Costa**[2]
[1,2] FAUP - Faculdade de Arquitectura da Universidade do Porto
[1]mariafranca.arq@gmail.com

A journey around my apartment.
The relationship between dwelling and the COVID-19 pandemic lockdown

Key Words
Confined, Dwelling, Adaptability, Individuality, Limits

The present article is a documented study of the confined body within a specific space. The title recalls the experience of Xavier de Maistre, a twenty-seven-year-old Frenchman, who remained confined to his room for forty-two days, an experience that resulted in the publication Voyage Autour de Ma Chambre [Journey Around My Room]. Simultaneously, and based on the approach that questions the dynamics of body-space as mutually influential entities [interactive], this article proposes a new inquiry into the modes of dwelling and how they are defined within the space of the home, through a perspective as singular and unique as the one we lived during the COVID-19 pandemic lockdown.
Staying at home prevented the virus' spread, making architecture "the first 'vaccine' against the virus" [Tostoes 2020, p. 633]. Nevertheless, the home became the epicenter of daily life, where the relationships between the body and domestic space generated new dynamics, resulting in a "powerful emotional sounding box" [Molinari 2020]. Four years after the moment that marked a transformative milestone in contemporary History, this reflection gains relevance in documenting how dwellings have transformed, allowing us to learn from the past and consciously plan for the future.
For a better understanding of the transformations of domestic space and to encompass a broader range of socio-spatial dynamics, the study is limited to the apartment, since the "architecture of everyday life is described from a cut of a multi-family dwelling" [Teyssot 2010, p. 153]. Based on this principle, the analysis of dwelling is conducted from three perspectives: the adaptability of outdoor activities to the interior of the living space; the importance of individual space for the possibility of isolation and privacy; and finally, the perception of its limits, both the physical and the intangible.
The most evident transformation in dwelling was the need to adapt domestic space to the new reality. Suddenly, people had to reinvent spaces at home, turning a dining room into a workspace,

the living room into a gym, or even the kitchen into a restaurant — "all this fragmentation [from the outside] ends up being concentrated in a single space, the home, forcing us to discover it differently" [Cruz 2020]. Almost all traditional collective in-person activities found their "digital alter ego, sacrificing physical contact, proximity, and the idea of space as a three-dimensional articulation of lives" [Alcocer & Martella 2020].
The possibility of incorporating new activities into the interior space is due to technological advancements in recent years. The ease of using digital devices at home allows for new possibilities, such as telecommuting, where the private and public spheres are reconciled. On the one hand, this transformation demonstrates that the dwelling can be a space for rest and, simultaneously a workspace, improving the quality of life regarding time savings and transportation management, replacing urban commuting with crossing the hallway. On the other hand, working at home can lead to a greater dissolution of leisure, entering into an "alienating work dynamic, confusing these two territories" [Alcocer & Martella 2020].
In that sense, it is necessary to rethink housing solutions to promote flexibility and the ability to adapt to new activities and functions in a pleasant and balanced manner. Considering the urgency of reformulating the contemporary housing landscape, it is possible to think of dwellings so that they can respond to future demands, for example, being equipped with "not only for the practice of work but also for leisure, sports practice, and even to enable the installation of a daycare center and a laundry" [Eleb 2017, p. 31].
Regarding the notion of individual space within the domestic sphere, the pandemic lockdown translated new relationships of individuality and intimacy among inhabitants of the same space and new challenges regarding one's autonomy in an individual space. In the possibility of infection and disease, we felt the responsibility to quarantine within the room for a certain period. In this situation, the incorporation of digital devices proved to be an opportunity for a certain degree of autonomy and the possibility to connect with others without leaving the same place. For example, the bed translated into an identity that is "increasingly sophisticated, equipped with all kinds of entertainment and communication devices, like a kind of control room" providing "a centuries-old dream of home connectivity" where it is possible to conduct "bed-to-bed communication" [Colomina 2021]. However, as autonomous as it may appear, the room's space maintains a relationship of dependence with the dwelling. In requirement for social distancing, the corridor adjacent to the room was usually used as a contact antechamber b tween the infected and non-infected person. The idea of a "satellite room" [Monteys 2014, p. 110] emerges as a response to these situations — an autonomous element of the house, located within the perimeter of the containing building, allowing its use without the need to enter the house [Monteys 2014, p. 110]. Thus, despite the trend for spatial decompartmentalization and fluidity elements, the bedroom or other individual spaces take on crucial importance not only for the inhabitant's intimate privacy but also for isolation needs during the pandemic lockdown. As for the limits of domestic space, these are generally associated with the dichotomies of interior/exterior and private/public through separation elements such as walls, doors, and windows. During the pandemic, these dualities intensified and materialized the "existence of borders that were always considered fluid" [Aureli 2021]. Since the virus was an 'invisible enemy,' the new borders personified the exterior as a contaminated space and the interior as a disinfected space. In that sense, the spaces between these limitations, or "threshold spaces" [Teyssot 2010, p. 253], became fragile and ambiguous but simultaneously essential to the new dwelling. One of these spaces was the home entrance hall, characterized by the need to take off shoes and leave other objects left at the entrance door, and the immediate handwashing upon arrival. The common and circulation space of the residential building was also transformed. What was once a space neglected by residents turned into an informal and community gathering space, giving greater prominence to the use of stairs. The outdoor spaces of residences, such as balconies, patios, and terraces, became the privileged places from where we could breathe the world, becoming the main factor for the quality of life at home. Functioning as channels for extending the interior to the exterior, these 'indoor outdoors' were easily transformed into new meeting places reinvented as alternatives to enclosed urban spaces.
Even though the pandemic has been an impactful experience in our lives, especially in the realm of physical and mental health, it was possible to find positive aspects in the field of architecture. For many, the dwelling has served as a living laboratory dedicated to exploring the relationship between the body and space, in a diary state of transformation. Just as Xavier de Maistre has revived the space of the room while isolated, reinterpreting it through a perspective stimulated by the imagination, so too have we explored our domestic space through new ways of living. This has allowed us to appreciate the home as an adaptable organism to different lifestyles, creating spaces that allow both sharing and individual intimacy, and also, showed us how a simple connection to the exterior can make an impact on the way we inhabit the domestic space.

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FIGURES

Fig.1 - Fanca, Maria Oliveira Epifanio. A Journey Around My Apartment - The relationship between Dwelling and the COVID-19 pandemic lockdown. 2023. Plan and axonometric view of the author's personal apartment, before and after the pandemic.

Eleonora Antoniadou
Royal College of Art, School of Architecture
eleonora.antoniadou@network.rca.ac.uk

The body as a tool in architectural pedagogy.
Global tools Body Workshops

Key Words
Pedagogy, Synesthetic learning, Embodied experience, Interdisciplinarity

In January 1973, at the editorial offices of *Casabella* magazine in Milan, a number of designers, theorists and architects, including Ettore Sottsass, Alessandro Mendini, Andrea Branzi, Riccardo Dalisi and members of Archizoom, 9999, Superstudio, UFO and other groups, held a gathering at which they founded Global Tools, a system of workshops that would continue to exist until 1975 [Borgonuono, Franceschini 2019]. The group's aim was to create "a school but non-school " focusing on arts and crafts, independent of an institution, that would experiment with tools, processes, crafts and instant learning. Coming from an anti-disciplinary attempt to establish a platform for the free exchange of different ideas and experiences, this was a place suited to the stimulation of individual creativity and the development of human potential.
Beatrice Colomina in the introduction of the book Radical Pedagogies, refers to Global tools as one of the most important experiments in architectural education in the post–World War II era that challenged and transformed architectural discourse and practice [Colomina 2022]. Global Tools cater an environment breeding new forms of architecture production, a unique ecology and a radical educational program that never made it to a school. For decades Global tool's influence was not recognised, and its protagonist were neglected by historians and critics alike. This paper will attempt to unfold the fragmented history of Global Tools' life and action as a model of architectural pedagogy, focusing on the Body as a tool of learning. The theme of the Body was the centre of investigations for the group and played a stimulating role on crossing the discipline boundaries. The physical endite of the body, its co-existence with other bodies and its relation to the environment were the pillars of Global Tools inventory.
In the traditional education of the 1950s, Body was mostly overlooked or seen as an independent entity giving to architecture metrical information [Raggi 1973]. Global Tools rejects modernity and the traditional pedagogical approach to Body, aligning with the wave of the period that challenges the traditional development structures and the way production and technological

growth is destroying the quality of life, the environment, the education and the work settings [Raggi 2019]. This wave of rejection, as well known as the "negative thinking" [1] had its uprising at the 1960s in Europe among the highest levels of intellectuals in the fields of art, architecture and design and continued in the 1970s challenging the existing artistic language. [Pulie 2017] Using different tools and outcomes from the traditional ones, this movement was "zeroing out" the norm and proposing a rethinking and reduction.
Individual artist and movements like Arte Povera, Video Art movement and Body Art movement that challenged the established notions of morality and value and criticised the production structures, played an important role inspiring and forming the group and its practice around the Body.
The work "My wings", of Mario Terzic in 1970 , a body structure made from crafts that was used from the artist to perform , the TV Helmet by the Austrian designer Walter Pichler, created in 1967 exploring the relationship of the body and the new technologies, the inflatable mobile office of Hans Hollein, in 1969 and the Body extensions of Rebecca Horn [Rumpfhuber 2017], are some of the influences setting the value of the body as primal.
As part of Global Tools manifesto established in 1973, five research and working groups were formed, functioning independently but always closely to each other with several overlaps in terms of methods and practices. The groups named Communication, Body, Construction, Survival and Theory were not following traditional educational models and were structured around experimentation possibilities and the research interests of the group [Borgonuono, Franceschini 2019]. The groups overlapped in methods, procedures, and concepts and most importantly in the use of Body as a primal tool to their investigations. The body was considered as a connector element, holding all the research groups together.
Global tools publications, started in 1974 with an "inventory of the human body" that worked as preparation tool for the upcoming workshops. This inventory was published in the Bulletin No2 [2] and was a documentation of the upcoming actions of the group and an early pedagogical curriculum for the future modules. It focused on the use and activities of the human body and the possible applications of it as a tool of learning.
In June 1975, the first workshop of the Body group, took place in Milan, in the outdoor space of the house of one of the members of the group. The workshop focused on analysing the basic movements of the body in connection to the space. Using temporary materials and a reverent approach to creation the group prepared different props that were testing the body parts and the individual and collective movements. The probs created, were connecting the bodies of the participants, were restricting certain body movements, and triggering spontaneous synergies. Emphasizing on the idea that the body is a living element with the ability to change the workshop contacted towards an anti – ergonomic idea. A body free from labor and in the center of the creative work, criticising the rational understanding of the body as a machine of the modernists.
As part of the second workshop, in a gallery space in Milan, a white room featuring the characteristic black dots of the group in a grid of 25 to 25 centimeters, in walls, floor and ceiling, was prepared as a room or detection and understanding of the human body. This exercise was inspired by Eadwear Muybridge, an American photographer that worked with a subdivided black wall with white lines as a background, taking sequential shots of the body in motion [Raggi 2019]. Looking, into the archive of the group there are testimonies of this experiment presented as a set of pictures of naked bodies moving into the grid room.
In the same space and as a continuation to the experimentations of the grid room, another experiment in corporation with performers, dancers, and actors [3] took place . This time the grid was not in place and the participants (performers, actors and dancers) were using spontaneous movements that would bring their bodies together. This movements were not limited to everyday life movements but were inspired by the theatrical and performing discipline of the participants. Looking into the archive of the group [4], and the documentation of the exercise one can see a set of interesting shots of the bodies of the participants. Bodies layers against the floor, bodies moving and acting as one, parts of the bodies that are trying to separate from the whole and bodies floating in the space. Through this exercise the group, once more crossed the boundaries of architecture, looking into dance and performance to understand the body, the body movements and constrains but also the relationship of bodies coming together and acting as one.
The body group workshops concluded into a non – hierarchical set of propositions that are overlapping in different points and are open to interpretations, such us: manifesting the re- exploration of the body as a primary tool through its movements, parts, position and constrains ;questioning the relationship of body and objects; creating a free form archive of all experiences regarding the body; presenting the props and physical models used in the body group workshops [Raggi 2019].

Global tools set free the human Body from the modernist concept of using the body as a measurement tool and positioned the body as a tool to itself [Franceschini 2022]. Aiming the formation of a school, Global Tools left behind a legacy for architectural pedagogy and staged the Body as the principal topic to architecture.

ENDNOTES

[1] *"a practical and theoretical zeroing of language forms of art, architecture and design and a profound reassessment of the expressive tools capable of describing a condition of crisis"* [Raggi, 2019]
[2] Bulletins were the publication of Global Tools using the format of a zine, including the manifesto of the Group an all documentation of the workshops- experiments performed
[3] Marina Spreafico, Dario Sereni and Paolo Innghilleri of *Theatro Arsenale* in Milan
[4] Global Tools.1773-1975.*When Education Coincides with life*. Rome. NERO editions. Page 104 , Body Group, Chap.III

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Gloria Calderone
University of Florence, Department of Architecture
gloria.calderone@unifi.it

Designing bodies: New challenges for a more corporeal urbanism

Key Words
Bodygraphy, Body-design, Performative Urbanism, Embodied methodologies, Halprin

The interest in the body within the field of urban studies has regained prominence since the last decade of the 20th century, adopting an approach influenced by phenomenology, as well as human and social studies [Bianchetti 2003; Thibaud 2010]. This interest encompasses the relationships between space and society, emphasizing everyday rhythms [Augoyard 1979; Chase et al., 1999; de Certeau 1980], and underscores the significance of aesthetic experience and affective perception in urban life [Augoyard 2008; Böhme 2006, 2017].
However, despite the renewed awareness of the connections between space and society, and the growing recognition of the somatic dimension in spatial analyses and the experience of living, there are still incomplete traces of a sensibility that considers the body in relation to the sensory and affective environments of inhabited places. The dominant approach in urban design and urban studies implicitly continues to mistrust the body. In fact, the prevailing knowledge guiding the analysis and design of cities and regions is still rooted in a cultural and methodological approach based on rationalist and positivist epistemology resulting in an exaltation of technical rationality and an insufficient treatment of the body [Sandercock 2004]. Anchored in the mind-body distinction, this model of knowledge (and design) production promotes the intellectual dimension to the detriment of the bodily dimension, considered less reliable due to subjectivity. The body is mostly considered only in its quantifiable, dimensional, and functional aspects — more or less standardized and treated as objective.
Considering that the body can be a designing subject as well as a recipient of design, this paper questions the dominant approach and experiments with alternative trajectories. The body is, in fact, the only subject capable of reading the sensorial and affective characters that the environment stimulates: aspects that are difficult to quantify but make up the quality of the experience of space [Bianchetti 2015; De Matteis 2020]. On the one hand, underlying this is a vision of bodies as organisms with a spatial-topological and identity-social character, as well

as a physical-anatomical one. On the other hand, spaces are read simultaneously as spatium, topos, and atmosphere, and this reading is complemented by Lefebvre's [1974] triple dialectic of perceived, conceived, and lived space. The 'space of the body' is a sensitive opening onto the world and a performative field from which individual and collective identity instances manifest themselves. The 'body of space' feeds on the social and relational-existential component, as well as the performative one [Rose 1999].
Bodies and spaces are bound to each other in a relationship that is not deterministic but one of co-implication and co-evolution. Both are simultaneously acting and acted, affecting and affected, and continuously inscribe their memory in the other by writing bodygraphies [Britto , Jacques 2008; 2009]. Within this perspective, this paper reflects on the possibilities of designing space with the body, declining the latter in three ways: 1. the body, in the singular, as a model; 2. the bodies, in the plural, i.e. those of the inhabitants as active subjects of the design; 3. the body of the researcher and/or designer.
1. In looking at the body as a model, the paper confronts systems of proportions and movement that go beyond the more static and homologated ones (e.g., Rudolf Laban's notation).
2. Considering bodies as an active design element involves designing not exclusively physical and stable arrangements but choreographing processes of transformation and perception of environments for moving bodies [Halprin 1972].
3. Like the bodies of the subjects being researched, the body of the researcher/designer is also a sensitive field of investigation, both to capture information about the environment being studied and to understand the "spatialities" located within his/her body [Spry 2001; Chang 2016].

ENDNOTES

[1] "Marketplaces" are physical spaces which accommodate regular public events involving the sale of fresh produce and other goods.
[2] For example, James Schmiechen and Kenneth Carls detail the broad economic, political and social forces which produced various British marketplaces since 1750, as well as the design strategies to control social behaviour [Schmiechen & Carls 1999]. Nonetheless, the authors provide little insight into how such designs supported complimentary practices such as social meetings.
[3] "Porosity" in this context has a physical dimension.
[4] Designed public space is any accessible, state-owned physical space, intentionally shaped for a social or civic purpose.
[5] According to Lefebvre [1991, p.16], a marketplace is a distinct social space corresponding to a "specific use of that place and hence to a spatial practice that [it] expresses and constitutes". However, he claimed the interrelationship was only evident in the earliest porticoes, basilicas, or market halls produced by merchants and their gestures [Lefebvre 1991, p. 216-217]. Since Lefebvre recognised the potential of the built environment to be intimately connected to practice and express itself symbolically, his spatial triad was an appropriate analytical tool to investigate how Melbourne's market structures shaped, and were shaped, by citizens.
[6] Evidence was drawn from diverse archival records, supported by secondary sources and direct observation. Maps and drawings represented "conceived" designs; artwork captured the "lived" realm of the imagination; and newspapers provided the "perceived" record of historical scenes or events.

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FIGURES

Fig.1 - Unknown Author, *Ritual Group Drawing. Experiments in Environment Workshop, 1968*, Sea Ranch, CA. Image source: Retrieved January, 15, 2024 from http://www.grahamfoundation.org/public_exhibitions/5241-experiments-in-environment-the-halprin-workshops-1966-1971.

Andrea Scalas
University of Cagliari,
DICAAR - Department of Civil, Environmental Engineering and Architecture
andrea.scalas@unica.it

Grounding.
Body and contact with prehistoric matter

Key Words
Phenomenology, Prehistoric architecture, Body, Nuraghe Santa Sabina Silanus, Peter Zumthor

The abstract investigates the Nuragic archaeology of Sardinia through a phenomenological approach. Its aim is to unveil the perceptual-experiential potency of its space in relation to the human body and to convey an unprecedented interpretation of Sardinian prehistory as "architecture", an apparatus of archaic principles for contemporary design. Narrated through the rigorous lens of archaeology, Sardinian prehistory today requires the conscious construction of a narrative that seeks in the past a possibility for the present [1]. This can materialize in a unanimous recognition of such architectures not as mere archaeological ruins but as timeless art forms, as places that convey enduring instances through the resistance of their body.
The prehistoric body is peculiar: it has cultivated the hidden necessity to distance itself from the measures of the human body, from the "anthropometric reference as a general rule" to achieve the "formless immeasurability" [Altheim 1935, p. 29], austere and silent, "infallibly in scale with the surrounding landscape" [Benevolo & Albrecht 2002, p. 43]. Specifically, this is typologically articulated in Sardinia through the lithic tower form based on the archetype of the circular enclosure, from which the Nuragic culture derives its name. The nuraghe, in its lithic grounding to the earth's crust, seems to draw strength from its synaptic isolation in the Sardinian territory.
Franco Purini observes that grounding constitutes a regulatory principle in architectural construction, which decrees "its fixity at a precise point in space" [Purini 2000, pp. 61–62]. However, grounding in the telluric substrate belongs not only to the body of prehistoric architecture but also to the individual who has experienced this process, empirically learning about gravity. The elementary repetition of a semantic gesture continuously shapes the wise ritual of Nuragic construction. This was possible through the artisanal effort of toil, becoming an experimental act that generates the structure, "the material presence of an architectural work" [Zumthor 2006, p. 21]. But there is more to this performative action: it specifically refers

to the role of its demiurge who, by rooting in contact with stone and earth, roots the architecture itself through a symbiotic exchange. This is clearly expicated within the context of cognitive-behavioral psychology, where the psycho-corporeal mode of grounding [2] modulates the individual's nervous system, fostering a greater adherence to the physical and material reality that surrounds us.
In this sense, field research can be enlightening if interpreted as an interactive learning process embedded in the subjective experience of the involved body. It has the ability to capture, through physical, perceptual, and experiential narration, the architectural object in its raw and phenomenal manifestation. The natural appropriation of space, described by Le Corbusier [1940, pp. 7–9] as "a fundamental manifestation of balance and duration", together with the cognitive grounding that situates "the author's stance", has led to the production of a personal appropriational account [3] of a Nuragic site. This experience was extraordinarily impulsive, entirely unforeseen, but for this very reason, simultaneously significant, narrated with words and images. Inhabiting the Nuraghe of Santa Sabina (located in the rural territory of Silanus, Sardinia) allowed for a resonance with the prehistoric architecture, discerning its poetic nature, which, as architect Francesco Venezia [2010, p. 16] reminds us, "is identified in the presence and unfolding of time in its existence". What follows is the account in the form of a diary page by the author architect, dated September 12, 2022, at 13:40.

> "Travelling from Nuoro to Cagliari, on a sultry September day, I skirt the town of Silanus. Suddenly, I glimpse the area of Santa Sabina. Driven by a strong curiosity, I decide to stop and visit the site. The first sensation upon arrival is that Time represents the only and true unit of measure: it is the evidence of matter's existence. Without Time, man does not exist: it is time that lends legitimacy both to his poetic of building and to his existence. A curious sight unfolds: on one side, the stereotomic grandeur of prehistory, represented by the nuraghe, and on the other, the Byzantine church. [...] Impulsively, guided by a primal instinct – perhaps dictated by the scorching heat - I remove my shoes and cross the threshold barefoot. I decide to inhabit archaically the nuraghe. [...] Where the entrance temperature seemed warm, warmly welcoming the man, the tone of the basalt stone undergoes a considerable change along the staircase. In the foreground, I distinguish the warm basalt gray, dictated by the light reflecting on the earth element. It's warm enough to discern the shadow of individual pores; further on, the staircase spirals, revealing a completely dark intermediate zone where the color temperature nullifies, and even further up, a cold color temperature, suggesting the staircase opens to the sky. [...] I move from the warmth of the basalt to darkness, losing my sense of sight for a few moments, relying on touch, until I slightly squint my eyes, reaching the cold temperature. I step up another rung, and suddenly, the sky. I am still protected by the mass, but I have contact with the celestial vault. I climb further, reaching the top: the sun is blinding. I see the church, the novenario, some nuraghes in the distance, the area of the sacred well, the giants' tomb. I find my bearings, and with them, the scorching heat that had left me for a few minutes. I observe the top stones, creating an incomplete surface; the church, from afar, has colors similar to the nuraghe. Nuragic material has been reused: fragments of Nuragic pass through history, living inside the church, bestowing it with immortality [...]".

By virtue of its subjective processuality, such field experience, through synecdoche, conveys phenomenological arguments capable of advancing the state of the art about the interpretation and potential design of any Nuragic site. The body of Nuragic architecture, in its intrinsic connection to lithic matter and light, evokes both expected and unexpected issues. Some of these, elucidated by photographs, pertain to the theme of material density and crossing the threshold; there is the theme of plastic fading between matter and mass, as well as the unforeseen manifestation of Nuragic color temperature – visual and haptic – which primarily betrays a temperature not only physical but "probably also psychic", linked to "what I see, feel, touch, even with my feet" [Zumthor 2006, p. 33]. Moreover, the overlays of matter over time emerge, reading the Nuragic as a palimpsest of fragments where, from a primary composition, a cyclopean decomposition scattered over the centuries is generated.
From the disciplinary positioning of an architectural tradition attentive to the perceptual-emotional and experiential themes of space, the act of inhabiting Sardinian prehistory with the body becomes an interactive (re)cognitive tool for contemporary design. Therefore, in light of the upcoming inclusion of Nuragic heritage in the UNESCO Tentative List and its recent multidisciplinary developments (Nov. 2023), it seems appropriate to reaffirm the prospective power of such architectures, highlighting their unflappable and paradoxical availability to be still critically observed. This is really important, especially in a place like Sardinia, where the presence of the ancient indiscriminately invests bodies, whether they are those of the

architecture or its potential future users.

ENDNOTES

[1] This concept is excerpted from the first lecture of the series "The Voice, the Gesture, the Archaeology", delivered by Giorgio Agamben at Palazzo Serra di Cassano in Naples on May 9, 2019.
[2] "The sensation of contact between the feet and the ground is known in bioenergetics as 'grounding.' This refers to a current of excitement flowing through the legs to the feet and into the ground. Then one is connected to the earth, not 'in the clouds' or 'airborne'. [...] To have 'grounding' is another way of saying that a person is down-to-earth. It can also be used to mean that a person knows where they are and therefore knows who they are. When grounded, a person has 'their stance', that is, they are 'some-body'. In a broader sense, 'grounding' represents the individual's contact with the basic realities of their existence" [Lowen & Lowen 1979, p. 22].
[3] The investigation into the author's body as a subject of the study was conducted as part of his doctoral research, entitled "Archaic Architectures. Typo-morphological invariants and principles of Nuragic space" (UniCA-DICAAR). This exploration emerged spontaneously after the incidental reading of texts on the phenomenology of architecture by authors such as Gernot Böhme, Peter Zumthor, and Juhani Pallasmaa.

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FIGURES

Fig. 1 - Andrea Scalas, *Lithic Grounding*, 2022, color photograph, Silanus, Sardinia.

Andrés Señoret
Universidad Autónoma de Barcelona, Departamento de Geografía
asenoret@uc.cl

Does social interaction at a street level promotes community ties?
Density, diversity, bodies and affect in neoliberal downtown Santiago

Key Words
Urban neoliberalism, Densification, Urban vitality, Bodily interaction, Urban sociability

Introduction: densification of downtown Santiago
This presentation aims to investigate how a mode of urban development that privileges the maximization of developers' profits ends up impacting the way in which inhabitants interact in the public space of cities, ultimately affecting the feelings of community and belonging to their urban space. Specifically, this work inquiry on how the densification of downtown Santiago, a process driven by what has been called urban neoliberalism [Harvey 198] has impacted the daily practices, the sociability patterns, and the sense of belonging of its inhabitants.
In the case of downtown Santiago, the liberalization of planning instruments, plus the economic incentive to private developers boosted the construction of high-rise residential towers [Lopez et al. 2012], transforming its built environment and negatively impacting its public space [Vicuña 2017]. Downtown Santiago has also experienced the arrival of a large contingent of migrants from other Latin American countries, a process that has radically transformed the demographic composition of the area.
In this sense, it becomes relevant to understand how this specific densification process, and its radical impacts in terms of built environment and population growth and diversity, affects the way in which inhabitants occupy public space, their sociability patterns, and their sense of belonging to the territory.

Theoretical and conceptual framework
To bridge the gap between densification as an institutional and economic process and the bodily practices and interactions of the inhabitants, we will focus on the material transformations that the densification process has generated in public space, and on the daily practices and social interactions that occur at a street level. In this context, it is necessary to adopt a conceptual framework that allows us to study the relationship between built environment,

social interaction, and sense of belonging.
Firstly, rom an urban studies perspective, the work is linked to a whole line of research that investigates the relationship between the attributes of the built environment, social and body interaction at the street level and social ties, considering public space as a key element for urban sociability. Jacobs (1961) and others [Montgomery 1995] ask how certain attributes of the built environment, mainly density, the presence of public space and the diversity of land uses, encourage a greater pedestrian use of the streets and the emergence of social ties between inhabitants. Based on the assumption that those patterns of daily life would increase the probability that city dwellers meet and interact with each other, generating social ties. Among these studies there are some authors who investigate the relationship between the materiality of public space and daily life [Gehl 1971]. Making an extensive use of street-scale cartography as a methodological tool for social analysis and representation, they focus on the way on which everyday practices interact with the attributes of the built environment, understanding how the "porosity" of public space has the capacity to increase daily practices and interaction between inhabitants.
Secondly, there are several works that focus on social interactions in public space, in what has been called public familiarity [Blokland & Nast 2014]. Concept that refers to the absent ties of recognition that emerge between inhabitants from their frequent encounters in public space. Relationships that have a positive impact on the inhabitants' sense of belonging to their territory.
Thirdly, faced with the question about how to approach the relationship between the built environment, social interaction, and social ties, we will appeal to a series of authors who aim, from a relational perspective, to problematize the relationship between the materiality and physical condition of urban space and the daily practices, bodies and subjectivities of its inhabitants. Such as Massey [2005], who considers space as the dimension of the social par excellence, or Thrift [2008] with his Non-Representational Theory as a way of studying the social from embodied practices and situated in specific contexts, understanding how the interaction between different material and non-material elements affect the subjects and compose their experience.

Research proposal
This work consists of a study that comprehensively addresses everyday life in the streets of downtown Santiago from a relational perspective but integrating all the elements that make up this phenomenon. Counting among these the attributes of the built environment and the institutional processes that shaped it, the daily practices and the social interaction of the inhabitants, and the feelings of community and belonging that emerge from these interactions in public space. The purpose is to understand how a mode of urban development that prioritizes profit over the common good can impact the patterns of sociability and the sense of community of its inhabitants. The study will be carried out based on the following research question: How do the different configurations of density and diversity that make up downtown Santiago, an example of neoliberal urban development, affect the social and bodily interaction of its inhabitants at the street level and the emergence of a sense of belonging and community?

Methodology
In operational terms, the study is based on mixed methodologies that were carried out in three stages with different aims, methodologies, and geographical scopes.
The first stage corresponds to the identification and differentiation of the different configurations of density and diversity that make up downtown Santiago, from a statistical analysis of clusters based on variables of built environment (density) and on resident and floating population (diversity).
For the second stage we selected some of those urban configurations to investigate in greater depth the daily social interactions that occur in them. From the realization of ethnographic observations and the use of street scale cartography as a methodological tool of analysis and representation, we characterized how these different urban configurations are shaped and affect their inhabitants and their social interactions. This with the purpose of mapping the daily life and interactions that occur in each study area, understanding public space as a type of social infrastructure that influences the experience of the inhabitants from its material form.
The third stage aimed to understand the experience in the public space from the perceptions and subjectivities of the inhabitants. For this purpose, we conducted in-depth interviews with the inhabitants in the public spaces they inhabit, aiming to understand how the interactions of the inhabitants in these spaces are inscribed in their subjectivities in the form of emotions of belonging or community (or of indifference and apathy). With this we seek to understand how the different configurations of density and diversity that make up the public space affect the

practices of the inhabitants and their feelings of community.

Results and discussion

In general, the results indicate that the streets generated by the process of neoliberal densification present public spaces that are not porous and do not encourage daily practices or bodily interaction among pedestrians. In addition to the high affluence of pedestrians, which hinders the establishment of public familiarity ties by restricting recognition and contact between inhabitants. Lack of social ties that also negatively affects the sense of belonging to the neighborhood, predominating a sense of transience in relation to the urban territory.

These results contribute to the understanding of how the process of densification experienced by the center of Santiago, a type of urban planning that prioritizes profit over the well-being of citizens, has a negative impact on the way in which inhabitants relate to each other and to their territory.

On the other hand, the study also seeks to contribute to the understanding of how the urban environment and the attributes of public space can restrict or encourage social interaction between inhabitants, thus seeking to develop methodological tools and generate empirical evidence that contributes to the development and design of more inclusive and cohesive cities.

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Andrea Manca
Università degli Studi di Cagliari, DICAAR
amanca@unica.it

The maieutic value of form.
A genealogical ramification of engagement in architectural and urban project

Key Words
Uses, Modification, Production of space, Form, Riccardo Dalisi

Introduction
For several decades, the debate on architecture and urbanism has reserved a special interest, albeit unevenly, for practices of collective modification. These are conceptual and operational practices - which this study identifies with the term " engagement " - that presuppose an attitude towards the social production of space in which the primary proponents are the inhabitants, in their complex and articulated condition as producers of architecture and the city. Since this approach considers form as the "first usable principle", the research defines its contribution starting from some questions: How can it nourish shared evolutionary processes capable of establishing deep and lasting relationships between inhabitants and places? Can the project be constituted in such a way that its very purpose, its formalisation, triggers subsequent modifications that feed on the practice of space, on the relationship between space and uses? These questions presuppose a maieutic value of form, referring to the act of formativity and the dialectic between 'form of expression' and 'form of content'.
The hypothesis, therefore, is that through the practices of conceiving, using and modifying space, the medium of form is configured as an instrument of knowledge, learning and action, attributable to the libertarian condition - individual and collective - of dwelling. The project is thus an open work, i.e. processual, physically defined but indeterminate in its evolution, aiming at multiple interpretations and "concordance of discordances" [Cocco 2017]; in it, the physical form - determined by the project - can accommodate and promote modifications of a complex and non-linear nature [Friedman 2018] in a radicant [Revedin 2015], incremental [Kroll 1987], adaptive [Hill 2003] and polyvalent [Hertzberger 1991] way.

Social production of urban space and modification practices
In order to critically analyse the reasons and interpretations that define the city as a product

of collective action, it is necessary to introduce the concept of space as "the result - socially defined and shared - of practices, conceptions and representations" [Lefebvre 1974]. Considered as a central element of architectural construction, "the privileged interest in space marks a distance from the objectivity of architecture, emphasising instead its experiential and use aspects" [Bocchi 2009]. In this sense, the architectural matterl is the means of interacting and influencing reality, both in general and in particular, that is, in relation to the environment and to people, that is, the possibility of constructing and shaping space, transforming it into a place, making explicit the idea that "to inhabit is to give form to one's being in the world" [Heidegger 1976].
Considering existence as directly determined by the act of dwelling therefore invites a sensitive reading of the world that promotes "architecture as a place in which to interpret, act and generate, as individuals and as a community" [Besse 2013]. The idea of dwelling thus includes the two complementary concepts of experience and use; the latter, "constant construction and destruction, implies the cultural conditions of practice" [Leger 2012]. Through use, one contributes to the modification of architecture, through "a dialectical and becoming relationship between design and use, between architect and user, the latter moving from passive to creative, and both having a role in the creation of architecture [...] The creativity of use should be a central issue of architectural design" [Hill 2003]. This assertion promotes the idea of a project capable of accommodating the complexity of socio-spatial relations, which does not avoid the confrontation with the uncertainty of the forces acting on architecture from the outside; a "low-definition project - low-fi architecture" [Till 2009], endowed with an intrinsic openness and capable of accommodating bodies and their power of modification, within the evolution of the human and social dynamics it will host, preserving and at the same time cultivating the gift of vision, imagination and the act of making.
From this perspective, the study reconstructs the dialectic between the theoretical debate, the practice of project and its objectification, in order then to look back at the origins of this attitude, particularly in the Italian context, and then to examine the exemplary work of Riccardo Dalisi in showing the maieutic value of form in practices of engagement.

The theoretical and experimental work of Riccardo Dalisi
In the 1970s, the debate on the engagement gained prominence in Italy thanks to Alessandro Mendini's editorship (1970-1976) of the review Casabella, which hosted contributions from important voices active in the field, such as Giancarlo De Carlo, but also the group Global Tools, founded in Florence in 1973. The aim of the group was to promote an action based on education and pedagogy, an experimental counter-school that sought, through widespread engagement in the act of modification, a mode of opposition to the drifts of the present, finding its theoretical references in Ivan Illich's deschooling and Victor Papanek's pragmatic educational experiments. This approach aims to stimulate the conscience of the individuals involved in the processes, especially in contexts of marginality, in order to provide an opportunity for redemption from social and environmental degradation, to induce resistance through creative dynamics, to rediscover the pleasure of doing, to strengthen individual and collective creativity of immediacy, free from intellectualisation and specialisation. Riccardo Dalisi's work fits into this context. Between 1967 and 1970, Dalisi worked on defining his methodological approach with a series of publications in which he focused on the problems of form and the process of its creation in relation to space, unpredictability and urban disorder. In 1971, together with his students, he started workshops with children from the working class suburbs of Naples - of which the one in the Rione Traiano remains the most interesting and radical experience - with the aim of stimulating and observing spontaneous creativity and encouraging architects to take direct examples from this state, an attempt to control the play of transformations in space, to register them in a progressive sense, to take them over, to mature them, to translate the pressures coming from other types of processes into creative possibilities for space. Dalisi's aim is not so much to produce objects and spaces in a participatory way, but to stimulate social change through the production of space. The theme of disorder, understood as a fertile ground for investigation, is linked to the unpredictability and randomness of use as a generative force of form. Through the implicit creativity of the inhabitants, the approaches adopted define triggers useful for activating practices that deal with the material and immaterial heritage of places. Starting from an idea of architecture that is not necessarily conceived as a stable form, the project in fact discovers actions whose strength lies in the interaction established between people and, above all, in the reaction induced in the context that they temporarily occupy, redefine and delimit, responding to needs that are less and less homologable and prefigurable.

The theoretical and experimental work of Riccardo Dalisi
The re-actualisation of Riccardo Dalisi's lesson proves capable of stimulating contemporary

interpretations of engagement; the study therefore aims to identify current operational approaches, contextualised in particular in the French and Parisian contexts, which can be assimilated to the experiences of the seventies because of their tendency to express a projective tension in a rooted and often rhizomatic way, therefore not comparable to a stable prefiguration, but subject to becoming, evolution and incremental progression.
These experiences, although distant in time, demonstrate the maieutic value of form, which is capable of triggering interpersonal relationships, between communities and places, orienting to the multiplicity of interpretations, stimulating imaginaries, supporting social and political cohesive, democratic and egalitarian processes. Form that expresses itself "in its being conceived" through the prefiguration of the project, "in its concretisation" through the act of construction, and "in its essence as a sensitive and significant element" through its ability to generate and stimulate modification, a creative force resulting from use.

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FIGURES

Fig. 1 - *Animazione al Rione Traniano, 1971-1975*. ©Archivio Dalisi

Barbara Coppetti
Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
barbara.coppetti@polimi.it

Retrospective | Prospective.
The body inhabits the world

Key Words
Persistence, Continuity, Inhabit

> "I can go to the end of the world, hide under the covers in the morning, make myself as small as possible, and even melt in the sun on a beach, and he will always be where I am. It is irremediably here, never elsewhere. My body is the opposite of a utopia; it will never be under another sky; it is the absolute place, the small fragment of space with which I *make a body*. My body, ruthless *topia*." [Foucault 1966].

In the radio conference on "Other Spaces" in 1966, Michel Foucault understood the body as the place we are condemned without appeal. The body is a shell that can become a cage from which to look and be looked at, speak and listen. On the opposite, there is utopia, a place outside of any place where you can have a body without a body or a body with superpowers. A substantial body, for example, which, when desired, becomes invisible, fast, luminous, particularly agile, or which can transform and change its appearance.
In utopia, an incorporeal body that can be crossed lives. In fairy tales, bodies move at the speed of light, wounds heal in a flash, and the heart continues to beat even after accidents or explosions; bodies survive a thousand dangers. Utopia erases bodies, but simultaneously, the human body is the actor of all utopias.
Pinocchio, the wooden puppet in Carlo Collodi's fairy tale [Collodi 1881], which has become a universal icon, is a metaphor for the human condition from an emotional point of view and in terms of body language. The novel tells of the metamorphosis of a constantly changing body and goes far beyond the story of a piece of wood shaped by a carpenter. In his physical transformations, he goes through embarrassing deformations and bestial degradations when he becomes a donkey. He becomes burning material for the Fire-Eater (Mangiafuoco), and after many adventures, he is reborn with a child's body thanks to the help of the fairy who celebrates the achievement of the human condition; the wooden alter-ego seems, perhaps definitively,

deposed. Therefore, in the narrative unfolding, Pinocchio's body represents a plural form, open to desire, exposed to enslavement, subject to incessant transformations, and continually threatened by the dissolution of the body shell [Catelli & Scattina 2017].
From an inanimate body to a vertebrate man, the pu pet as a form in progress was the protagonist of many illustrated editions, such as that of Emanuele Luzzati in 1997 and of Mimmo Paladino in 2004, and many films, from Disney's animated original in 1940 to the film by Luigi Comencini with Nino Manfredi and Gina Lollobrigida in 1972, to the version by Roberto Benigni with Vincenzo Cerami in 2002, to the recent film Matteo Garrone with Benigni in 2019. It has been the subject of transpositions, countless rereadings and rewritings for almost 150 years because exploring the world involves putting the body into play.
Moreover, Pinocchio's body reflects reactions, mutations and a world that belongs to all humanity; Pinocchio's body inhabits this world, which induces its metamorphoses and reacts to them, inter-acts, highlighting the dynamic and active relationship between space and body.
The reflection on the dynamics of active interaction in the body-space relationship starts from the awareness that "The body inhabits the world". I borrowed the title from the second paragraph of the second chapter of the volume "The Body" written by the philosopher Umberto Galimberti, an essential book in recent cultural history and my biography. However, the rereading I carry out here allows me to consolidate and underline an indispensable physical approach to the relationship between space and body. An architectural approach that underlines the traits of persistence with the past, when the role of presence, co-presence, movement, gestures and sensorial engagement in terms of embodied experience were the only possibilities for human beings.
In preserving the materiality of space, which makes embodied experience indispensable, I underline the traits of persistence and continuity in the ways of being and inhabiting places because the space of the body escapes any abstract system of coordinates: the body responds to that indivisible series of acts that allow us to displace things above or below, to the right or the left, near or far, thus obtaining orientation and direction. The possibilities of its actions measure our body. The homogeneous and objective space of geometry acquires meaning only by starting from the oriented space of the body.
As the philosopher states, living is feeling at home, hosted by a space that does not ignore us, among things that say our experience, among faces that there is no need to recognise. Living is knowing where to put your clothes down, where to sit at the table, where to meet others, where responding means co-responding. Living means transfiguring things; it means loading things with senses that transcend their pure objectivity; it is removing things from anonymity and returning them to our "habitual" gestures that allow our body to feel among its "things" [Galimberti 1987, p. 69].
This meaning of inhabiting implies inhabiting the world and its truth. Therefore, only an ego deprived of the body, which does not inhabit the world, can doubt the distinction between illusion and reality. The body experiences the correct dimensions of reality and the different dimensions of the imaginary only inhabiting the world. The world, therefore, is not what we think but what we inhabit.
In an era in which many aspects of our society are moving from the physical to the immaterial, from the corporeal to the virtual, it is necessary to establish the unavoidable aspects of how the body inhabits the world in qualitative terms: knowledge of the world comes through inhabiting the world with an active body because the flow of information between the world and the body is reciprocal.
The body projects itself into the world; the body engages, operates and recognises itself in the things of the world. The body's actions in the world are substantial in the life process. "The day this commitment ceases, our hold on the world ceases, the body no longer recognises itself, it no longer feels alive, and therefore it takes leave of the earth. This farewell is prepared by a progressive disinterest in the world, a decline of meaning, and a progressive blindness that no longer allows us to see the meaning of things. Our body is something more than its senses' possibilities. Its life can be above or below these possibilities because it is not the senses that decide his degree of vitality, but his interest in the world" [Galimberti 1987, pp. 70-71]. The interactive meeting between body and space nourishes and creates specific habitats. The best intertwining between body and space is achieved through conscious architectural choices that create places with meaning and identity. The construction of architectural space cannot ignore the presence of the physical body that inhabits it because it is the physical body that operates there with its practices and actions.
In scientific research, teaching and training, observation and experience inevitably imply the physical body's presence. This body measures itself against others and participates in learning practices within the educational community. Learning that when it involves the industriousness of doing, in the involvement of the senses, is also an exercise for thought. The Architecture Ex-

periences section, which I lead and implement with teaching and scientific research, is building key action moments: students react to stimuli and become actors in significant architectural spaces.
The questions that emerge in these moments of architecture involve the essence of living, building and composing.
Issues that never emerge during frontal lessons; in this time, the students take on a passive role by simply listening and projecting images and drawings. Architecture Experiences establish stimulating, physically and mentally exciting life situations. In this way, the teaching and training of future designers directs attention to the foundations of Modernism and the cornerstones of twentieth-century architecture.
In his scientific autobiography, Aldo Rossi continually merges the narration of projects with his personal history and the events of his own life. In each of his projects, he summarises a general involvement connected to the simple acquired ability to see and feel space with the body and its senses. Through an analogical process, observation and experience, which then turn into a memory of things, were Rossi's most important formal and design education.
To conclude, observation and experience invariably imply the presence of the physical body, of that body that inhabits the world and develops its interest in the world. The relationship between architectural space and bodily space - a measure of the possibilities of one's actions - is not new in our discipline but is today weakened by digitalisation and the virtual. In the past, it has been the subject of studies on Le Corbusier's Modulor and has had applications in the specialised fields of ergonomics and anthropometry. Today, recalling the role of field experience, of active training within the educational space characterised by a living and vital environment that surrounds every human being, intends to relaunch the basis of training in architectural design. Therefore, the proposed advancement in architectural research is retrospective because in today's reality, characterised by relationships that increasingly develop in an immaterial digital environment, experience and direct observation struggle to find space, time and resources in our educational programs.

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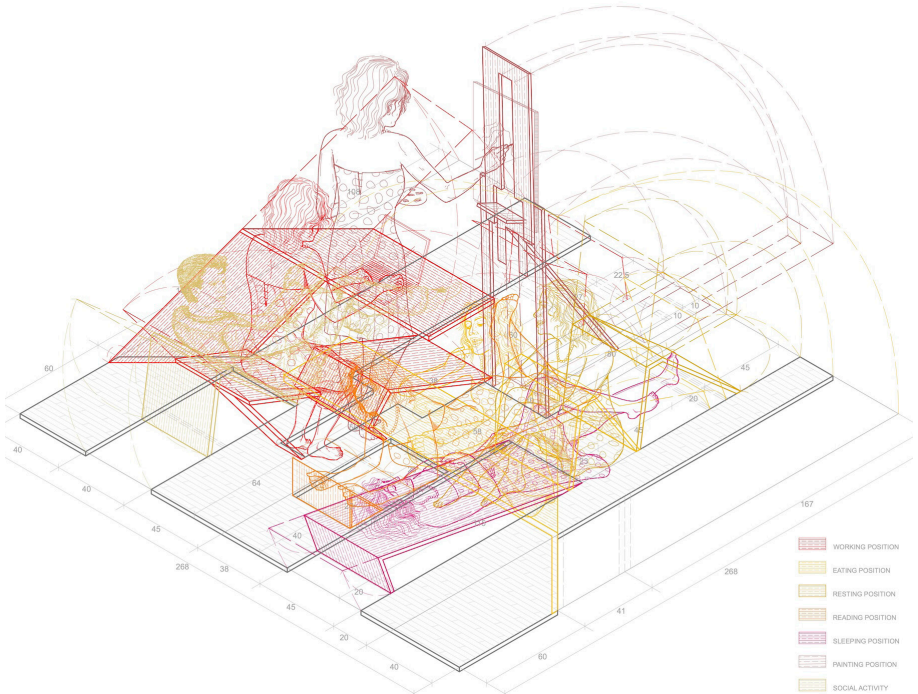
FIGURES

Fig. 1 - Promenade Architectural: measures, structure, rhythm, and sequences in Milan's Monte Amiata residential complex, 1st March, 2024.


WORKING POSITION
EATING POSITION
RESTING POSITION
READING POSITION
SLEEPING POSITION
PAINTING POSITION
SOCIAL ACTIVITY

Javier Sánchez Merina
Alicante University, Dep. Graphic Expression, Composition and Architecture Design
jsm@ua.es

Microarchitectures. Exploring intimate connections between body, space, and the understanding of diverse realities

Key Words
Microarchitecture, Body, Realities, Therapy

The ongoing discourse surrounding the dichotomy between the physical and the virtual has become a central focus in our architecture schools, and the global impact of the COVID-19 pandemic has only served to intensify this debate. Within this context, the article under discussion serves as a profound reflection on the transformative potential of architectural projects that originate from an intimate relationship with the human body. It delves into the notion that these projects have the capacity to engender a perception of reality distinct from our conventional understanding.

Exploration of Alternative Realities
Central to this exploration are a series of exercises meticulously designed to construct bridges between the physical realm and what may be perceived as an enigmatic virtuality by society at large. It is noteworthy that the virtuality we are dealing with, while perhaps incomprehensible to the majority, holds a tangible and genuine existence for marginalized groups: People suffering from neurodegenerative disorders, loneliness, segregation, or, for example, irregular immigrants are the crux of a research that lies in elucidating the concept of their visions of space from the perspective of their bodies. This is a design approach emerging from an alternative reality.

Unravelling the Intricacies of Therapeutic Architecture
The overarching objective of this research is to define Therapeutic Architecture, a concept that transcends conventional design paradigms by drawing inspiration from a reality that stands apart from the mainstream. The emphasis is on understanding and conveying how architectural interventions, born from the very essence of the human body, can offer a different

lens through which to perceive and engage with the built environment. In pursuit of this goal, the article presents a series of six design exercises developed by students of architecture, each accompanied by its final drawings. These exercises, while originating as responses to a fundamental question posed to students, take on a deeper significance. The question revolves around the challenge of designing spaces for individuals grappling with circumstances that can provoke social marginality. Crucially, the article advocates for an empathetic yet non-patronizing approach, encouraging students to transcend the pitfall of pity and instead invest their efforts in comprehending the unique worldview of those for whom the architecture is intended.This series of exercises provides a design voice to those who are marginalized or otherwise overlooked.

Microarchitecture for obsessive compulsive disorder (ocd)
The goal of this project is to make our students feel like they suffer from OCD. To achieve this, the cycle of OCD behaviours (obsession --> anxiety --> compulsion --> relief --> obsession...) was used and adapted in a way that everyone can experience it. In an uncomfortable space, with different stimuli telling our subconscious to make it stop and go away (obsession, anxiety), the only way to do that is complying with what we are told to do and fixing what is wrong (compulsion, relief). OCD often leads to perfectionism, being better organized, with the ability to focus for a long time without distractions, so that for every activity there is a perfectly designed space:
- Working position: Sitting in one position for an extended period, kneeling chairs can manage fatigue, pain, and headaches, helping a person be more productive throughout the day. Researchers report that a major reason for distractions in the workplace is physical pain. Working on everyday duties is quite difficult when you're suffering. The kneeling chairs can help improve posture, reduce pain, and enjoy added comfort.
- Eating position: One of the best ways to eat is by sitting on the floor, improving digestion, weight management, flexibility, and posture. Sitting cross-legged while eating relaxes the mind and calms the nerves, promoting healthy nutrition.
- Reading position: Reading while lying down on the stomach is considered one of the best positions, allowing for comfort, free hands, and prolonged focus without the need to fidget or move to take notes.
- Resting, Sleeping, Painting, and Social Activity positions complete the various aspects of daily life and creating spaces that cater to the unique needs of individuals with OCD.

Microarchitecture for multiple sclerosis (ms)
Empathy is foundational in designing a microarchitecture that simulates the challenges faced by MS patients. The design focuses on "total control of your body," emphasizing patience, time, and preciseness. Before starting the microarchitecture, an agreement signed with an Association of Multiple Sclerosis was helpful to get information and share our design with them.Measurements inspired by Enric Miralles' croissant drawing result in a delicate and elegant paper suit, creating awareness of every movement, akin to an MS patient's constant vigilance. The Microarchitecture is made precisely with triangles, delicate and elegant paper resembling a second skin. The one who wears the suit should be aware of every movement of her body, even when breathing, controlling chest, bones, and muscles like an MS patient. When we move, it can tear up easily, and you could appear naked in public.

Microarchitecture for alzheimer
Inspired by the Rorschach test, the microarchitecture revolves around creating surprising shadows that evoke different feelings in the person who wears it. Abstract shadows prompt the observer to recall memories or daily life objects, emphasizing the importance of movement, light, and imagination in shaping perceptions and recalls.
- During the day, what do we have?
- The first thing which we have to do all the time is movement.
- Firstly, while we do our essential needs, we use light, sun or artificial lighting.
- We have to perceive our movements even without any memories and abilities.
- And we have our shadows according to light's angle.
- We have still imagination. So, there must be something that can remind us of what we want to see

Microarchitecture for capturing aroma
Marseille is characterized by being one of the most extreme European cities in terms of cultural diversity and integration. A city infused with scents that represent its tradition and multiculturalism. The microarchitecture consists of an aroma captor adaptable to the body's

physiognomy, made of fiberglass using a personalized mould for each student. The design aims to autonomously capture the city's smells through capillarity, attracting wind optimally, and encapsulating the smell after humidification by the same active pearls used in sanitary towels to capture and eliminate odour. Water, contained in a perimeter tube, provides humidification.

Microarchitecture for particiaption
The Participatory Stool consists of two wooden legs, a triangular base, and an upper piece of the same material. The stool is a structure with a serrated hexagonal shape that allows different autonomous units to fit together, forming a larger seat with a multitude of possibilities.
This design ensures that the stool adapts to the needs of the place, work and discussion groups, and the various existing formats of participation. It presents an additional value designed to encourage participation and dialogue. An individual unit cannot stand on its own as it only has two legs. The way they interlock causes the individual stool, initially unstable with only two supports, to become part of a completely firm set, ready for collective reflection.

Microarchitecture for irregular immigration
Crafted with both functionality and symbolism in mind, the microarchitecture for irregular immigration stands as a testament to innovation and empathy. The use of thermal blankets, featuring aluminized plastic, serves a dual purpose – providing essential warmth and challenging preconceived notions surrounding immigration. The design of the microarchitecture incorporates thermal blankets with a reflective gold side strategically exposed to the elements. This intentional choice not only aids in preventing hypothermia but also transforms the structure into a visual commentary on the prevailing anti-immigration ideologies. By presenting irregular immigrants arriving on coasts in dugout canoes, adorned in sophisticated, highly technological suits reminiscent of luxury, the microarchitecture challenges stereotypes and sparks conversations about the complex realities of migration.

Conclusion
These initial exercises serve as foundational activities aimed at fostering a deeper comprehension of alternative perspectives. Subsequently, students are empowered to create designs tailored for marginalized groups, informed by their unique viewpoints and lived experiences.
This article represents a path from the physical to the virtual by interacting with the body, understanding the virtual as an unknown vision of space. By intertwining the physicality of architectural design with the nuanced needs of specific user groups, the research aims to foster an appreciation for Therapeutic Architecture. It emerges organically from the lived experiences of individuals facing exclusion challenges, advocating for a paradigm shift in architectural thinking — one that prioritizes empathy, understanding, and the acknowledgment of diverse realities in the pursuit of a more inclusive built environment. The showcased design exercises exemplify the potential of architecture to address social challenges and redefine our understanding of space.

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FIGURES

Fig. 1 - Microarchitecture for obsessive compulsive disorder (ocd).

Elevation P3.e.1

Barriers

Barrier P3.e.1.A

Materiality
masonry: wall with a metal gate

Blockage	yes	not
phisical	[x]	[ ]
psychological	[ ]	[x]
fordable	[ ]	[x]
permeable	[x]	[ ]
other	[ ]	[x]

Porosity change (%)
60%

Space embezzlement (mq)
57 mq

Enclosed space
passage between the first courtyard and the parking lot of the building which gives access to the lifts

Additional notes

Barrier P3.e.1.B

Materiality
masonry: wall with a metal door

Blockage	yes	not
phisical	[x]	[ ]
psychological	[x]	[ ]
fordable	[ ]	[x]
permeable	[ ]	[x]
other	[ ]	[x]

Porosity change (%)
90%

Space embezzlement (mq)
51 mq

Enclosed space
the external area nearby to the parking area in via Arnaldo Angelucci located on the plot edge

Additional notes

Barrier P3.e.1.C

Materiality
masonry: wall with a metal gate

Blockage	yes	not
phisical	[x]	[ ]
psychological	[ ]	[x]
fordable	[ ]	[x]
permeable	[x]	[ ]
other	[ ]	[x]

Porosity change (%)
60%

Space embezzlement (mq)
57 mq

Enclosed space
passage between the first courtyard and the parking lot of the building which gives access to the lifts

Additional notes

Barrier P3.e.1.D

Materiality
masonry: wall with a metal door

Blockage	yes	not
phisical	[x]	[ ]
psychological	[x]	[ ]
fordable	[ ]	[x]
permeable	[ ]	[x]
other	[ ]	[x]

Porosity change (%)
90%

Space embezzlement (mq)
46 mq

Enclosed space
the external area nearby to the parking area in via Arnaldo Angelucci located on the plot edge

Additional notes

Barrier P3.e.1.E

Materiality
masonry: steel bollards

Blockage	yes	not
phisical	[x]	[ ]
psychological	[x]	[ ]
fordable	[ ]	[x]
permeable	[x]	[ ]
other	[ ]	[x]

Porosity change (%)
40%

Space embezzlement (mq)
0 mq

Enclosed space
there is no enclosed space

Additional notes
The bollards do not steal the space but delimit it by controlling the passage of pedestrians and preventing the passage of motor vehicles

Paola Scala
University of Naples Federico II, DiARC - Department of Architecture
paola.scala@unina.it

Traces, bodies and the public space

Key Words
Informality, Urban regeneration, Social housing

The project "The City for All" began with modernism and has since vacillated between two different positions. On one hand, it aims to invent new urban and architectural paradigms that characterize new communities, design new connections between residential and workplace areas, and create more flexible spaces that blur the boundary between indoors and outdoors. On the other hand, modernism believed it was possible to quantify quality using indices and minimum dimensions that defined the relationships between spaces and bodies solely by numerical parameters [Reale 2015; Sambricio 2008].
Ultramodern public spaces are really significant respect this condition. The adjective ultramodern refers to the spaces designed according to the standard parameters of the law entitled Ponte, law no. 765/1967, which still regulates Italian social housing. For this reason these spaces are really interesting because retracing their design process it is possible to focus on the modern idea of public space, which is of course based on an idea of total welfare and of open access to goods and services but at the same time an idea no able to recognize the multiple differences and the historical aberrations, the multiple identities and contexts of the Italian cities of that time [Lieto 2021].
In the 1950s and 1960s, some of the most important theoretical contributions to the dimension of "Collective Living" also hinted at the possibility of an "other" space, intended for flexible and "unforeseen" use by small groups. These spaces aimed to develop a sense of belonging among people who not only inhabited but also lived in these places, transforming them into "common" spaces.
The "Streets in the air" by Alison and Peter Smithson [Smithson 2001] belong to this line of research, as does Aldo Van Eyck's work on "in-between" spaces, named so for their neutrality and potential for easy colonization [Venturi 1966; De Silva 2018]. John Habraken's theory is also a significant contribution to this research, emphasizing the inadequacy of the Mass

Housing system [Habraken 1961] concerning the practical and creative needs of individuals to shape their own environment [Scala & Pota 2020]. In 1964, Iannis Xenakis developed the project for the Ville Cosmique, described by Sven Sterken as a project conceived in the tradition of utopian urban planning, offering an intriguing alternative to the strict control of cities characteristic of modernist urban planning [Giannantonio 2021]. A few years later, Rem Koolhaas formulated the concept of programmatic instability [Koolhaas 1989; Bilò 2014], upon which OMA's project for the Parc de la Villette was based. This approach sees architecture not as a formal outcome but as an open process that facilitates the flow of bodies and uses characterizing contemporary society. These research endeavors represent the "minor" legacy of modernity, inheriting the notion of a global city based on technological power. However, they primarily serve as a critical response to the rigid project of ultramodernism, presenting an alternative hypothesis to the concept of 'totalizing and autonomous architecture' by proposing a different interpretation of the relationship between space and the body. Much contemporary research on collective housing, from the "informal" studies of urban think tanks to the polished projects of the MVRDV, starts with the concepts of flexibility and indeterminacy proposed during this period, which highlight the distinction between the typical man and the individual.
PUSH Research aims to discover the "city of people" within the city of concrete [Ghel 2010]. PUSH stands for Public Space in European Social Housing, a European research project funded by the Hera program involving four European universities. The objective of the research was to develop a reflection on public spaces in emblematic districts characterized by social and economic difficulties. The Neapolitan group worked to distinguish between public space and community places, both conceptually and from a design standpoint, starting with the idea that "community space" is characterized by a less "abstract" publicness that is more responsive to the actual needs of individuals.
The Neapolitan unit selected "Lotto 0" as its case study, a district constructed in Ponticelli, the eastern region of Naples, to accommodate individuals who lost their homes during the 1980 earthquake. From a planning perspective, the reconstruction was based on the Suburbs Plan, which was approved a few months prior to the earthquake, as a component of the Extraordinary Residential Building Programme. The PSER, developed by Law 219/81, made the Zone Plans 167 (L.167/62) and the Recovery Plans (L.457/78) operational. In response to the urgency of the post-earthquake situation, the decision was made to adopt the Grandi Pannelli - SPAV structural system for the new buildings. This system consisted of load-bearing partitions produced by the Spav Prefabbricati company, where both the main and infill walls had a load-bearing or bracing function. From a spatial perspective, this structure exhibits exceptional rigidity and resistance to any form of modification.
Currently, the district is considered an enclave where many planned public buildings were not constructed. These public facilities were intended to transform the area into a proper city according to standards. Without them, it risked becoming a dormitory district for 50,000 inhabitants amid the vastness of residential 'fortresses' and the complexity of infrastructural networks [Franzese 2021]. Considering these circumstances, the initial phase of the research aims to map "informal usages". This aimed to highlight variations, or rather 'mutations', induced by inhabitants on the structure of architectural typological invariants. These variations serve as indicators of the social, economic, and cultural networks of the communities residing in these areas. Lotto 0, defined through this knowledge-gathering phase, proved to be far more complex than initially hypothesized.
The critical interpretation of these places involved redrawing the ground floor of the buildings, revealing an extraordinary porosity at the basement level characterized by transversal passages connecting different courtyards on the ground floor. While the original project intended these spaces to identify the complex as a unified horizontal macrostructure, inhabitants seem inclined towards a greater fragmentation of space. This enhances the role of the courtyards in defining a more human-scale space. These areas, shielded from the road by gates or bollards, take on a unique connotation akin to a 'neorealist' district, further emphasized by changes to the facade, including shading devices. Building upon this progressively acquired understanding of the various contexts within Lotto 0, the strategy developed by the Neapolitan research group for urban regeneration aims at breaking the enclave through a series of urban 'acupuncture' interventions. These transformations are aimed at encouraging, accelerating, and amplifying the spontaneous virtuous processes observed and compiled in an 'atlas of the informal'.

Conclusions
PUSH aims to uncover, amidst the ruins of the city and the ultramodernist public space, the city of bodies. This research aligns with studies that began in Italy in the 1980s, when Bernardo Secchi, through the pages of Casabella, issued his warning: "conditions have changed" [Secchi 1984]. Secchi urged architects and urban planners to reconsider their disciplinary tools to

overcome the rigidities and limitations of urban analysis, incorporating not only "urban facts" but also the dynamic structure of social relations into their understanding of the territory. While this study-session was significant, some research in this direction tended to stray from the project, favoring a sociological approach.
Contrary to this trend, PUSH research seeks to redefine the social role of the architect within a reality far more fluid and dynamic than envisioned by modern thinking. Building upon this premise, PUSH's methodology relies on researchers' ability to uncover and interpret the "traces" left by bodies within space. These traces serve as "clues" enabling a discerning eye to identify critical issues and potential inherent in the structure of places, which can then be developed through architectural projects. The informal, characterized by the production of a spatial character not initially planned in the project's original form, is not the subject of investigation for PUSH. Rather, the informal serves as a tool through which architects recognize the potential to create spaces capable of fostering unexpected relationships between bodies and cities. These spaces allow individuals to recognize themselves as part of communities and, consequently, become common goods.

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FIGURES

Fig. 1 - informal alterations in Lotto 0. Source: Push research group.

Yiorgos Hadjichristou
University of Nicosia, Architecture Department
hadjichristou.y@unic.ac.cy

Body in space. Space as a body. Interaction of bodies in Malleable courtyards

Key Words
Malleable courtyard, Space Bodies, Social ritual scenographies, Human topographies

The Human body in the traditional courtyard typology scripted its story in its static spaces. Could the 'Malleable courtyard' typology [Hadjichristou 2015] synergically with the body also become a Body and narrate their joined stories? In this intertwining of Built and Human Body, the ladder is the driver and the receiver, is the actor and the acted in all its sensory and corporeal qualities [Pallasmaa 2009], in its enmeshed, immaterial everyday choreographies in the material realm [Hill 2006]. The Space will be thought not as a vessel for the body but rather as an interactive entity, gaining the verbal qualities of the Human body rather than keeping its qualities as a 'noun' or as Pallasmaa argues 'a building is not an end itself; it frames, articulates, restructures, gives significance, relates, separates, and unites, facilitates, and prohibits. (*The Aura of Sacred, lecture* by Juhani Pallasmaa. 2011). The 'Malleable courtyard' typology adds the parameter of the Verb in the relevant architectural typology where the 'built' and the 'user' are constantly interacting and redefining themselves

The evolution of the courtyard typology into a 'malleable courtyard typology' [Patsavos 2018] became a necessity as a 'creative' voice of resistance. Not just a resistance against the colonization which is responsible of extinguishing the courtyard typology due to the new urban regulations imposed on the island of Cyprus and still been enacted. Not simply a resistance against globalization, that tyrannically dictates the 'western way' and erases the localities. But also, a resistance against the powers that suppress the Human Body and its senses, including the technological advances and the establishment of new standards by the existing socio-economic systems of capitalism and neoliberalism.
In contradistinction to the static state and of the traditional courtyard, the malleable courtyard typology in the Kaimakli house [Alex Sanchez Vidiela 2009] (*'Sustainable architecture across Europe' ACE- Architecture Durable* 2010) does not only attempt to recuperate the division of

the traditional house in two parts in a Space- territory also separated in two due to the Dividing Green Line of the island of Cyprus. It triggers an architectural discourse where the Bodies of the Human and Space enjoy an interactive kinesthetic everyday experience where the one choreographs the other scripting new rituals of being. This traditional part of the house serves as the basis where the mobile, sliding opening kinetic parts of the annexes are orchestrated by the Bodies of the house inhabitants as a Theater stage.
In architectural practice, could we think of the Pleasures of the Bodies, both Human and the Space? Could the ladder gain the former's qualities and reflect to the 'Lefebvrian' understanding 'there is no pleasure without movement' [Lefebvre et al. 2014] . Could we start 'moving' on together to new emerging eras of the relationships of the two Bodies?
In the Strovolos tow projects, the notion of this interaction between Bodies enables interchanging of their spaces by moving their architectural elements. So, the sitting Human body, without being moved, his senses of being in an interior space change in the ones of being in an exterior space. At the same time, The Body of Space switches states of being inside, outside or landscape. In this interplay, various other parameters are 'moved and changed' as the weather conditions and the playfulness of the Bodies' public and private states.

In the Smalto (*'European Union Prize for Contemporary Architecture _ Mies Van Der Rohe'* .EU mies award 19.2019) and Athienou [Panetsos, 2012] projects the two Bodies enter a new interaction with the Urban Bodies as the city is organically merged with their bodies – the Human's and Space's ones. Their fluid interaction connects their malleable cores with the cities Bodies and Spaces through them, the Human and Space Bodies.
In the ARC Architecture Research Center [AIAC Italian Association for Architecture and Criticism, magazine A10 new European Architecture, 2016], the interaction between the Bodies of the Space and students renders a new quality as the knowledge and the methodology are given birth and nurtured within their Bodies.
The architectural education in the Arc was filtered through this approach for further explorations.

The 'PerformDance' studio [Hadjichristou 2010; Hadjichristou 2012] architecture students immersed into choreography workshops that led to the creation of an apparatus as part of the Bodies, their owns and of the Space. The Bodies thought as one entity as the final project of the experiential 'PerformDance' space for users of 'different' abilities be on wheelchairs, blind etc.
The 'Human topographies_ Emerging Identities' studio (with Swiny A.) dealt with the queer Bodies, both the human and the Space, through a series of relevant workshops. The queering approach brough successful results as the second-year students achieved international prize in the LGBT center in Uganda [Ioannidou, 2016] competition.
The 'I Am Where You Are, Where Am I?' workshop at the IUAV, Venice [Gianni, 2018] the everyday different arrangement of the mingling of the Bodies of the students and the items of the studios led to understand the notion of this interaction. That resulted in more interactions including the ones between the Bodies of Humans, Space, and the animals.

The negotiation between the Bodies could not be more evident in installations for workshops or performances.
The project Xilomata (Kamberis and Stylianou) based on the painting of Christoforos Savvas [Nikita 2008] 'to poullin tis mesarkas' added a further layer in the interaction of Bodies. It mingled the Bodies of Human and Space with the Body of the 'magic landscapes' of the installation inspired by the painting.
In the stage for the performance of Afirimeni (Kamberis) based on the above painting and the 'World of Cyprus' by Adamantios Diamantis [Nikita 1998] the Body of the Human was intertwined with the Body of the landscape and regenerated space to a new Body of the Space that was filled with the Cultures of the Bodies.
Finally, ideas for demonstrating new approaches in architecture and town planning demonstrate this interactive, experiential way to every visitor.
The Bodies of the visitors enmeshed in the Bodies of Architectural Spaces, Creations of Art Groups and NGOs in the I Am Where You Are [Antoniou 2018] Cyprus Pavilion in the Venice Bienale 2018. All the Bodies together generated the Forest of the everyday life, where synergically worked all together: 'I encompass some of what you are, and you encompass some of what I am'.
In the 'Human Topographies_Emerging Identites' exhibition of the Trienale of Design 2222016 [Antoniou 2018; Antoniou et al. 2016] the Bodies included the urban- weather topographies and social ritual scenographies. The visitor moving around with a torch could generate a shadow stage, an ever-changing cityscape. The Body of the Human could interact with the Body of Urban Space, arguing that all the Humans not only have a right to the city but a say on its way

of being a city.
The chorographical interactive way between practicing, teaching, writing, orchestrating architecture could open fresh discourse on the notion of the synergetic becoming of its both constituent elements, the built and its user and the ever growing evolvement and how one defines)or self-defines) the other. .

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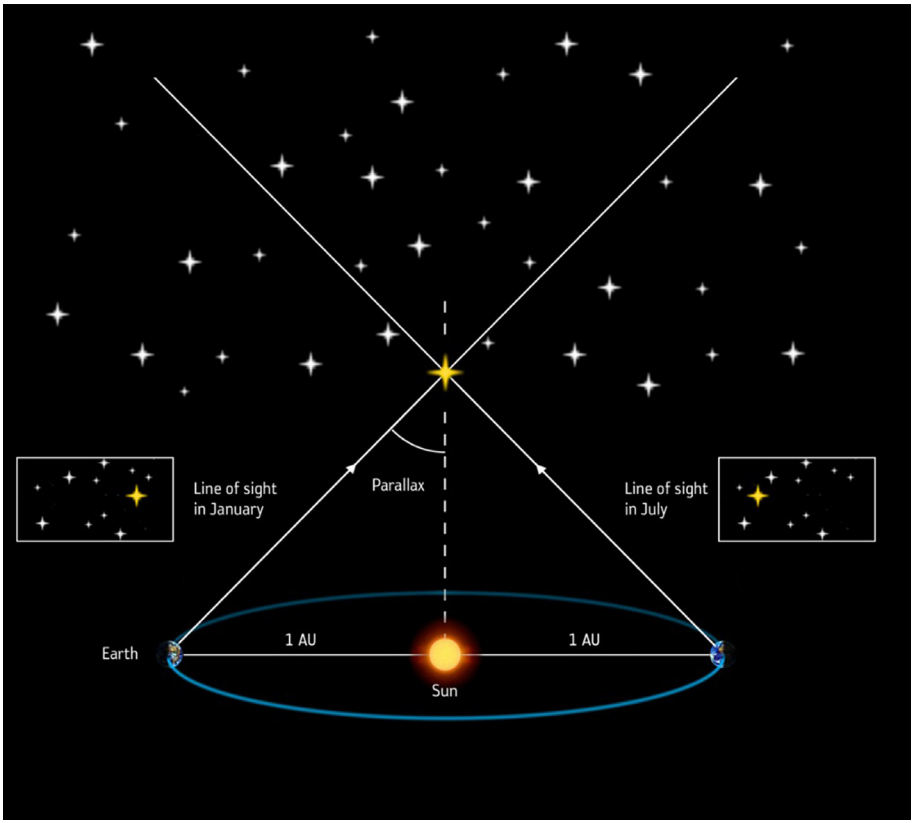
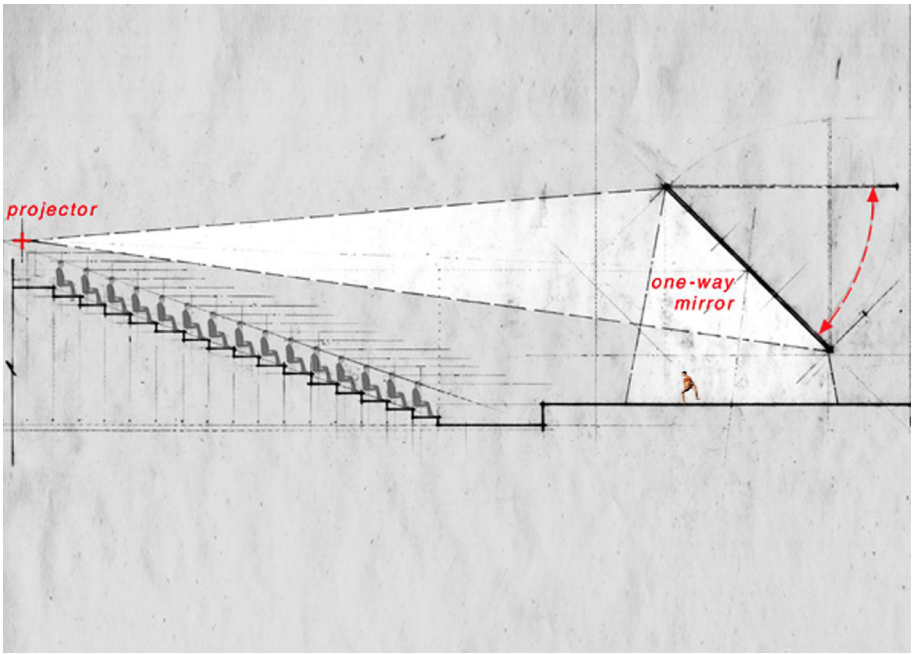

Line of sight
in January
Parallax
Line of sight
in July
Earth
1 AU
1 AU
Sun


projector
one-way
mirror

Bilge Can[1], Fatma Erkök[2]
[1,2] Istanbul Technical University, Architectural Design Department
[1] canb16@itu.edu.tr

Searching for the traces of avant-garde theory in practice:
A parallax view of Diller and Scofidio

Key Words
Avant-garde theory, Content, Expression, Subject, Object, Parallax

This paper aims to point to the relationship between art and architecture by explicating Diller and Scofidio's works through the concept of parallax. The starting point is the theory of avant-garde since the dialectics of subject and object changed by the avant-garde movements in the twentieth century. Avant-garde movements created this change by increasing the tension between object and subject and shifting from the importance of perfect form to the importance of content and expression. The origin of the word *avant-garde* comes from a military term, a *vanguard* unit of military. However, the term gains different meanings in the historical process. The term avant-garde was first used by the socialist utopian Saint-Simon, essentially offering that humanity will reach a realm of art and this can be guided by art [Nochlin 1989]. In this way, art is attributed a pioneering task of taking humanity forward.
However, the violence witnessed in Paris in June 1848 isolated art from this utilitarianism and purposiveness [Artun 2003]. Art no longer represents any value, nature, or god; it does not even represent the artist but represents only itself. Beginning in 1648, the power of the palace, church, and academy, which had dominated art was lost, and art became institutionalized with the modernist transformation. The avant-garde, in the sense used by Bürger, is the passion to initiate opposition against this institutionalisation and to reconcile art with life again [Bürger, 1984]. Avant-gardes of the twentieth century made it possible to notice experimental forms of expression against traditional methods. According to Bürger, art aims to renew itself as a phenomenon that expresses itself through life within an avant-garde approach. The intellectual content of art became more important. Bürger defines this situation as the abandonment of the principle of *imitatio naturae* – the mimesis of nature – and the entry of art into a process of criticism [Bürger 1984]. The methods created by Dada aimed to a tension between subject and object through the shocking effect, and this tension is a driving force for the emergence of the art object. Therefore, the avant-garde seeks ways to create this tension through the avant-gar-

de art object that becomes a tool for realizing the questionable nature of life.
In this research, we start with avant-garde since the *experience* radicalized by the avant-garde is a key concept that raises intersubjectivity and interdisciplinarity. This idea of intersubjectivity connects our research to the concept of parallax. Parallax is a term in astronomy referring to the angle between two lines directed from two different locations to a point far away. The term also refers to the change in the observer's perception when looking at an object from two different vantage points. In terms of criticality, the term expresses a change in the perspective in the opinions of a subject. It is possible to see different uses of the term in different contexts in philosophy, literature, and architectural theory. Žižek interprets the parallax shift as a difference in point of view, perspective of thinking, and preferences. He focuses on three different parallaxes: *ontological*, *scientific*, and *political* parallax. While *ontological parallax* is directly related to the individual, *scientific parallax* concerns the irreducible difference between the phenomenal experience of reality and its scientific explanation. In dealing with scientific parallax, Žižek confronts science and art. In the *political parallax*, when the perspective of thinking changes, even resistance becomes part of the internal process that feeds power [Žižek 2008].
Zizek summarizes Hegel's theory of mediated subject and object as follows: the epistemological shift in the subject's perspective always reflects the ontological shift in the object [Zizek 2011]. We argue in this paper that avant-gardes reveal this shift by transforming the *object* into *content*; and *form* into *expression*. In other words, the avant-gardist aim here can be defined as breaking the traditional expectations such as the formal beauty of objects, and making the dialectic readable by everyone through content and expression. The creator of the art object also becomes the creator of thoughts through the art object. This kind of dialectic in object-subject relationships cannot be described as hierarchical but can be defined in terms of parallax.
Foster argues that although the avant-garde remains in the past, it will re-appear with the innovative art of today [Foster 2009]. Two concepts guiding Foster's thesis; parallax and deferred action. Parallax means that the image of the object changes with the viewer's movement; deferred action means that an event encompasses the previous one - and reinterprets it. Foster uses the concept of parallax to emphasize that we shape the past depending on our current position [Foster 2009]. Zizek, on the other hand, explains parallax as a non-reductive gaze in which the object is not treated as passive and the subject as active; these roles are constantly shifted between subject and object [Zizek 2008]. The concept of parallax has another meaning that multiplies the spatial experience in the form of the transformation of the surfaces defining the space depending on the change in the viewer's position [Holl 1988]. Thus, the concept of parallax emerges as multi-layered: the *intellectual+theoretical* layer that enables the 'oscillatory movement' of radical critique and the *spatial+physical* layer where the object is surrounded by all perspectives, multiplying the experience.
The idea of this research comes from an attempt to bridge Diller and Scodio's works to avant-garde theory through the concept of parallax since some of their works are based on a close analysis of avant-garde such as: 'Who is Your Dada?' Their spatial and intellectual explorations and productions, even without referring directly to Dada or Surrealism, reflect the avant-gardist aims and characteristics. Their productions while offering to transform our perception spatially allowing us to observe from different perspectives and also carrying intellectual manifestations. Through this theoretical background, we aim to elucidate the work of Diller and Scofidio situated at the interface of theory and practice, as well as art and architecture, in the context of the concept of parallax. Diller and Scofidio are architects who innovatively investigate materials, are creators of moving images, and construct narrative elements supporting spatial research [Dimendberg 2013]. For these architects, conceptual thought belongs to vision, but this vision is not just an activity of the eyes but a production of the brain; as in the Blur project atmosphere, these architects make contemporary space contemplative, playful, and unpredictable by controlling how and what we see/don't see [Dimendberg 2013].
Spiller in 'Visionary Architecture: Blueprints of Modern Imagination' mentions a book named 'Hypnerotomachia Poliphili' written in 1499 and its important effects. The book caused a variety of interpretations and has been the center of attention from various perspectives for centuries (Spiller, 2008). Spiller underlines the most important of these interpretations is that the book breaks down the traditional distinctions between text and illustration. The author associated this dissolution of boundaries between text and illustration with the blurring of distinctions between text, image, and the ontology of structure for many visionaries of the twentieth century. Spiller also mentions that the book caused a belief that it contains an alchemical message and code system interpreted in the very detailed descriptions of places as a theatre of memory (a mnemonic device involving images, icons, and architectural arrangements). He emphasizes that contrary to popular belief, the alchemists did not aim to turn lead into gold but to gain a philosophical insight into the fundamental nature of the universe. Spiller suggests that it was

this alchemical symbolism that gave rise to Marcel Duchamp's ready-made objects and event-machines and in the last decades of the century, architects such as Daniel Libeskind and Diller and Scofidio were also influenced by this symbolism [Spiller 2008].
If the concept of parallax is interpreted as different realities seen from different positions, the encounter of multiple situations, the overlapping of illusions, or the multiplication of the gaze. Diller and Scofidio's productions seem to follow the concept of parallax in terms of allowing the multiplication of perspectives – without being reduced to each other – and confronting the perceiver/viewer with new realities in Holl's conceptualization of parallax, the perceiver's mobility multiplies spatial definitions and experience. Diller and Scofidio's productions allow the perceiver to acquire different perspectives and experiences from a fixed position simultaneously. For example, one of their design 'Moving Target' is a project conceived by Frédéric Flamand and presented in Charleroi, Belgium in 1996. Diller says: '[There was] a 45-degree mirror above the stage where everything that was on the stage was reflected to the audience – we called it an interscenium rather than a proscenium. The audience saw the stage turned through 90 degrees. It [produced] different conditions of gravity and [split] the focus of the audience into two registers, sometimes combining the two spaces in very virtual, optic and unusual ways' [Diller 2009].
We argue that in this situation, the dancers are synthesized into a hybrid space where they must consider both the rules of the stage and the rules of the screen, like the oscillating movement of the parallax point of view. On the other hand, pre-recorded dancers are freed from the limits of physics. Thus, Moving Target opens a parallax interval by enhancing the experience by multiplying different perspectives. In addition to freeing the dancers from the limitation of gravity, it also frees them from temporal boundaries through technological means, allowing for the superimposition of what was in the past and what is in real-time. It also intellectually calls into question the norms of the theatre space. Diller and Scofidio's many similar productions can be elucidated by thinking side by side with the concept of parallax.

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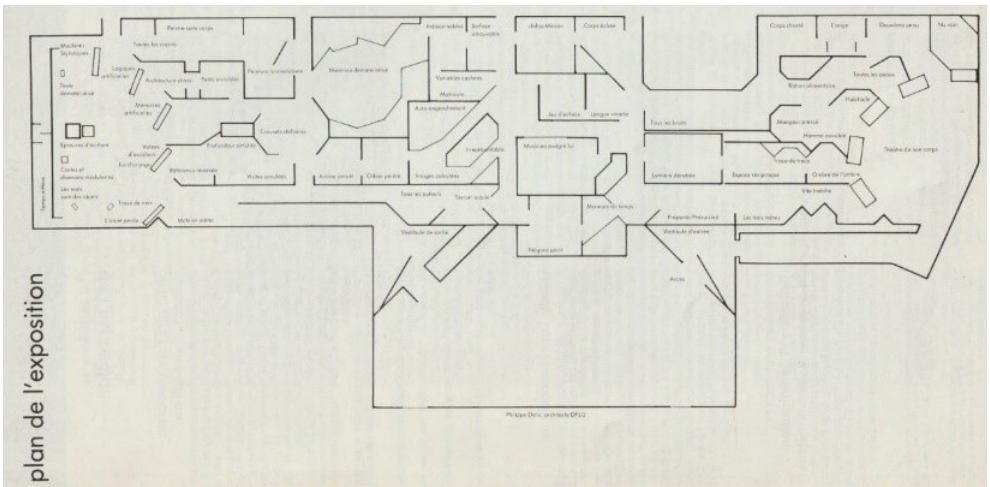
FIGURES

Fig. 1 - https://www.space.com/30417-parallax.html. / https://dsrny.com/project/moving-target



plan de l'exposition

E. Burcu Eryılmaz
Middle East Technical University, Department of Architecture
Çankaya University, Department of Interior Architecture
burcuhp@gmail.com

Les immatériaux and the paradigm of interaction

Key Words
Jean-François Lyotard, Les Immatériaux, Interaction, Embodiment

Describing the position of the Cartesian subject as "centered and stable, autonomous and thinking, standing outside of the world" in her seminal book The Virtual Window: From Alberti to Microsoft, Anne Friedberg presents two opposing views regarding the recent discussions about visuality: the first view is consisting of the "Cartesian-based theories of disembodiment which hold that the viewer is separate from the world, disincarnated in vision," and the other refers to the "phenomenologically based theories of embodiment, which root sight in its bodily organ" [Friedberg 2016, p. 47-48]. Within this frame that Friedberg draws, this paper suggests a revisiting of the 1985 exhibition Les Immatériaux (The Immaterials), which Jean-François Lyotard curated for the Pompidou Centre in Paris in co-operation with design theorist Thierry Chaput, through the lens of the paradigm of interaction. This paradigm introduced by the exhibition challenges the conventional relationship between human and material, and repositions the subject as decentralized, as opposed to the central position of the Cartesian subject that modernity imposes. Revisiting Les Immatériaux as a pre-text to read this repositioning, the study aims to reflect upon how this paradigm embodies the subject in the exhibition space of Les Immatériaux and thus subverts the understanding that situates the body apart from the spatial dimension.

For this aim, the spatial layout of Les Immatériaux could be read in parallel to the notion of embodiment through an exploration of the guiding ideas of the exhibition. As summed up in the text "After Six Months of Work... (1984)" by Lyotard, these general principles are given as follows: dividing the exhibition space into "the zones corresponding to different questions bearing on the different senses of the root mât;" preventing the visitor from seeing an overall view of the whole exhibition space; embedding "the spirit of immateriality" in the exhibition by way of the use of audio sound rather than textual instructions; allowing the visitors to perambulate

freely without imposing an anticipated route; and lastly overexposing the exhibition space with artificial lighting in such a way that creating completely dark sites or even zones would be possible through a system of local enclosures [Lyotard 1984/2015, pp. 60-63]. It could be stated that what Les Immatériaux offers to the visitors is not an accustomed feeling of experiencing an exhibition space; on the contrary, the exhibition deliberately aims to evoke a sense of intriguing obscurity on the viewers through these spatial acts. In contrast to the controlled space of modern exhibition, the exhibition space of Les Immatériaux is organized in the form of a labyrinth, which is formed by the grey metal woven sheets with different opacities suspended from the ceiling of the fifth floor of the Pompidou Center. The plan layout (fig. 1) allows the visitors to perambulate between the sites and zones, independently from an anticipated route or itinerary. Accordingly, the idea of the modern gaze, which is expected to be educated at the end of gallery space, is subverted, as these labyrinth-formed screens make the visitor feel disoriented in darkness.

For Lyotard, the idea that "everything speaks" is one of the assumptions of modernity: in this regard, this structure of communication employed in Les Immatériaux does not offer something new in relation to the modern project and follows the modern understanding of exhibition through this model; however there is a certain way of "stretching the meaning of the word 'material', like a sort of fabric, in order to draw it, to stretch it over the structure of communication" [Lyotard 1984/2015, p. 31]. What Lyotard means by "immaterial" addresses an extended meaning of the material in the postmodern condition, which refers to a time that the "project of modernity which extends its communicational web to the totality of all possible givens so as to be able to control them by way of translation" [Lyotard 1984/2015, p. 32]. Within this frame he drew, Lyotard thus asks the principal question of the exhibition rhetorically: "do 'immaterials' leave the relationship between human beings and material unaltered or not?—this relationship being understood as it has been fixed in the tradition of modernity, for example by the Cartesian program of becoming the master and possessor of nature," [Lyotard 1985, p. 48] and introduces the counter-figure who follows the paradigm of interaction instead of the modern project of domination:

> "[...] the human subject becomes no longer a subject but, I would say, one case among others, albeit a case which retains this privilege.. Yet it is just one case among the many multiple interactions that constitute the universe. You see that, from this 'immaterials' point of view, we have emphasised – and this is a part of the work of mourning – a kind of counter-figure that takes shape within the figure of modernity, a counter-figure within which man does not play the role of the master. One might call this figure postmodern, insofar as it has always been present in modernity, but it might be the very completion of the technoscientific project of modernity. And as this project is destabilised, it allows this counter-figure to appear more clearly than before" [Lyotard 1984/2015, p. 33].

Here, Lyotard describes "interaction" as a situation "where man himself is not the origin of messages, but sometimes the receiver, sometimes the referent, sometimes a code, sometimes a support for the message; and where sometimes he himself is the message" [Lyotard 1984/2015, p. 37] on the contrary to the figure of modernity which gives form to the material according to her/his own needs. In that regard, this new blurred figure challenges the conventional relationship between humans and material, and allows for reading what materiality means in the postmodern condition. Linker accordingly explains the exhibition's specific goal as "to examine the way in which the new 'immaterial' materials associated with the technological revolution have altered man's identity as maker" by its investigating the effects of "the demise of creativity defined as material production" [Linker 1985, p. 104]. Freeing the work from being the mirror of its author as the human subject, this paradigm of interaction destabilizes human's mastery over nature and indicates a need for the redefinition of creativity. Referring to Lyotard's describing "the new structure of creativity" as "the principle upon which is built the operating structure is not one of a stable 'substance', but of an unstable set of interactions," [Lyotard 1984, as cited in Dufrêne 2015, p. 140] the art historian Thierry Dufrêne noted, the concern that identified the postmodern condition results from this instability Lyotard mentioned. Referring to Lyotard's describing "the new structure of creativity" as "the principle upon which is built the operating structure is not one of a stable 'substance', but of an unstable set of interactions," [Lyotard 1984, as cited in Dufrêne 2015, p. 140], the art historian Thierry Dufrêne noted, the concern that identified the postmodern condition results from this instability Lyotard mentioned. Along the same lines with Dufrêne, Linker also states that "the instability of post-Modernity," as staged in *Les Immatériaux*, is caused by "the dislocation of cultural coordinates," [Linker 1985, p. 104] in such a way that one may define the postmodern condition

as a slippery ground. Thus, it requires the repositioning of the subject, which is assumed to be at the center of everything in grand narratives, as well as the reconsideration of the ways the subject relates to the world. In that sense, she explains this paradigm of interaction through the decentralized subject of the exhibition:

> "The plural 'messages' that comprise reality do not converge on the self, nor can they (as Walter Benjamin commented) return man's gaze. Without the self as center all is interchangeable, for man is a part of, rather than apart from, the reality he once controlled. Indeed, such general interaction was a major theme of 'Les Immatériaux'" [Linker 1985, p. 104].

Linker's situating the subject as "a part of, rather than apart from, the reality" referring to the presentation of the subject in *Les Immatériaux* could be regarded as a rephrasing of Lyotard's statement that "the human subject becomes no longer a subject but, I would say, one case among the many multiple interactions that constitute the universe." Employing this paradigm of interaction that challenges the conventional relationship between human and material, the exhibition depicts the subject as being decentered, thus turning her into an agent among others. As opposed to its central positioning in the Cartesian-based views, in particular, that of vision, as exemplified by Erwin Panofsky in his description of the subject of perspectival construction as the one-eyed and immobile spectator [Panofsky 1927/1991, p. 29], the subject which *Les Immatériaux* portrayed is characterized by its involvement as an agent both in the exhibition space and the web of relationships.

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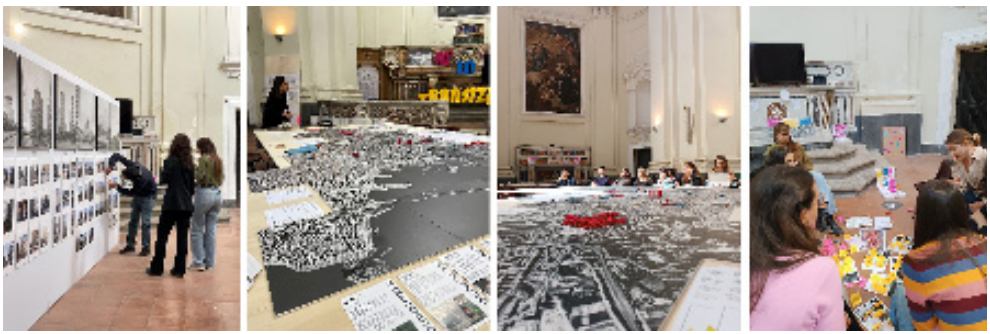
FIGURES

Fig. 1 - Plan of the exhibition (Source: Petit Journal, 28 March–15 July 1985, Paris, p. 16. Centre Pompidou, MNAM, Bibliothèque Kandinsky Digital Archive).



Orfina Fatigato
Università degli Studi di Napoli Federico II, Department of Architecture
orfina.fatigato@unina.it

Project as a process of transition:
Precision, adaptability, indeterminacy

Key Words
Transitory, Regeneration, Adaptability, Indeterminacy

Re-inhabited spaces for the 'living world"
"The time is a problem for us, a disquieting and demanding problem, perhaps the most vital one in metaphysics: eternity, a game or a laborious hope," writes Borges in *Historia de l'Eternidad* [1936], substantiating his poetics aimed at rescuing reality from the ontological condition of certainty, instead embracing the charm of the enigma that the "ephemeral" yet real present carries within itself.
The tension between the transient and the eternal is certainly not foreign to the dimension of the project as an act of configuring a space in the present that is "projected" into the future through the project. Designing implies transforming space, thinking about its configuration, habitability, use, character, etc., simultaneously delivering the project (more or less consciously) to the real conditions of the present time, but also to the unpredictability of space mutations and metamorphoses in the time to come.
Dealing with the temporal dimension is an inescapable condition inherent in the design process, but the ambition for finiteness, precision, and compositional balance that formal research aspires to often limits, even during the project's ideation, reflection on the many unforeseen possibilities for the use of the designed space, beyond those conceived, once it is realized and finally inhabited.
This "short circuit" between the designed and realized space occurs through the practices of experiencing the "bodies" that inhabit it. Isn't the continuity (permanence, eternity) of architecture precisely in the infinite possibility of 'form' and "meaning" renewal of space over time? It's not about giving up the perspective of a formal and defined configuration of space but rather thinking about the project within an articulated timeline. Measuring the temporal dimension in the project is a fundamental condition, especially in reference to the modification of existing built space.

Yona Friedman, in his Spatial City [1959], envisioned a massive reticular infrastructure overlaid on large urban voids where each inhabitant could continuously modify their dwelling. Cedric Price, with his vision of a "mobile" and interactive architecture for the Fun Palace (1961), doesn't aim to design more or less functional forms but rather to "structure" "processes" of modifiable organization through interaction with users. Constant envisions New Babylon (1959-1974), elevating "anti-architectural nomadism" [Careri 2005] to a constitutive principle of an infinitely extendable new city that, freed from the "urgency" of functions and "open" to playful experiments, leads to a new way of living together.
For several years, there has been a renewed interest in the radicality of these (and other) experimental and utopian inquiries, partly driven by the evident need to renew design approaches and experiment with new methodologies to rethink, regenerate, buildings, parts of cities, territories lying unused, impoverished, uninhabited, degraded, in contemporary landscapes. Numerous are the empty, abandoned buildings of contemporary urban landscapes, and the economic and political conditions capable of supporting their requalification and reuse over time are increasingly fragile.
Their presence raises more issues: the failure of human power over the territory [Berger 2006], the decline of the Fordist model, the violence perpetrated on territories by exclusively extractive forms of economy, and in some cases, the ineffectiveness of projects, formally impeccable but revealed over time to be inadequate to renew the contexts they could and/or should have faced. Rethinking the space-time relationship through the project is a complex challenge that cyclically interrogates the project in the history of architecture and the city, appearing particularly indispensable in the contemporary era faced with the desolate scenario of the ruins that territories have inherited – "cubic meters" of spaces that need to be rethought in a renewed, and renewable, relationship of meaning with the present and future time. One of the challenges that this scenario seems to pose is to learn to think and experiment with the project as an evolutionary and incremental transition process.

Spaces in Motion in Infinite Places

In the 2018 Venice Architecture Biennale, the collective *Encore Heureux* coined the title "Infinity places" for the exhibition they curated for the French Pavilion. The exhibition showcased ten diverse contemporary French projects – varying in function, typology, space ownership, and funding for implementation.
Despite their differences, all projects aimed, according to the specificities of each case, to transform existing abandoned buildings into "spatial" laboratories where diverse forms of being together, inhabiting collective and inclusive spaces in the contemporary 'moving' city could be experimented with. For the curators, these ten "collaborative, ecological, supportive" places represent a potential different way to regenerate abandoned and unused spaces over time and to experiment with new "forms" to inhabit the contemporary city, through the initiation of processes that can be implemented over time.
They speak of "pioneer places," fragile and in waiting or becoming – such as 104 in Paris, *Atelier 6B* in Saint Denis, *Friche belle de mai* in Marseille, *Lieu unique* in Nantes, *La ferme du Bonheur* in Nanterre, etc. – where the transformation of space is inherently connected to that of the social bonds that inhabit it.
Encore Heureux, through the title coined for the French Pavilion, connects the notion of place to that of the infinite, which in turn refers to time – an infinite time – recognized as a fundamental paradigm for the creation of a "place."
The notion of an infinite place refers to the idea that, if every spatial phenomenon occurs in time [Donnadieu and Mazas 2002], space can only be continuously in flux (in motion) because it is the field in which relationships, events, forms of connection – often unpredictable – between the 'bodies' that experience and inhabit the space take place and manifest.
The unforeseen is thus considered as an "opportunity" for the 'manufacturing' of space. Each of these places questions the role of the architect, claiming an 'alternative' role, not just in thinking about the transformation of space but rather in questioning the ways to create networks, connections, relationships through space, among the 'bodies' that inhabit it. It is, therefore, a matter of conceiving the transformation of space as the design of an "infrastructure" for possible, open, and implementable relations over time.
The notion of "indeterminacy" that this regenerative project approach implies challenges the design disciplines to envision adaptive systems, open to the unpredictable, thus acting within a problematic but capable oxymoron of opening up numerous possibilities.

Transitory Uses to Inhabit the City in Transition

Between April and October 2023, the CA23 Plural Territories Architecture Festival took place in various locations in Campania and the city of Paris. The festival was structured around

six Living Labs, focusing on experimental themes in different festival locations. In Naples, in collaboration with the Department of Architecture at the University Federico II and the ENSA Paris Malaquais, the Living Lab "Inhabiting the City in Transition. Evolutionary projects for the reuse of urban containers" [1] was held.
The living lab was conceived and structured as a collective laboratory that explored the processes of regeneration of some large abandoned containers in the city of Naples by activating possible transient uses. Participants collaborated on co-creating innovative programs, new forms of accommodation to re-inhabit these spaces, proposing open and incremental strategies over time.
During the Living Lab, the specificities, "stories," and potential of some disused buildings that populate the urban territory of Naples were explored at different scales. Living Lab participants and community members, along with architects, photographers, artists, students, and university professors, questioned the value of these containers as 'places of possibility.'
France is among the most advanced countries in Europe regarding experimentation with transient uses as a phase in many urban transformation and regeneration programs. Numerous interdisciplinary groups have emerged in the last fifteen years, contributing to the theme of *urbanisme transitoire* through research and experiences.
Some examples include *Yes We Camp*, *Plateau urbain*, *Encore Heureux*, *Communa*, etc. These groups have become new "real estate" actors capable of making substantial investments in the transient use of public and private properties, revitalizing abandoned spaces and generating innovative economies.
Unused buildings and spaces, experimentation grounds for transient uses, are known in France as *tiers lieux*, or third places where, beyond living and working, the hybridity of programs and the incrementality of the process are experimented with, unpredictable beforehand for space transformation. Indeterminacy becomes relevant when considering the ever-changing nature of human interactions and the evolving needs that arise over time. Spaces designed for transient uses must possess the ability to adapt to unforeseen scenarios and the shifting demands of the community that inhabits them.
This indeterminacy can be seen as an opportunity rather than a limitation, paving the way for creative and innovative solutions. In summary, the design for transient uses requires a delicate balance between precisely defining key elements and the willingness to embrace indeterminacy as an integral part of the process. It is an invitation to conceive spaces capable of evolving alongside the dynamics of the "living" in motion, allowing active participation of users in the co-creation of the environments in which they live and move.
The French experience provided an important framework during the Living Lab through the structuring of workshops both in Naples and Paris with the *Plateau urbain* cooperative.
The work of the Living Lab resulted in proposals and project scenarios to envision the transition processes of empty "cubic meters" of some disused containers in Naples into new welcoming and evolving spaces in the contemporary city.
Through design experiments, considerations were made regarding desirable project actions to 'reclaim' spaces in disused buildings that are often repulsive due to their sometimes alienating scale compared to contexts or evident obsolescence. Simultaneously, the focus was on the potential evolvability of proposals as a necessary condition for space activation.
The relationships and connections between those who use the space are in constant mutation and transformation. It's as if the design of these experimental spaces is required to remain partly "open" to evolve, change, adapt over time in harmony with the people and the "living" world [Clément 2006] that inhabit it.

ENDNOTES

[1] The Living Lab Inhabiting the City in Transition. Evolutionary projects for the reuse of urban containers, curated by Orfina Fatigato and Gianluigi Freda, is one of the six Living Labs of the *CA23 Festival dell'Architettura Territori Plurali* (https://campaniaarchitettura.it/territori-plurali-living-labs). The Living Lab took place in Naples from April 10 to July 17, 2023, at the Ex-Church of San Demetrio and Bonifacio (Department of Architecture DiARC).

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FIGURES

Fig. 1 - CA23 Plural Territories Architecture Festival Living Lab Inhabiting the City in Transition.

1| SCHEME | PORTUGAL / SPAIN

2| PLAN | ROUTES OF PORTUGAL / SPAIN
CAMINHO DA RAIA / PORTUGAL
RUTA DEL AGUA / SPAIN
LAGO DE BRAGA / PORTUGAL
CAMINO NATURAL / SPAIN
CAMINO DE SANABRIA / SPAIN
VIA DE LA PLATA / SPAIN
MERAS / SPAIN
RIONOR DE CASTILLA / SPAIN
RIO DE ONOR / PORTUGAL

3| SCHEME | BRAGANÇA < RIO DE ONOR / RIONOR DE CASTILLA > SANABRIA
SANABRIA
< 18 km >
RIONOR DE CASTILLA
RIO DE ONOR
< 28 km >
PORTUGAL / SPAIN
BRAGANÇA

4| SCHEME | AVELEDA < RIO DE ONOR / RIONOR DE CASTILLA
RIONOR DE CASTILLA
RIO DE ONOR
< 14 km >
AVELEDA
PORTUGAL / SPAIN

5| PLAN | RIO DE ONOR / RIONOR DE CASTILLA
RIONOR DE CASTILLA / SPAIN
RIO DE ONOR / PORTUGAL
0
50

6| SECTION | RIO DE ONOR / RIONOR DE CASTILLA
RIONOR DE CASTILLA / SPAIN
RIO DE ONOR / PORTUGAL

Soraia Patrícia Antunes dos Reis [1], Carla Garrido de Oliveira [2], Filipa de Castro Guerreiro [3]
[1, 2, 3] University of Porto, Faculty of Architecture
[1] up201808033@edu.arq.up.pt [2], coliveira@arq.up.pt[3], guerreiro@arq.up.pt

Cross-border cooperation: For a sustainable territorial planning.
Insights from Rio de Onor and Rihonor de Castilla in the northwest of the Iberian Peninsula

Key Words
Border, cross-border, Threshold, Territory, Rio de Onor

Synopsis
This paper proposes a critical analysis on the dynamics of cross-border territories, as a tool that transforms the spatial corporality. The border is not merely a passive line that delineates a country or nation; rather, it exerts a profound influence on the connotation of a space, be it a region or a territory, affected by either artificial or natural elements within that spatial domain. Focusing on the Northwest of the Iberian Peninsula - the oldest border in Europe - the main objective of this paper is to define, within the community and its settlement, the essential contributions to understand the relationship between the body and space in border territories. Additionally, the research aims to explore the role of collaborative practices in transforming urban spaces, beginning with the case study of Rio de Onor and Rihonor de Castilla, then articulated with other cases.
From this perspective, the opportunities and challenges involved in this short paper seek to move beyond the administrative borders, focusing on other limits connected with cultural, social and geographic elements, as units of integration, sharing practices and values, in a common space.

Border
The border operates in alignment with the political system, affecting territory, communities and settlements. The concept of "border can refer to the very line of demarcation and also to the zone affected by the presence of this line" [Paül, Trillo 2014, pp. 163-164]. Environmental, territorial, and community interactions shape urban configurations affected by artificial and natural factors. In recent years, conflict-ridden states redrawing borders have led to persistent tensions in border regions, underscoring a profound impact on the relationship between environment and corporeality.

Portugal and Spain share the world's oldest political border, characterized by its regular course parallel to the coastline, outlines with it an elongated rectangle along the meridian, forming one of the most harmonious and simple state shapes [Ribeiro 2023, p. 147].

Context

Throughout history, the border between Portugal and Spain have been shaped by territorial agreements, resulting in a heterogeneous territory affected by both visible and invisible borders. From the Treaty of Zamora (1143), which divided Gallaecia, to the Treaty of Alcanizes (1297), which defined and recognized the portuguese border, various localities have witnessed changes in their governance.

The Treaty of Lisbon (1864) aimed to end conflicts along the vulnerable border territories. Despite the early stabilization of borders between Portugal and Spain, in the northern border there were some very particular and ancestral practices of cross-border cooperation: first, the 'Couto Misto' - an extinct micro-state in- between Portugal and Galicia, which belong to Spain after the Treaty of Lisbon; then, 'Aldeias Místigas' - Cambedo da Raia, Soutelinho da Raia and Lama de Arcos - communities with an ambiguous governance that recognized portuguese governance after 1864; finally, Rio de Onor and Rihonor de Castilla - besides their similar names, the proximity has promoted international practices in the collaborative management of the space, until today.

When Portugal and Spain became a member of the European Union (1986) the limit was no longer a space of conflict, as it was during the period of dictatorship in both countries. This encouraged the creation of cross-border cooperation programs, resulting in seven eurocities and two euroregions between Portugal and Spain. These initiatives aimed to strengthen connections between cities and administrative regions aligned with the administrative limits of cities, focusing on pure economic objectives rather than tangible and everyday concerns such as agro-pastoral dynamics. In comparison, it becomes evident the opportunities inherent in each type of cross-border cooperation, and unveils the authentic boundaries of the border, extending beyond the mere division line to encompass a distinct and non-neutral region, equally affected by the presence of this border, facing the same challenges and enjoying the same privileges of boundaries—the border region.

Rio de Onor / Rihonor de Castilla

Rio de Onor is located in the district of Bragança - Portugal, while Rihonor de Castilla belongs to Sanabria, in the province of Zamora - Spain. The considerable distance from the center (26 km to Bragança - Portugal; 16 km to Sanabria - Spain) fosters a strong sense of community, as a consequence of being a vulnerable space. Moreover, Rio de Onor/Rihonor de Castilla has established strategic cross-border cooperation as a means to bodies overcome visible and invisible barriers, isolation, distance, conflicts, and manage natural resources. This initiative contributes significantly to the conditions necessary for its social reproduction [Brito 1996, p. 32].

The two sibling villages are organized around the river, two streets parallel to it, with a slightly sloped longitudinal profile, forming an 'H' shape with the bridge [Fernandez 1964, p. 6]. The cluster of houses is spread along the street, forming a homogeneous (and varied) whole. In addition to the sense of unity, the two riverbanks converge at common points, such as the mill, the river, pathways and cultive-fields, creating a cohesive unity landscape. The houses are typically two-story, taking advantage of the terrain's slope, with stairs and balconies playing a prominent role in the design of the street-facing facade. [Filgueiras, Araújo, Dias 1980, pp. 136-138].

Between the two villages, there are stone markers representing the political border, placing each village within distinct national structures. The border seems silent and invisible but equally bears witness to the cross-border cooperation evident in bodies daily dynamics. Passages are not hindered by passports and are crossed for both work and leisure. However, the relationship between space and body diverge when it comes to go to school or administrative affairs.

Following the 2013 reform in Portugal, the administrative border of Rio de Onor was shifted to Aveleda, 15 km away, as part of a new administrative division. This movement of the border underscores the tangible impact of abstract lines on the territory and highlights how acting bodies adapt to such changes. Studying these communities not only provides valuable insights for national-level urban planning in border territories but also within the regional context and local management, and how social dynamics are affected by any alterations in these borders. These insights shed light on the intricate interplay between territory, the space and the embodied experience.

Conclusion

Focused on cross-border cooperation, this study emphasizes the necessity for collaborative urban planning that transcends administrative boundaries, reflecting the conditions and practices that affect the presence of bodies in an open and continuous space. In the contemporary context, globalization systems defy limits, connecting everyone, everywhere [Mueller 2020, pp. 391-392]. The actuality of the border does not correspond to its extinction, and neither to the construction of walls. Instead, it moves the border to other limits, as "an urban political economy of adaptation, retrofit and reuse; they suggest new ways of conceptualizing urbanization across this divided territory" [Cruz, Forman 2023, p. 27], instigating collaborative practices to transform space. As mentioned in the Rio de Onor / Rihonor de Castilla study case, and also in the examples of the 'Couto Misto' and the 'Aldeias Místigas', the analysis of cross-border situations as 'borderline cultures' recognizes historical divisions without obscuring their memory in the space but rather framing them [Godinho 2021, p. 20]. Inhabitants recognize their cultural, social, and geographical situation, and the border becomes a space of bodies encounters.

In conclusion, the insights from cross-border cooperation in Rio de Onor / Rihonor de Castilla not only enhance our understanding of border dynamics but also ancestral practical implications for sustainable territorial planning, laying the groundwork for future analysis; as a critical contribution to investigate the role of corporeity in border regions through cross-border cooperation.

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FIGURES

Fig.1 - Reis, P., *Rio de Onor/Rihonor de Castilla,* 2024, Collage, 16/21 cm, Rio de Onor/Rihonor de Castilla. Images and assembly developed by the author.


"Neo-Classical Wonderland"
Neil Lamb
Principal Lecturer,
Scott Sutherland School , RGU
"More green space"
"More green, clean, & colourful"


COMMUNITY
HIGHER EDUCATION INSTITUTIONS
LOCAL GOVERNMENT

Neil Lamb [1], Whitney Bevan [2], Maria J. M. Sanchez [3].
[1, 2, 3] Robert Gordon University,
Scott Sutherland School of Architecture and built environment
[1] n.lamb@rgu.ac.uk, [2] w.bevan@rgu.ac.uk, [3] m.martinez-sanchez@rgu.ac.uk

Enhancing student learning, inclusivity, and a sense of belonging in higher education through community engagement and civic projects

Key Words
Pedagogy, Synesthetic learning, Embodied experience, Interdisciplinarity

This article explores diverse strategies of Enhancing student learning, inclusivity, and a sense of belonging in Higher Education through community engagement and civic projects. The City Studio model and the Sustainability ambassadors' group are presented as case studies of practices that support the civic engagement at the Scott Sutherland School of Architecture and Built Environment in Aberdeen.

The City Studio is a model of experiential learning and civic engagement, that includes appropriate collaborative working with external parties– community groups, policy makers, professional bodies, etc. Civic engagement is a strong aspect of architectural education as students are required 'to look beyond the confines of the studio to embrace global cultures, politics, and social contexts critically.' (Martinez Sanchez et al. 2022:1).

Experiential learning emerges in opposition to 'learning from texts and teachers, learning through experience; to acquisition of isolated skills and techniques by drill is opposed to acquisition of them as means of attaining ends which make direct vital appeal. Kolb developed a cycle of experiential learning that has four stages: Concrete experience, Reflecting Observation, Abstract Conceptualisation and Active Experimentation. As per its definition, the CityStudio model embeds Kolb's experiential learning stages.

The City Studio module is shared across different courses. The module aims to provide students with a theoretical and practical understanding of co-design and community engagement in the context of liveable communities. Each year, the students focus on a case study in the city. This paper will present the case study of the transformation of Union Street, looking into different alternatives and opportunities to revitalize the area and making of it a vibrant space for the city.

We will analyse the impact that media can have in the civic engagement role that schools of architecture play within the city and how a the CityStudio model can enhance student learning, inclusivity, and a sense of belonging amongst the student community.

Neil Lamb, Principal lecturer, published in summer 2023 the article Walkin' the Mat and reimagining Union Street at the local journal Press & Journal. Lamb's article reimagined the possibilities of Union Street at the heart of Aberdeen. This article has become a manifesto on what Union Street could be, and the departure point of this years' CityStudio module at the school.

Union Street was designed 200 years ago in a Neo-Classical style linking the old town with the 'new town'. It is an almost one-mile street with neo-classical granite buildings that became the most popular space in the city. However, over the last years the street has suffered a decline, due to changes in shopping practices and the COVID-19 pandemic amongst others. The street has now many empty commercial units and the businesses continue to leave the street almost giving it a sense of a ghost town. The Aberdonians have been asked to engage with this, initiated by the community-led group Our Union Street.[1]

During the City Studio module (January to April 2024), the students have proposed concrete solutions for the regeneration of Union Street in Aberdeen, that have emerged from conversations with different stakeholders. The main output of this module is a documentary developed by all the students, which is used as a methodology for the engagement of communities; the students interview stakeholders, and members of the community as part of the process. The City Studio module covers aspects of co-design, including techniques for the engagement of different target groups from the quadruple helix, and deals with the need to design of practical interventions in the built environment in a participatory way. This includes consideration of the socio-economic, environmental, governmental factors that can support selection of the most appropriate co-design approach.

Within Higher Education (HE), practitioners and institutions recognise and invest significant effort into enhancing, monitoring and reviewing the student experience. There are number of influences in which the student journey within an institution can be determined, such as the teaching and learning methods adopted by practitioners, learning environments, connection to peers, the institution, or institution surroundings. A key concern, especially for international students (Tavares 2021), is student inclusivity, feeling part of or a belonging within the university (O'Keeffe 2013), local community and area, as well as understanding and integration of diverse cultures within an institution, which can enrich the student experience (Gresham and Clayton 2011). It can also be the case where students are new and temporary to an area, or part of a course for a short period of time (e.g. one year Masters course), which can increase the challenge of inclusion and student connection to an area. Further, as blended learning approaches to teaching have become prevalent in recent years, the time online and possible isolation from peers and the institutions, can cause further exclusion and hinder the feeling of belonging to an institution.

Building upon previous research that implemented forms of student-centred learning, such as giving the students a voice in their environment and learning that allowed them to become 'active players', as well as the local community and area, within student learning activities and assessments (Bevan, 2023). Study recommendations emphasised a greater understanding and student interest of the subject area, as well as indications of further curiosity for the local community and host institution.

This investigation adopted an interpretivist approach with the aim to explore the impact of diverse practices to student learning through activities that promote students being active players and community integration. The study created a 'Sustainability Ambassadors' group within a School of Architecture and Built Environment, consisting of twenty-one students over five different courses (Construction Management, Quantity Surveying, Architecture, Architecture Technology and Project Management), both Undergraduate and Postgraduate students. The aim of the ongoing Sustainability Ambassadors group is to engage with the university, the local community and peers in response to the embedding of sustainability within the university. The objectives are associated with raising awareness of sustainable practices for students, practitioners and visitors to the university, as well as engage with local sustainable community projects.

This research further extends a 'community involvement approach' (Bevan 2023) to teaching to incorporate classroom activities involving the local community. This approach which consists of projects involving universities (including students and staff), communities (including industry) and local authorities (see figure 1 below). Activities include classroom visits from local industry and stakeholders of the town to engage with students and provide insight into current community and town planning challenges. Sustainability Ambassador activities included real-life planning and development of projects in the local town, where students need to work together within their roles to address current challenges to building retrofit, occupation and community integration. Student focus groups were held following activities to understand student perceptions, levels of engagement and community connections.

Interim results highlight a level of ownership by students during the student sustainability ambassador's role and meetings, as well as empowerment to discuss sustainability issues within the institution. Students further take a proactive approach in stating how the university can improve sustainable practices and want to be involved university sustainability activities. There are also indications of greater levels of inclusion as different courses are brought to work together and there is a connection to roles assigned to students. Further, during classroom visits from the local community, there is student interest in understanding the local community and businesses (e.g. local Amazon), in addition to greater understanding of local events and discussions of how students can be part of the community e.g. a litter pick.

ENDNOTES

[1] See https://www.rgu.ac.uk/news/news-2023/6219-opinion-walkin-the-mat-and-reimagining-union-street.

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FIGURES

Fig.1 - *Captions of the Documentary developed by the students in the City Studio at Scott Sutherland School of Architecture* (Robert Gordon University, UK).
Fig.2 - *The Community Involvement Approach.*

Gerardo Semprebon[1], Chang LIU[2], Zhi LEI[3]
[1, 2, 3] Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
[1] gerardo.semprebon@polimi.it

The enigma of density.
Testing design proposals to revitalize Hua'anli urban village (Wuhan)

Key Words
Architecture, Design, Urban village, Wuhan, China

The phenomenon of Chinese urban villages, 城中村, in pinyin chéngzhongcun, literally: "village in city" is receiving growing attention from a plurality of points of view. Indeed, they resulted from the polices related to the dual land use system (urban and rural), generating contradictory urban situations in contemporary megacities. Their urban grain feature such a density that we can address these agglomerations as big architectural objects made of solids and voids. The units of the fabric, single constructions arriving at eight floors after illegal additions, are notoriously called "handshake" or "kissing" buildings [Al 2014] because of their vicinity. Such congested urban environments have been conducive to hygienic issues, mostly in terms of illumination and ventilation, creating conditions where the body of the city impacts negatively on people's ones.
The origins of urban villages date back to the establishment of the hukou system, the categorization adopted by the State to separate urban and rural residents, forming the basis for resource allocation. Urban residents benefited from stronger state control over public resources, including food, clothing, education, and social welfare. Rural residents, however, had more autonomy within their local communities. According to the Dual Land System, urban land is owned by the state, and therefore available to expropriation for new developments, while rural land that belongs to village collectives grant property rights to peasants, engendering what has also been labelled "the sunny side of hukou" [Marrucci 2017, p. 49]. Over time some rural villages have been engulfed by urban expansions resulting in today's urban villages, rural enclaves surrounded by skyscrapers and modern infrastructure, hosting a mix of poor and transient populations [Wang 2016; Wu et al. 2010] that over the years have also experienced a self-urbanization process via spontaneous illegal additions on top of existing buildings. They are informal not-any-more rural settlements encroached in urban areas drawn by centralized planning. Chronicles report that in such dense environment, inhabitants face social problems

like crime, addiction, and prostitution. Nevertheless, urban villages also offer economic opportunities to newcomers, provide affordable housing for rural migrants seeking work in the city, and still encapsulate fragment of traditional culture. For all these conditions, we can frame them as heterotopia, recalling the condition of being worlds within worlds, mirroring and yet upsetting what is outside [Foucault and Jay 1986]. Their role in the city is controversial since their poor conditions and property regime opposes to traditional land speculation and guarantee a humble yet necessary form of right to the city. Their integral demolition to make space to new urban developments represent also the authorities' will to eliminate the informality embedded in their genealogy to create more governable spaces [Wu et al. 2012].
The paper considers Hua'anli, a Wuhan's urban village, as an interesting case study to test design strategies to save the settlement from bulldozers and at the same time improve its livability. The research stems from a critical reflection on a thesis defended for the master's degree in architecture [Zhi and Chang 2023] in which the authors have elaborated an architectural project for revitalizing Hua'anli. Given the complexity and interdisciplinary dynamics converging on the dilemma of density in urban living, the proposal endorsed a research by design method to test the validity of different approaches.
Hua'anli is one of the 167 urban villages recorded in Wuhan in 2003. There is no official data about the current amount of people living in Hua'anli but in the past the population reached one hundred thousand. [1] Surrounded by railroads, it has poor transportation and poorer services like healthcare, education, or social facilities. As for the majority of Chinese urban villages, the authorities wished to re-develop this intercluded land by turning down everything to rebuilding with conventional mass housing schemes [Fabris and Semprebon 2019]. The critique to this modus operandi was the starting point of the project, which aimed at exploring alternative paths toward a more equitable future for the residential area. The most obvious action would have been to operate with punctual demolitions to free up space in the compact fabric. However, this approach would have introduced other problems, among which the definition of criteria for bulldozing some houses instead of others, or the risk of provoking irreversible damages to the structures in the demolition process, or the subsequent need to transform the façade of mutilated buildings, or the reduced monetization resulting from decreasing density, or the difficulty of introducing new service facilities, all of which would have negatively impacted on the balance of pros and cons. We soon realized that the sole act of demolition was too weak – and ideological, from a Western perspective – to be really considered as a feasible option and that we need a clearer urban vision. The decision was, therefore, to test developmental models already implemented in the past and, empirically, assess the potential implications. The four models took the name of the architect who conceived them: Haussmann, Le Corbusier, Tschumi, and Ungers. All these hypotheses unveiled shortcomings, especially when applied at the scale of the whole settlement, where social and economic mechanisms inevitably overflowed the perimeter of an architectural proposal. Therefore, the choice went to reduce the scale of intervention and, by force, play with compromises.
At a closer scale, it was possible to identify a plot with interesting spatial characteristics given by the buildings' orientation, whose rotation created space for rethinking open space both at the edges and in the inner part. The decision was to test a selective demolition and subsequent construction of an architectural prototype working as a service hub for the district. In this way, the project rejected the ideological position of making space between existing buildings and tried to fit a new architectural program in an already hyper-dense environment. The new volumes, permeable at the ground floor and connected at the upper ones had to be a taller and create a slenderer sequence of masses, conceived to host some residential units but also, and more importantly, a generous amount of services among which, sport facilities, medical clinics, halls for children and elderlies. The tentative was not only to provide a new functional program for the neighborhood, but also to give it a new architectural sense in terms of relationships between uses, introduction of a more welcoming circulation system, and application of materials and techniques guaranteeing more access of light and air. Therefore, the building has been conceived to have solid parts hosting service spaces such as toilets or deposits, and translucid parts sheltered by semitransparent skins for the primary functions, occasionally shaded by internal curtains. Perforated sheets were fixed along the external stairs to provide shelter but, at the same time, let the glaze flow though buildings and alleys.
Rather than displaying a definitive project, the experience here discussed put forward a design method and a preliminary architectural prototype alternative to recurrent massive demolitions, relocations, and reconstructions. The real validation of this hypothesis can only come from the project execution and community reaction. Yet, it is comforting to constate that other projects are working on similar paths, mostly in the notorious conurbation of the Greater Bay Area (Guangdong, Hong Kong, Macao) with significant experiments applied in Nantou Old Town. For instance, Urbanus office's regeneration plan envisions a strategy of gradual transformations

following the principle of urban acupuncture, [2] while TAO Trace Architecture Office projects leverage on the social engagement architecture can play in hyper-dense environments. [3] All these experience suggest that density remains an enigma whose processualism is often more interesting of its temporary solutions.

ENDNOTES

[1] See the portfolio by Ma Zixiao, "Vertical Wuhan," https://issuu.com/1214557189/docs/zixiao_ma_portfolio_for_ucl_march_architecture_des/s/18733736. Accessed 7 February 2023.
[2] The project is consultable here: http://www.urbanus.com.cn/uabb/uabb2017/exhibition-venue-design-concept/?lang=en. Accessed 7 February 2023.
[3] One projects is the "In-between Pavilion," consultable here: https://www.t-a-o.cn/in-between-pavilion; another projects is "A Hamlet within the urban village," consultable here: https://www.t-a-o.cn/a-hamlet-within-the-urban-village. Accessed 7 February 2023.

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FIGURES

Fig. 1 - Zhi Lei and Chang Liu. *Panorama of Hua'anli Urban Village, Wuhan*.

Christelle Lecoeur
Ecole Nationale Supérieure d'Architecture de Paris-Malaquais, ACS lab research
christelle.lecoeur@paris-malaquais.archi.fr

First semester in architecture:
A body confronted with the reality of suburban spaces

Key Words
The built and environment/body relationship, Teaching pedagogy, First year

The first steps in architectural and urban design in the first year can be destabilising for an 18 year old who has chosen a school located opposite the Louvre, when he or she is asked to work in suburban areas that are undergoing change and are often little-known and highly apprehended, on which he or she models at worst negative apriori, at best a targeted knowledge. Most of the time, the prevailing feeling is ignorance, a more nuanced feeling when a student lives there.
The challenge for the teacher is manifold: to initiate an approach to the suburban area, its socio-urban history and its polymorphous geography, to develop the tools to look at it, to analyse it but above all to help people understand the issues, its multiscalar complexities and its heterogeneous history. We need to learn to grasp its scales and its particular relationship to the body, a witness to the large areas marked by infrastructure and industry.
To achieve this, we need to imagine a threefold process: that of surveying set out in narrative form; that of designing a situated exercise constructed using the architect's tools on an observed territory; and finally that of an experiential approach that seeks to take its source in architectural and artistic practices whose object is the relationship between the body and its environment: cinema, literature and artistic practices are all resources in this respect.
The aim of this talk is to give an account of a pedagogical approach adopted over a period of a few weeks, during which the students, through their physical movements and the way they look at things, radically change their experience of a terra incognita: the suburbs.

First steps in the city
The Paris Malaquais School of Architecture is located in the heart of St Germain des Près. It shares the Beaux-Arts de Paris site.
For future students, joining this school often means wanting to be part of this prestigious

place, imagining forging links between art and architecture, working on heritage.
However, since the school was founded in 2001, a majority of the first-year classes have worked on a common area of the Parisian suburbs, and more particularly on the red suburbs *(banlieue rouge)*, towns marked by municipal communism and a working-class, suburban culture since the 1920s. Over the years, the students have been offered several large areas of this red belt surrounding part of Paris.
Groups of 15 students are formed around pairs of teachers with different backgrounds. They are brought together around a theme and have to build their teaching around 4 terms and the proposed territory: *observe, describe, design, experiment*.
A suburb that is geographically close to the school but culturally and architecturally very distant. A suburb from which few students came until last year.
They are not familiar with the word *banlieue rouge*. Sometimes they've never even heard of it, and don't know the specific history of this area, which has nonetheless been heavily impacted by modern architecture and architects. After a long history of housing and urban policy, today, it offers a range of contemporary issues surrounding industrial wasteland, alternative design methods, soil pollution and political changes.

So it's with some trepidation and sometimes even disappointment that they begin this semester. But they're also curious: why are we being asked to work on these suburbs rather than the centre of Paris?
This is one of the aims of my teaching: to answer this question and help them to immerse themselves in the first person, to show the many faces of these areas and to build up an in-depth, unfiltered knowledge of them using architectural tools. The aim is also to reflect on urban space and architectural space in relation to the political dimension, the decision-making sphere and the making of the city. Travelling through these towns means bearing witness to the careers of architects such as Renée Gailhoustet, who have been involved in a number of projects in the area. It also means talking about commitment and social democracy.
To do this, over a 6-week period, we are multiplying the exercises, the media, the on-site sessions and the sessions at the school. The students investigate, measure, analyse, record, film and tell stories, with the aim of producing critical inventories of their research and explorations for each individual or group exercise. The idea is to associate the 4 terms: observe, describe, design, experiment, with each exercise, rather than using a progressive pedagogical approach.
We work around a number of concepts that involve both the physical and sensitive senses of the students as part of the courses, exercises and urban walks. We also seek to create connections between artistic practices and architecture.
Here are a few examples, with the aim of creating skills common to the whole group.

Scale
The territories we explore are territories of transition, with scales ranging from the very small architectural object (whether a suburban pavilion or an Oscar Niemeyer building) to the very large (factory, industrial zone, housing estate, urban motorway, etc.).
The notion of scale is therefore central, and all the more so when you're going through derelict or tabula rasa areas.
This is one of the first approaches we build up during these weeks together: surface areas, notions of size, comparisons.
We choose to work with scale models by producing a large-scale model of a small architectural object (usually a pavilion they have found). Then we identify a plot of land or a place that they feel is out of scale. This time, by reducing the scale, the aim is to see how many small houses fit into this large block. Through this exercise, they quickly get to grips with the large scale.

Bringing the body face to face with the invisible
When it comes to understanding a territory, there is what you can see and what you can't see. Ivry is a town partly built on quarries that are now closed, but which form an invisible underground network. These quarries, from which material was extracted, were used to build Paris and its suburbs.
In Ivry, I always get the group of students on our urban walk to stop in front of a door on an embankment and ask: where does this door lead to? The answers point to electrical rooms and networks.The reality is different. It leads to a whole network of abandoned stone quarries running invisibly beneath the city.
To confront the invisible, I propose a highly paradoxical exercise: filming it!
The instructions are as follows: from a given address, discover the invisible of the site.
This could be something hidden or buried, or something that has been covered over or no longer exists.

This work is carried out in situ, using archives and comparative cartography.
The format of the film is free. We have had police investigations, filmed zoom conferences, desk cinema, fiction, etc.
To prepare for this exercise, a session was devoted to the relationship between the city and cinema and the architects who make films.

The weight of a city
This title was inspired by the work of artist Lara Almacergui on the city of Sao Paulo.
How much does a city weigh? How much does a building weigh? The questions seem incongruous. But it's a way of looking at the issue of resources and materials.
Based on this question, take a building that seems representative of the city and try to imagine its weight and the materials used in its construction. Is this building, which seems so representative of a suburban city, really so local?

Plants
As part of an urban walk, I present an exogenous plant in a pavilion garden.
A plant that bears witness to the social history of the community.
It's a community that was built by a large number of Portuguese immigrants, who built its housing.
Using a small piece of software on a smartphone to identify plants, we decided not to make a herbarium, but to collect photos of plants mapped on wasteland. Because with this software, we understand that we come across plants that are of distant origin, migratory plants that make up the richness of a wasteland landscape. Giving back a history and value to what is endangered or threatened seems to us to be a necessary educational gesture for a generation that will have to build in a fragile environment.

Developing an intimate relationship with the land
To take hold of an area is to develop an intimate relationship with it.
In this very personal context, we are working on the idea of writing a true story like Sophie Calle for a moment of unveiling and intimate staging.
Over the courses, the students learn about the wide range of media that can be used in architecture. Above all, they understand the importance of observing before taking action, and of grasping places and feeling them in the physical sense of the term.
Many students return to a first-year site when they graduate!
With projects where the focus is on an ecosystem that goes beyond the architectural act.

2 / INTER-ACTIVE ENDNOTES

Stefano Sartorio e Francesco Airoldi
Politecnico di Milano, Department of Architecture and Urban Studies

Understanding the relationship between the body and the space implies addressing the importance of presence, movement, gestures, sensorial experiences and people's perceptions. As stated in the introduction of the session, space cannot be considered just as a set of cartesian coordinates, or an empty area ready to be filled; it is reasonably possible to perceive and describe it through actions, movement, or personal experiences, and in relation to multiple entities, making human bodies a key factor in this process. Indeed, bodies are often seen not as mere moving entities, but as media: interacting with the environment – both physical and intangible ones – they influence humans' perceptions and conditionate its description.
Authors from all over the world participate to the session "Inter-active", that invites reflection on the reciprocal and active link between body and space, contributing to the debate proposed by the EURAU Milan 2024 call with short papers that presents some similar topics, although approached with originality and observed from personal and specific research perspectives. In this sense, the key to reading of atmosphere, the possible declinations in pedagogy and education, the agent context of fragile systems, the lens of performativity, the discussion of the project-city pair, the interpretation of these relationships, and the investigations on the body experiences can be identified as recurring themes.
Specifically, in many of the contributions collected in the session it emerges how different disciplines as psychology, neuroscience, and philosophy can help in understanding the essence of spatial perception, discussing on the concept of atmosphere as a main aspect for humans' emotional responses. This suggests the efficacy of a multidisciplinary gaze at the subject, combining the physicality of space with an emotional and introspective component.
The session investigates how body's interaction can directly transform physical spaces too: it is the case of those authors who focused on the educational-formative dimension, which recently is increasingly integrated with the digital "presence" as experienced during the pandemic time. They often interpret the topic of interactivity by investigating not only the relationship between the subject and the physical sphere of the built environment, but also the additional value that space can give to pedagogy and education.
Furthermore, when multiple bodies interact in a space, they also contribute to its construction through dynamic practices, as it can happen in social groups or communities, especially in fragile contexts. Following this logical thinking, it is possible to identify a shared narrative of meanings which embodies identity factors of a place through the inter-active relationship between people and space.
Other important declinations of the main theme are the temporal practices such as theatrical performances, which provide a further insight into how movement and time transform not only space itself, but also our perception of it.
Some contributors investigate how bodies modify urban spaces through their presence and action, transforming them according to their needs and daily activities, whether referring to an open space of a city or to a specific building typology. In these cases, the focus is on the role of bodies in space design (architectural, urban, landscape etc.), from surveying and construction sites to exploration pathways, analyzing how they interact with real-virtual spaces, and contributing to a broader and integrated understanding of the environments in which we live.
Another recurring aspect in the texts is the importance of the different scales in urban and territorial analysis, with exercises ranging from the study of models to the understanding of the invisible elements of the urban landscape: these can be used as lenses of inquiry for the restitution of interesting interpretations of the relationship between body and space, as

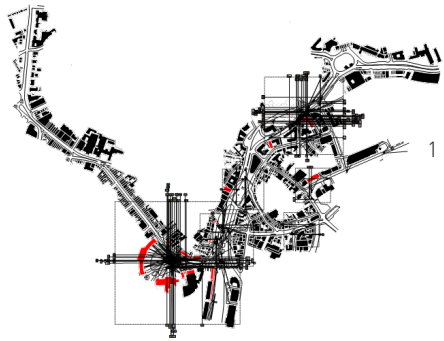
some researchers pointed out.
Finally, the section also highlights the perception of space through the senses: sight, touch, smell and other senses play a key role in the bodily experience of the surrounding environments.
The richness of contents of "Inter-active" session is due to the geographical and disciplinary plurality of the participants, who come from different parts of the globe and from various fields of research. Moreover, a variety of contexts around the world are investigated, offering an overview of the contemporary where spatial and social systems intertwine and add layers of complexity to the relationship between body and space: urban contexts, marginal territories, peripheral areas, etc. The case studies analyzed by the authors in their texts exemplify this richness, shaping up as interesting experiences from all over: from Melbourne markets to São Paulo museums, from art installations in a desert to urban studies in Indian cities.

Edited by the Inter-Active Scientific Committee and the Milan Organising Committee, see p. 21

3 / AFFECTED

/ On the possible relationships and actions of the environment on the body. Built and natural environments can be considered spatial agents acting on bodies in their various features. This corporeal view seeks innovative ways to engage people with environmental challenges, tracing the relationship between the environment and bodies in guiding a spatial transformation and cultivating a shared understanding of this perspective on 'affected' bodies.
Rather than relying on ideological stances, we draw inspiration from the experiential and corporeal aspects of the human body, how they are affected by architectural and urban spatial configurations, as well as by thermal comfort and – in general – the impact of the natural/artificial environment on it. This theme encourages disciplines to interact with frontier knowledge, investigating the relationship between the body/space and other entities and organisms.
Light, energy, temperature, fluids, and microorganisms generate/inform/form the experience of body/space, mutually modifying each other. Moreover, considering the physical and social body as a perceiving element, comprehending and interacting with the environment, and creating opportunities for environmental transformation also means investigating the role of corporeity concerning commons in their action on territories and urban spaces.
To delve into the theme of affected bodies and expand the gaze towards the condition of the climate crisis means to question the current resilient practices and post-disaster modification from a body-centred perspective. Accordingly, it means observing emergencies but also temporally broadening the view towards the future to understand and interpret risk phenomena, environmental but not only, which affect daily life, the possibilities for transformation, and the relationship between body and space. By assuming this perspective, the session could touch on the contemporary definition of this relation and the historical transformation of the issue, looking at moments of shifting conditions or significant understanding of the topic.

The session welcomes contributions which include but are not limited to:
/ The built and natural environment/body relationship;
/ The body/environment relationship in defining relationships with climate and comfort issues;
/ The body/space relation as an organism, where light, energy, temperature, fluids, and microorganisms generate/inform/shape the experience of the body-space, modifying each other;
/ The city as a place of bodies: the relationship between body, city, and commons;
/ The body affected by climate change: resilient transformation practices, and post-disaster transformations;
/ The relationship between body/climate/environmental risk.



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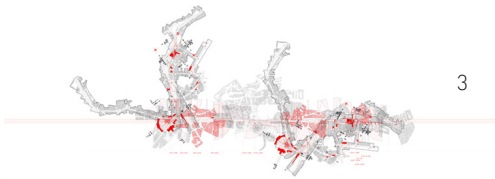

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Aikaterini Antonopoulou[1], Sebastián Aedo Jury[2]
[1]University of Liverpool , Department of Architecture
[2]University of Portsmouth, Department of Architecture
[1]aikaterini.antonopoulou@liverpool.ac.uk, [2]sebastian.aedo@port.ac.uk

The body of the crowd as a cartographic tool through the Kill the Bill movement in Bristol

Key Words
Crowd, Design-led research, Mapping, Protest

Traditional theorizations of crowds emphasize on their sensory and tactile character [Canetti 1962, Le Bon 1896], however modern crowds have always been regarded as 'mediatic objects,' engaging in complex ways with the technologies that enable their viewing. For Walter Benjamin, mass movements are best captured and observed with the help of mechanical equipment [1968, pp. 251, 236], while for Siegfried Kracauer [1960, pp. 50-51], the crowd is a highly cinematic object, whose essence can only be instantiated through film. Indeed, "the mechanical eye" as a prosthetic device of film-makers in the early 20th century is fascinated by the crowd, which they use extensively as a subject and a medium to explore the visual reality of the city and to re-present facets that cannot be seen by the human eye [Vertov 1984, pp. 17].[1] Yet, as attractive to the camera as it might be, in its transient, and ambivalent nature, the crowd seems to always escape precise representation, making space for social, political, and aesthetic controversy. According to Judith Butler, the mass assembly is 'uncapturable' for one more reason, because the definition of 'the people' represented goes far beyond those physically present on the street to include those who could not attend and even those who have not joined yet, since the collectivity is in a continuous process of making [Butler 2015, pp. 165, 169]. Today, the media form an inextricable component of social movements and mass assemblies. And although media coverage is often used by state authorities to frame perspectives of 'the people' and to produce convenient definitions of 'the people's will' as means to authorize themselves, mobile photography and filming have demonstrated their ability to form counter-positions, counter-situations, and counter-perspectives.
The aim of this paper is to revisit the ever-unresolved relationship between body, technology, and space by examining how the body of the protesting crowd interacts with its urban environment, with the media having entered the very constitution of 'people.' This study works

through the (still and moving) images of the protesting crowd, as posted online, at the at the 'Kill the Bill' movement [2] in Bristol, UK, to devise a series of exploratory drawings, maps, and models. Images and videos of the events are sourced, evaluated, and categorized, to re-compose the city and the spaces of politics in new ways. At the intersection of design-led research and film theory, the protesting crowd becomes a cartographic tool that allows for alternative representations of the city to come to the surface. Ultimately, the cartographies that are produced become discursive objects to decode the mediated subjectivity of the 'people' and their entanglements with the urban. With the recurrent shifts across the media (from photography to drawing to film to modelling and back...), the crowd emerges as an intermedia construction and as an agent that brings together people and the city in a performance of their socio-political context. This paper focuses on four acts throughout this cartographic process:

ACT I. working with still image: the development of a space-based map
The space-based exploration began by a process of organizing the photographs into groups based on their locations and then positioning them on the map of Bristol, aiming to reveal the main public spaces of action and, by extension, how the crowd has moved through the city at the time of the protest. Through the taxonomies of images, a more precise route and series of spaces were revealed throughout the city. Key buildings begun to emerge as points of reference to position the images within the map. These key buildings – we call them 'anchor points' – become spatial references for the images. As the different photographs use these buildings as spatial references, the buildings then become activated by them as if points in the space stitched by the movement of the crowd.

ACT II. working with video: the development of a space-based map
The time-based drawing unravels an eight hour long recording of a live broadcast, via YouTube, of the procession which took place on the 26th of March 2022[3]. The drawing unfolds the city onto a timeline, following the person with the camera, and rotating the buildings so that their elevations are aligned with the procession. The red blocks are areas that repeat themselves in the procession (and as the crowd circles around the city centre trying to approach the police station from different sides). The crosses signify moments of stop and panoramic views, while the thick blue lines mark the locations and movement of the police blockades.

ACT III.montaging image and video: a superimposition of maps
To return to Kracauer, as he draws from Vsevolod Pudovkin, the editing techniques of film compare to that of a man moving across multiple viewpoints to get a clear 'picture' of a street demonstration [Kracauer 1960, p. 51]. This multiplicity of viewpoints within the crowd, along with the tension between the stillness of the image and the movement of the film are also explored in Vertov' s Man with a Movie Camera, where the multitude is rendered from above and below, far and near. As the space-based map and the time-based map are montaged onto one another, the photographic perspective is brought to a dialogue with the cinematic one, unlocking new forms of urban representation. This re-composition also challenges the concept of a totalizing composition and encourages fragmentation, conflict, madness, and play.

ACT IV. the return to physical space: from drawings to objects
The above representational studies were turned into a series of physical objects and are organised in an installation, which took place at the Island Gallery in Bristol, not far away from the actual locations where the events took place, from the 30th of November to the 4th of December 2023. As the superimposition of maps transforms to a volumetric object that shows the space of the city fragmented, disjointed, and different; as the original drawing is etched on a transparent surface and becomes a lens for reading the model; and as a study about the public space of the city returns to the public, we argue that, through the lens of the protesting crowd the urban as a fixed entity gives its place to a series of spatial negotiations, contradictions, and tensions, allowing space for the marginal, the contingent, and the accidental to appear.
Against the top-down perspective of traditional cartography, the maps and models produced here emerge through the multiple views of the people from the ground of the city and as captured by their mobile cameras. According to Butler, the materiality of public space is reorganized by the public assembly and speech, constructing a new time and space of politics [Butler 2015, pp. 75]. This project attempts to represent this new time and space of politics as experienced from within the crowd. It also demonstrates that image-making (which is now an inextricable part of protest) leads to new forms of space-making. The collective body here becomes both a mediatic object and a medium itself for the production of space. The embodied and embedded representations developed here introduce a new form of urban presence, not merely a presence on the streets, but a presence within the things, a presence within the space

of politics as it emerges from the action in the city and the recordings and the dissemination of this action.

ENDNOTES

[1] See also Dziga Vertov, dir. Man with a Movie Camera (Soviet Union, 1929), Walter Ruttmann, dir., Berlin – Sumphony of a Great City (Berlin, 1927), and Fritz Lang, dir. Metropolis (Berlin, 1927).
[2] The 'Kill the Bill' movement is a series of protests in defence of the right to protest. They spread across the UK when the 'Police, Crime, Sentencing and Courts' Bill passed its second reading at the UK Parliament in March 2021 and lasted for several weeks after. Among other clauses, the legislation aims to restrict the right to protest by giving the police more control over the place and the performance of public dissent.
[3] Media Consumer 9/11, "LIVE Bristol Kill the Bill Protest," streamed live 26 March 2021, video, 7:53:39, https://www.youtube.com/watch?v=8tW5NKRVFbI (accessed October 20, 2022)
[4] Here also drawing from Bernard Tschumi (1987, p. vii)

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FIGURES

Fig. 1- The first of space-based maps.
Fig. 2 - Time-based map.
Fig. 3 - Superimposition of space-based and time-based maps.
Fig. 4 - Model exhibited at The Island Gallery, Bristol.
Fig. 5 - Exhibition at The Island Gallery, Bristol. Credit: authors.

Julia Nerantzia Tzortzi[1], Maria Stella Lux[2]
[1,2] Politecnico di Milano, DABC - Department of Architecture Built Environment and Construcion Engineering
[1] julia.georgi@polimi.it [2] mariastella.lux@polimi.it
[1] mariafranca.arq@gmail.com

Citizens as main characters in urban adaptation.
People's experience and contribution in the development of Decision Support Systems

Key Words
Urban resilience, Citizens as observatories, Urban data, Participation, Sustainable development

Climate Change (CC) is increasingly manifesting tangible effects on the environment in which we live, particularly within urban settings. Heat peaks, extreme weather events, periods of drought, followed by intense precipitation and flooding, are increasingly and significantly impacting the lives of citizens. In the face of this transformation, society is called upon to take action, with research playing a prominent role. The international scientific community has been actively engaged for decades in studying mitigation and adaptation strategies to support and guide decision-making processes and urban planning. However, citizen involvement remains relatively limited [Cruz et al. 2023], leading to a disconnection between the knowledge produced and the theoretical possibilities of action on one hand, and real-world practices on the other. This inclusion and impact effectiveness gap has also been acknowledged by the European scientific community, which is moving forward a stronger integration of citizens science and participatory processes within the application for urban resilience and adaptation paths.
Indeed, while in recent decades, CC research has primarily focused on the role of Earth Observation (EO) data, the debate on the integration between EO data and so-called citizens-based data has gained prominence in recent years. The big data provided by satellites offer a wealth of information about the entire Earth's surface, allowing for the extension and democratization of knowledge processes. However, EO data alone are not sufficient, nor with the integration and validation provided by in-situ and ground-based data. Hence, the establishment of a robust participatory planning foundation is imperative for effective and sustainable decision-making in urban planning. This foundation should consider both evolving behaviors and urban metabolism and it requires new methods for actively engaging citizens in the understanding of the problems and in the definitions of common paths for adaptation. This new direction has been clearly expressed by the strategic guidelines of the GEO community, which moved from the priorities of data and services accessibility to the for the post 2025

strategy aimed at providing "Earth Intelligence for all" [GEO 2023]. The notion of Earth Intelligence comprises precisely integrates Earth and social science to derive knowledge and insights that inform strategic decisions, build capacities and empower society to address environmental, societal, and economic challenges.
In this continuously evolving framework, the H2020 HARMONIA project provides a relevant example of data integration and priority inclusion of citizens. HARMONIA aims to deliver an Integrated Resilience Assessment Platform (IRAP) and thematic Decision Support Systems (DSSs), supporting adaptation and mitigation measures of the Paris Agreement. The project takes into account the local ecosystems of European urban areas of four pilot cases (Milan – Italy, Ixelles – Belgium, Sofia – Bulgaria; Piraeus – Greece), following an integrated and sustainable approach by incorporating the active communities' participation. Among different patterns of citizens engagement ranging from the unilateral search for feedbacks through questionnaires to the use of citizens as "sensors" providing them with mobile devices, HARMONIA opted for the active engagement of citizens as "observatories" [Barsukova et al. 2021]. In this approach, citizens are on one side the receiver of informative contents that are generally limited to the community of experts and practitioners and on the other side are called to express their opinions and needs, participating in the knowledge process and providing relevant inputs for orienting the final product. The experience gained over the past two and a half years of the project has allowed us to propose various opportunities for direct engagement with the citizens of the four HARMONIA pilot cities. In all cases, the experiential dimension has proven crucial for establishing a shared platform for discussion and mutual understanding. This is true at the level of theoretical discussion, where the communication of scientific data is made accessible and comprehensible by connecting such data with their practical significance and tangible impact. It is also evident in the phase of gathering input from citizens, who communicate priorities and perceived needs based on their physical experience of the urban environment. Lastly, this is observed in the delicate phase of participatory construction of a shared vision, which necessarily requires the immersive experience of on-site inspections or visits to key locations in the city to become aware of local issues and stimulate a transformative vision.
In conclusion, in support of the trajectory towards greater active citizen inclusion in decision-making processes for urban adaptation, and drawing on the experimentation conducted in the HARMONIA project, corporeity and the experiential dimension prove to be the foundational level from which to build participatory processes, shared discussions, and a collective understanding of complex issues, posing a significant challenge for researchers and experts in CC adaptation and urban planning studies.

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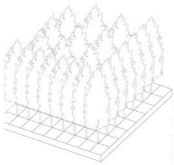

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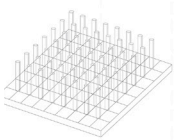

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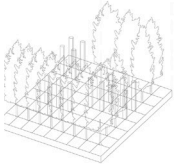

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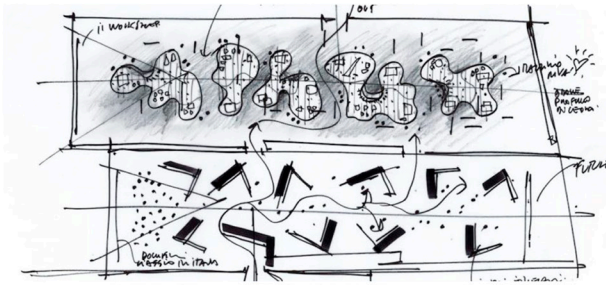

Alessandro Gaiani
University of Ferrara, Department of Architecture
alessandro.gaiani@unife.it

Post-natural inclusions

Key Words
Post-Natural, Circular overwriting, Reconditioning, Comma

The perception of Nature as a "separate and intact sphere, as a wild space to be protected and preserved by staying away from it "[Morton 2016, p. 8] or as a "subjugated and dominated element "[Morton 2007, p. 15], has prevented an inclusive and direct relationship on the part of us human beings. Imagining it as an untouchable and untouched space or as a commodity, resource or instrument for the devastation of organic ecosystems, linked to profit, are two sides of the same coin. Treating Nature, together with all living and non-living forms on earth, as an entity composed of separate elements, typical of the deterministic scientific system has driven the architecture of Modernism. It led to a season in which the relationship between man and space was divided into functions that did not intersect with each other, resulting in a built space only as a sequence of different, differently organised functions.
This attitude created architecture and cities without relationships between the parts, leading to the dissolution of the forma urbis traditionally understood, which predisposed us to inhabit "territories whose metrics are no longer spatial "[Cacciari 2021, p.14].
In the historical city, there was a relationship and a direct correspondence between human life and the quality of architecture, while the symbolic system we use today as architects can no longer totally represent the ever-changing human community because it is all too often fuelled by an abstract composition of absolute purism that places architecture on a totally autonomous and abstract plane, and is consequently inadequate to represent contemporary living.
For this reason, there seems to be a need to adapt the design process to the elaboration of visions and strategies that are different from the past in which a different concept of Nature is used, derived from the bursting in of inclusive relationships between all the elements, living and not, that make up the scene, in which there is no dominion over Nature and of Nature. We need to operate on the environment, in constant crisis, with hybrid, real conditions, necessary to unhinge the vision we have maintained from antiquity to the present.

Having ascertained that 'contingency' is present in our existence, we are now aware that we live in an ever-evolving reality that "expresses itself in the need for multiple narratives" [Chertok, Strengers 1991, p. 31], in which "the typology of natural systems is much more extensive and much more diverse [....] than those idealized elements on which modern science had initially turned its gaze" [Ceruti 2019, pp. 35-36].
These assumptions lead us to the awareness of an incompleteness within evolution that through changes and adaptations lead us to conceive the present as a continuous mutation no longer based on deterministic rules but in permanent connection with the course of events that authorizes the coexistence of inclusive relations of different levels of reality.
Translating this approach to architectural thought, based on the one hand on the tradition of Italian architectural design, which has always been founded on the relationship between the form of architecture and the city and which has seen in Aldo Rossi's interpretation of the philosopher Maurice Halbwachs' theories in which "collective memory is territorialised in urban space" [Halbwachs 1950, p. 14].
the moment of total synthesis and, on the other hand, making use of the multiform relational rules that preside over natural systems, we have the opportunity to introduce a system that is a creator of possibilities in which we interpret a multiple contemporaneity, within an ecosystemic vision that envisages a hybridization between traditional concepts and new methods and in which there is a new inclusive relationship between Man/Social Community, the rules of the city and Nature. We can then try to propose an approach that draws on circular principles proper to the natural system, hybridized with those of our recent architectural past, in which everything is brought back into play by adapting it to continuous change and, as a consequence, introducing a return of the removed.
This approach will revolve around the concept of Post-Nature, understood as a place of coexistence and subject in conflict, operating with a system that does not envisage a radical substitution of thought but a mutation of it in which ordinary human events and the extraordinary evolution of nature intertwine. An approach of specificity proper to a system capable of operating with overlaps and circular contaminations in continuous metamorphosis. Metamorphosis that will be based on a hybrid sedimentation of human and non-human narratives, desires and figurations that require the creation of alternative ways of narrating the past, present and future.
A Post-Circular approach that also envisages a "reconditioning" of the "waste" that will take on an inverse role, that is, as the engine and trigger of the mutation of space through a process that is oriented towards the recovery, manipulation and re-staging of the city's discarded and valuable heritage, operating with a hybrid and inclusive instrumentation typical of Post-Natural systems.
We know how a tree lives its life in the same spot and place, just as, precisely because it is immobile, it adapts its being on the earth with continuous mutations, grafting, year by year, elements that serve to dispose itself to changes.
So, just as the natural process is based on continuous mutations and adaptations, so too for the city and its architecture and the people who inhabit it, we propose interventions based on a "Post-Natural, inclusive, circular, adaptive and additive overwriting", which is activated through hybrid assemblages that will sometimes find cohabitation on the grafted subject, sometimes will be in conflict. The overwriting, will use a vision both in correlation and dystopian of certain elements present in nature that will be "inserted" within the body of the architectures like an enzyme that produces, by coming into contact with the constructed reality, a significant reaction.
The light, the orientation of the winds and the building, the shadows, return to be primary elements of the architectural project as well as, by way of example the archipelago, the parasite, the forest, the skin change (porous margin), the graft, the oasis, the crater and the dune (soil projects), i.e. elements present in nature, which are manipulated, hybridized to allow an unprecedented reaction with the existing structure.
These will be selected with regard to the problems that the environmental and social surroundings produce in order to mitigate the perception of climate and social change.
Where there will be a heat island, one can intervene, for example, with an operation that will de-moisten the ground and create, through an increase in trees (figure 1) or an archipelago design, a decrease in the perceived temperature gradient, or where there are situations of excessive acoustic levels, one can operate with a topographical design or a change of skin, if one operates on the individual building, always intersecting, through a design interweaving, these problems with the social ones, indicated by the communities that live there
These enzymatic, additive and adaptive multifocal devices may be able to introduce sequences of organizations that are not completely defined, spurious, in which an attempt will be made to translate the unstable relationships present in the place. They are tools based on

elementalities as a founding value and conceived as an alphabet of relational logics, capable of accumulating dispersed energies, cutting and pasting, adding or disseminating, that is, proposing a continuous metamorphosis. The proposal seeks to produce architectures/ranges of relational cities, capable of composing an unprecedented heterogeneous assemblage, placing the architectural project in a transition that can no longer be postponed. It suggests a research that aspires, however, to be based on the knowledge and re-interpretation, temporally different, of the "sedimented layers" of the city and the territory in an unusual Post-Natural relationship, with the use of "low-resolution" tools [Mantellini 2018, p. 5], coming, in part, from other worlds and capable of depriving themselves of denotative values.

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FIGURES

Fig. 1 - Assemblage of possible post-natural approaches: Forest, Archipelago (courtesy of Mario Cucinella), Topographical Project, Section of the States Olympic & Paralympic Museum, Colorado Spring, by Diller Scofidio + Renfro (courtesy of)

Cindy Menassa-Kuelby
Külby Architects
cmenassa@gmail.com

061

Rethinking design: body, behavior, nature, and our role in balancing ecosystems

Key Words
Body, Nature and the outside

In our modern existence, There has been a progressive alienation from nature, driven by factors like clothing, urbanization, and sealed environments. The urgency of climate change now demands that we reassess our behaviors, habits, and design methodologies. While the idea of "resetting the planet" may seem impractical, the focus should be on rebuilding the relationship between humanity and nature.
Recognizing our pivotal role in the planet's ecosystem, architects must prioritize designing structures that harmonize with both human physiology and the broader environment. The external environment and the symbiotic relationship between humans and nature is no longer a mere luxury; it should be an integral part of daily life, acknowledged for its numerous positive impact on our physical and mental health [Colomina-Wigley 2021, pp.167-177].To bridge the gap between indoor and outdoor spaces, particularly in urban settings, we must reconsider traditional architectural paradigms. This involves exploring innovative design approaches that democratize access to outdoor spaces, prioritizing the promotion of well-being and ecological balance.

Architectural Paradigms Evolving Through Typologies
Anthony Vidler's "The Three Typologies" outlines our architectural evolution: first Laugier's primitive hut, symbolizing a connection with nature; second the machine, representing industrialization; and third the city, with its diverse functions [Vidler 1977, pp71-74]. Javier Garcia-German, in his essay titled " Body, Atmosphere, climatic Typology: Toward an Architecture for Everyday Life", proposes a fourth typology—the climate type—highlighting the need to consider thermodynamics, culture, and social aspects in design [Garcia-German 2020]. However, architectural evolution typically doesn't negate its predecessors but rather builds upon them. Our cities are fragments of many architectural epochs, drawing upon their time.

To truly address the need of an environmental change, we must revisit and enhance previous typologies, extending their principles into contemporary design approaches.
Garcia-Germans technological demands and the integration of the inherent qualities of the surrounding natural landscape into a cohesive ecosystem can pave the way for a sustainable and interconnected future, emphasizing the seamless integration of architecture and landscape.

Transformation towards Wellbeing and Ecological Balance
Amidst pandemics and climate crisis, a transformative shift is imperative. Drawing inspiration from historical precedents such as Laugier's direct connection between architecture and nature and the modernist emphasis on well-being might seem promising. Yet, the true aspiration lies in the human body directly interacting with its outside environment, challenging conventional architectural boundaries that should go beyond thermodynamic improvements as advertised by Garcia-German and executed by Lacaton & Vassal in their elaborate building extensions [Lacaton & Vassal 2015, pp.252-260].
Reflecting on the Moriyama House in Japan by Sanaa architects, we witness a revolutionary approach (Sanaa 2020, pp.280-300) that dismantles traditional notions of spatial organization. This innovative architectural endeavor seamlessly integrates with the urban landscape, facilitating a fluid transition between spaces and fostering an effortless transition between inside and outside without change in behavior, attire or attitude between spaces. In Beka and Lemoine's film about the house[1], a poignant moment unfolds as user and photographer capture a butterfly, elevating it to a significant element within the narrative. The film skillfully frames the user alongside pivotal events like the death of the users` dog and his interaction with his neighbor, with the butterfly serving as a coexistent symbol within the encompassing plot of land. Contrary to conventional expectations, the architecture doesn't take center stage as the main subject for the photographer. Instead, the film emphasizes the holistic coexistence of various elements, contributing to the entirety and richness of the depicted experience. It highlights the significance of considering the broader ecosystem in which architecture not only positions itself, exerting a substantial influence on the ecosystem, but also should be reciprocally influenced by it to an equal extent.
I argue that we cannot place the human or the architecture, nor the nature in the center of our world to perfect our design practices. We need to look at all of them together and equalize their importance to become part of our ecosystem.

Call of Action: No More Inside-Outside Hierarchy
This transformative shift involves challenging the conventional separation between individuals and nature, urging us to confront and embrace the sensory experience it offers. This paper isn't a call to abandon urban living but rather a call for action for architects: How can we make nature an integral part of our daily domestic and working lives? Gilles Clement as a landscape architect introduced this concept as the "Third Landscape," which encompasses the integration of nature and landscapes into abandoned urban spaces [Gilles Clement 2014, pp.32-35]. This approach emphasizes the importance of preserving biodiversity and ecosystems, while embracing the positive effects of natural growth without human control. Clement's work challenges traditional notions of urban design and landscaping, urging us to reconsider our relationship with nature.
However, Clément's proposal primarily revolves around the wild landscape penetrating and converging with the city. I suggest instead to introduce and infiltrate nature to the individual, dismantling the separation between humans and nature at its origin. This approach advocates for a bottom-up transformation, where the external environment becomes an integral part of our living spaces.
If we focus on the domestic space for a moment and break down its elements, it encompasses cooking, eating, personal hygiene, sleeping, socializing, and outdoor spaces. Traditionally, all these elements are associated with interior spaces, with outdoor spaces often relegated to being the smallest areas on an urban scale that often enough are not assigned a specific function, they are simple "balconies", "terraces" or the likes. They become byproducts of our designed interiors, a residue of building codes and design conventions.
The challenge thus lies in democratizing outdoor spaces within houses and buildings and have them become an integral part of the living space and consequently of everyday life. It is essential to elevate the significance of the exterior environment and ensure its integration into the broader ecosystem. Imagine cooking amidst the open air, transitioning between functions through biodiverse outdoor spaces, and prompting our bodies to activate their senses. The aim is to ensure that the human body engages with both inside and outside spaces more frequently within the 24-hour period in daily life. Several Scientific studies show the positive effects on the brain when a person steps outside[2], not to mention the still valid modernist request for

sunlight and hygiene. The physical and mental effects of the person change positively. Why can't we, as architects, take this into consideration and start designing for the benefit of the human body [3], prioritizing well-being over solely considering the monetary and formal effects on our cities and economy?
In conclusion, a decisive call to action resonates for architects: To initiate a transformative shift that goes beyond traditional confines, seamlessly intertwining individuals, architecture, and nature. The amalgamation of historical typologies — Laugier's harmonious connection with nature, the industrial machine, and the multifaceted city — lays the foundation for a sustainable and interwoven future. This synthesis beckons architects to not only design new structures but to curate existing environments that nurture both human well-being and ecological balance. It challenges us to reimagine our relationship with the built environment, infusing it with a sense of purpose that extends beyond mere functionality, embracing the profound interconnectedness of people, structures, and the natural world.
This type of thinking urges us to rethinking our educational system as architects and asks for an interdisciplinary approach to comprehend ourselves and the ecosystem we live in. Biology, landscape architecture, and psychology should be integrated into the curriculum to enhance our knowledge to design for human beings.

ENDNOTES

[1] See Beka & Lemoine documentary Moriyama-San, that showed the intimate spaces of the artist and requestions the common sense of domestic life.
[2] See Kühn 2021, Spend time outdoor for your brain-an in-depth longitudinal MRI study, research and paper done at the Max Planck institute for Human Development, Berlin Germany.
[3] Modern architects have contributed to the idea of the relations of the human body, hygiene, and health, however the translation always ended up by framing the outside in the best possible way or utilizing the roof space as an outdoor activity that became an additive function within the house or more often it became a mere representation of cleanness with white walls and transparent façade.

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Francesca Di Fusco
University of Naples Federico II, Department of Architecture
francesca.difusco@unina.it

Interdisciplinary dialogue: Body, space and well-being.
The impact of architectural and urban configurations on paces of care

Key Words
Places of care, Cities of well-being, Body/sensory system

Environments, whether built or natural, are spatial agents capable of shaping the multiple facets of bodies. This body-centred perspective, a dynamic approach to the relationship between environment and individual is proposed, aiming to orchestrate a spatial metamorphosis and cultivate a shared understanding of human perception.
Spatial configurations, both architectural and urban, affect the body through factors such as physical well-being and care, considered as catalysts for a design process aimed at the comfort of the individual. The Treccani dictionary provides a precise overview of the term 'care': 'to take care of someone or something, to take active care of it, to provide for its needs, its preservation: to take care of one's own person, of one's own objects', and this is precisely what a space designated for wellbeing should do. In this context, the way is opened for an interdisciplinary dialogue, encouraging the discovery of new links and connections between human beings and wellness environments, where spaces act as key elements in the management of health, influencing individuals directly and indirectly. Dwelling refers, according to Heidegger, to the capacity to stay in situations, to linger and stay for a long time with the presence of the body, thought and feelings [Cocco 2020]. In this way, the design process represents an intricate system of relationships that transcends the purely cognitive and mental dimension but becomes part of a body/sensory system. When we immerse ourselves in the context of well-being, comfort and environmental quality, we can observe the reaction of the body immersed in space and its stimulation in contact with architectural environments. These stimuli generate effects that translate into sensations and emotions; the body, therefore, is a weave, an extremely complex set of bodies that are composed according to multiple relationships [Deleuze 2016]. The act of designing can be understood as the ability to shape sensory experiences in space, creating an emotional context in harmony with the psychological profile of those who inhabit it. By integrating the tools of Feng Shui with architectural design, the space is transformed

into a place capable of interpreting people's needs, narrating them and restoring a sense of belonging that converts it into a territory of narration and creation of meanings. The adoption of this method of working allows for the re-appropriation of a vision and tools that have guided architectural practice for centuries, combining technical skills with a sensitivity that develops through physical and bodily perception; in particular, in the treatise "On Airs, Waters and Places" it is clear how health depends on a state of balance between different factors that influence the activities of the body and mind: a balance that can only be achieved when a person lives in harmony with his or her external environment [Vanore 2019].
The aim of the project is to satisfy the well-being of a qualitatively good life, identifying in the architecture itself a therapeutic-preventive role and remembering that space is the true "nurturer" of society [Mei 2022]]. An example of architecture that can best interpret the union between well-being and the body is the spa: it is closely linked to the morphology of a place, as it must adapt to the available natural resources and environmental sensitivity to offer a complete spa experience. The organic analogy has used the body to fix a morphology, projecting ideal perfection onto the city and architecture, finding words, proportions and relationships in the body [Bianchetti 2020]. Several architects have taken on this challenge: such as Peter Zumthor with the Vals Spa, where the relationship between materials and the emotional connection with spaces generated intimate and unique atmospheres; Tadao Ando who, in building the Armani Spa in Tokyo, put a Zen approach into practice, envisaging minimalist spaces and recreating an atmosphere that fully promoted the concept of relaxation for the visitor. This architectural typology has perfectly incorporated the principles of sensoriality and spatial balance in their realisations; what distinguishes them is the special attention paid to the connection with nature, the intelligent use of materials and the design of spaces that respect the physical and sensory needs of the individual.

According to the EU, health and well-being are fundamental objectives closely integrated with the notion of a sustainable city. The design of urban space affects our health and well-being and has long-term implications for our quality of life. There is evidence that urban behaviour and relationships are profoundly influenced by the built environment and its design [Steemers 2015]. Thus, it is no longer sufficient to speak only of wellness architecture, but one must turn to what is called wellness cities, which prove to be a privileged framework for investigating the connection between the body and spaces of care. This relationship requires an integrated approach that does not only contemplate the body as a physical entity but also as a collective agent, capable of exerting and being influenced by the structure and dynamics of urban spaces. The idea of an urban and diffuse system for well-being responds to the logic of therapeutic connections and works in an attempt to involve different types of places and practices in a mechanism through which to construct new mappings of interaction between body and city [Bernieri 2019]. Considering the physical and social body as a sensitive element, capable of perceiving, understanding and interacting with the environment, implies an in-depth investigation of the role of corporeity in relation to the commons and its influence on territories and urban spaces. These specifications are based on reflections at different scales that combine the 'human factor' with the 'urban factor', articulating different fields of investigation through the relationship between man-community-population respectively home-neighbourhood-city [Bernieri 2019]. In this perspective, corporeity is configured as an active and interactive element, guiding the transformation of spaces towards a reflection aimed at the active participation of the body in the architectural and social fabric, opening up new perspectives for sustainable design and a harmonious interaction between individuals and the surrounding environment. It is necessary first of all to start from the body in order to imagine a design action that does not obstruct or inhibit the possibilities of good encounters and that is capable of opening up relations with the other material bodies of the city according to a non-technocratic perspective [Pasqui 2022]]. These themes are also addressed by Foucault as a function of a triple declination of the spatial paradigm, subsequently tuned to the dimensions of language, the social and the body, precisely by entrusting the person with the role of knowing how to best decline the spaces that heterochronies offer him [Sabot 2012]. The body, therefore, becomes the transit channel between space and project: the means by which the project manipulates space [Bianchetti 2020].

The contribution therefore aims to investigate how spatial configurations, in both architectural and urban settings, can directly affect the body, influencing physical well-being and human perception. The text argues that spaces are key elements in the management of health and that the design process is not limited to the cognitive dimension, but also involves the sensory and bodily dimensions. This in-depth analysis encourages considering the body as an integral part of the architectural fabric, promoting awareness of the links between body, space and

the commons. It will therefore be necessary to question how the human figure can become the place where both the essence of the corporeal presence and the architectural dimension in which it is handled coincide, and how research in architecture can also be research into corporeality and its movements, completely abandoning that intangible dimension.

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FIGURES

Fig. 1 - Architetti HIL, Meditation room, 2018, Photo, Cina. Retrieved February, 28, 2019 from: www.archdaily.com/912262/meditation-hall-hil-architects?ad_medium=gallery

Sara Nafi
Qatar University, Architecture and Urban Planning
Arch.saranafi@gmail.com

Exploring the synergy between transit-oriented development and architectural humanism.

Qatar's transit evolution: bridging architecture and urban living

Key Words
Transit-oriented development, Mobility, Connectivity, Space, Integration

Transit-oriented development (TOD) focuses on crafting environments that facilitate easy movement between various spaces. This emphasis on mobility aligns seamlessly with the overarching goal of designing spaces that promote human interaction [Calthorpe, 1993]. Architectural designs within TOD should actively encourage people to engage with one another in shared spaces, such as transit stations, pedestrian walkways, and public plazas. The concept of permeability in architecture plays a vital role, referring to the ease with which individuals can navigate through different spaces. In the context of TOD, permeable designs enhance the relationship between the body and space. This enables smooth transitions between transit facilities, buildings, and public spaces. This enhancement is achieved through well-designed entrances, open layouts, and thoughtful landscaping. Ultimately, the essence of transit-oriented development lies in the creation of spaces that prioritize accessibility and comfort for pedestrians [Marthya et al. 2021]. Architects involved in TOD should be mindful of the human scale. This means ensuring that both buildings and public spaces are proportionate to the human body, thus fostering inviting and user-friendly environments (Abdi 2021).
TOD assessments are essential to achieving society's needs, as in traditional city planning. A pedestrian catchment area (PCA) known for an adequate walking distance is considered when planning TOD (Tong et al. 2018). TOD focuses on 10 minutes walking time (400 m-800 m) as a strategic area [Al-Harami, Furlan 2020; Alawadi et al. 2021; Dong 2021]. As an adequate threshold, several standards have been proposed, starting with 400 m (quarter mile), 500 m (one-third mile), 600 m (2000 feet), and 800 m (one-half mile) (Pal 2018). The method by which these standards were established remains unclear [Hess, Lombardi 2004].
Calthorpe [Calthorpe 1993] described the different type of TOD model, and are summarized as follow:

1.Core TODs: These operate as commuter centers and are served by a variety of transportation modes, including high-frequency service. During the 18–24-hour period, the 400-meter (quarter mile) radius around the transit station is often the densest and most active. Similarly, to traditional cities, major cultural and economic activities center around central business districts. The core districts are characterized by a high density of commercial, residential, and cultural activity.

2.Center TODs: These serve as distinctive employment and residential regions in conjunction with a city. In these areas, at least two modes of transportation are available 18–24 hours a day. Within a quarter-mile radius of the metro station there are vibrant, mixed-use districts with a street configuration that encourages pedestrians and cyclists. Similarly, to the traditional model, TODs serve as both starting and ending points for travelers, connecting to a regional transit system.

3.Village TODs: Local-serving centers that serve as community and economic hubs. Several types of transportation link local city centers, combining origin-destination travel. Town centers attract fewer inhabitants from the surrounding area, with residents within an 800-meter (half mile) radius constituting the plurality of the user population. Densities are typically higher within a 400-meter (quarter mile) radius of a station.

4.Destination TODs: Special-use zones with a high user base and a major physical attraction that are often single-use. Stations are usually not the center of economic activity, and concentrations are distributed evenly around them. These are commonly seen in colleges, hospitals, government facilities, retail malls, major employment campuses, stadiums, or huge parks. Development near transportation hubs should prioritize pedestrian access to transit stations.

The architectural framework of TOD should consider transitional spaces that facilitate a seamless transition from the private to the public realms. In this regard, transit entrances serve as pivotal points where the built environment seamlessly blends with public transportation. A thoughtful design provides both efficient movement and social interaction within these transitional spaces.

To support effective public transportation, TOD often entails higher population density, so architectural design should address the vertical dimension as well. Optimizing land use with building height and form fosters urban density without sacrificing livability. Furthermore, TOD promotes infrastructure that prioritizes pedestrian and cyclist needs. A transit station's architectural design should complement this by offering bike storage, pedestrian walkways, and comfortable waiting areas. In addition to fostering efficient mobility, this approach strengthens the connection between the built environment and the body.

In addition, TOD often involves redeveloping existing urban areas near transit stations. Through TOD, architects can transform antiquated structures into vibrant, contemporary spaces. By preserving a location's historical essence, as well as adding layers of significance and memories, it fosters a profound connection between a community and its surroundings [Alawadi et al. 2021].

TOD promotes mixed-use development, which means integrating residential, commercial, and recreational spaces within a compact area. Architectural design should facilitate this integration, creating a diverse and vibrant urban environment where people can live, work, and play in close proximity to transit facilities. TOD emphasizes creating a sense of place and community identity. Architectural design should contribute to placemaking by incorporating distinctive features, public art, and landscaping that reflect the local culture and enhance the overall character of the area (Nafi et al. 2021).

The state of Qatar's capital, Doha, is a good example of TOD in its urban planning and construction initiatives. The Msheireb Downtown Doha development incorporates TOD concepts to create a sustainable and pedestrian-friendly urban environment.

Msheireb Downtown Doha:

Transitional Spaces: Msheireb Downtown Doha emphasizes transitional spaces around its transit hubs. The area around the Msheireb Metro Station serves as a bustling transitional space, seamlessly connecting the metro network with the surrounding urban fabric.

Vertical Dimension: The architectural design in Msheireb takes into account the vertical dimension by incorporating a mix of mid-rise and high-rise buildings. This optimizes land use, creating density while maintaining a livable and aesthetically pleasing environment.

Human-Centric Infrastructure: The development includes pedestrian pathways, shaded walkways, and comfortable waiting areas around transit nodes. This human-centric approach enhances pedestrian and transit users' experiences, reinforcing the connection between the

body and the built environment.
Adaptive Reuse: Msheireb Downtown Doha also showcases adaptive reuse, incorporating elements of Qatar's heritage into the urban fabric. Old structures have been transformed into cultural spaces, preserving the historic character of the area and creating a meaningful connection with the community [Boussaa et al. 2021].
This example illustrates how TOD principles are applied in Doha, integrating efficient transit infrastructure with thoughtful architectural design to create a vibrant, walkable, and community-centric urban environment. In conclusion, the connection between transit-oriented development and the relationship between the body and space in architecture is about creating environments that prioritize movement, interaction, and comfort. By considering these factors, architects can contribute to the creation of urban spaces that are not only well-connected but also enhance the overall well-being and experience of the individuals within them.

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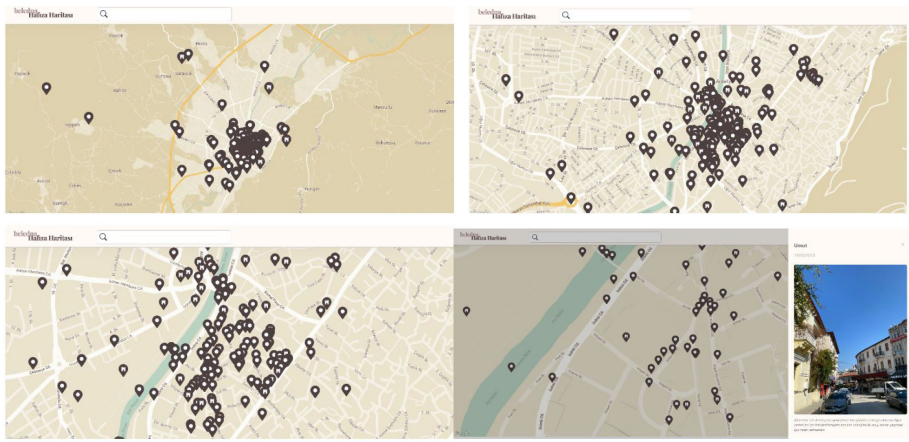
Indeks
Hatıra Haritası

Cicek Karatas
Illinois Institute of Technology, College of Architecture
ckaratas@hawk.iit.edu

Navigating fragility and urban memory: The role of the Beledna Memory Map in preserving intangible cultural heritage post-earthquake in Antakya, Hatay, Turkey

Key Words
Cultural heritage preservation, Intangible heritage, Collective memory, Digital heritage, Post-disaster resilience

Amidst the extensive devastation wrought by the earthquake that struck Türkiye and Syria on February 6, 2023, inflicting once-in-a-century havoc across the region, numerous cities in central and southern Türkiye suffered substantial damage. Particularly affected was the province of Hatay, home to the ancient city of Antakya, which withstood the worst of the catastrophe. The urban fabric of Antakya, including both reinforced concrete and historic masonry buildings such as bridges, mosques, and churches, was damaged beyond recognition by the 7.8 and 7.7 magnitude earthquakes. These seismic events delivered a catastrophic blow, reducing whole neighborhoods of the city to nothing but apparent smudges on Google Maps and instigating irreversible alterations to the landscape. In the aftermath of this calamity, not only did the physical environment undergo profound transformations, but many other fundamental elements of the urban habitat, along with its inhabitants, also ceased to exist. The redundant of the terrain pose a grave threat to the cultural heritage accumulated over more than two millennia—imperiling the distinctive identity of Antakya and its society.
At this moment, while memories of the fabric that was destroyed are still fresh, preservation of that cultural heritage is imperative. This paper proposes that the collective urban memory of Antakya's residents can be harnessed to safeguard the city's tangible and intangible heritage. As John Ruskin eloquently states in 'The Seven Lamps of Architecture' (1849), 'It is as the centralization and protectress of this sacred influence, that architecture is to be regarded by us with the most serious thought. We may live without her, and worship without her, but we cannot remember without her.' This sentiment underscores the profound role that architecture plays in shaping collective memory and cultural identity.
This paper delves into the aftermath of the devastating earthquake in Antakya, emphasizing the vital role of collective urban memory as a form of data in the post-disaster context. As evidence of the powerful role collective urban memory can play when harnessed in conjunction

with modern data analysis technology. The Beledna Memory Map and parallel efforts like the Murmur project, the MemoryWeb, and Historypin although modest in scope at present, have potentially immense implications for post-disaster resilience. While earthquakes may be a regular event, they wreak exponentially more havoc as cities are built up more and more, and globally we are poised for increasingly cataclysmic disasters, both by global warfare and increasingly erratic climate. Making digital heritage increasingly important (a) as a record from which we can reconstruct physical things and (b) just in and of itself as what may eventually be the only consistent thing we have when physical things become truly ephemeral. Collective memory can be a powerful tool for documenting both tangible and intangible cultural heritage. However, it's essential to recognize that not all structures, monuments, or cultural artifacts receive equal recognition or appreciation, leading to gaps in their documentation and preservation. Many historically and culturally significant sites remain unrecorded or underappreciated, at risk of being lost to time and neglect. Jorge Otero-Pailos' influential work 'Experimental Preservation' (2016) and the scholarly contributions of researchers such as Sharon Macdonald, Cornelius Holtorf, and Laurajane Smith delve into disparities in heritage preservation, shedding light on overlooked aspects of cultural significance that may not have been officially recognized or documented, despite their profound impact on shaping collective memory and identity. Initiatives like the Beledna Memory Map offer a promising avenue to address these gaps and foster a more comprehensive preservation of intangible heritage by harnessing collective urban memories.

The BMM is an example of a tool that organizes digital heritage to catalog urban memories which can be found here https://www.hafizaharitasi.com/map (Figure 1). Functioning beyond the conventional notion of a map, the BMM transforms into a virtual common space where memories of Antakya and the Hatay region come alive. This map, collaboratively created by volunteers, including academic scholars, aims to establish an archive contributed by individuals connected to the city. Its primary goal is to mitigate spatial memory loss caused by the destruction and subsequent reconstruction the city has undergone. Open to the public, the BMM allows users to mark locations significant to them, contributing personal stories, writings, or 2D visuals. This collaborative effort results in a rich tapestry of memories collectively representing Hatay's multifaceted identity. By leveraging the BMM as a platform for preserving and sharing collective urban memory, this paper further underscores the importance of acknowledging the intertwined nature of memory and social experience.

Transitioning from tangible to digital realms, intriguing questions arise about the function of such data in post-disaster scenarios. Specifically, how can these digital records, lacking the physicality that once shaped the urban experience, effectively evoke a poignant reminder of the city's vibrancy and life? In considering the intersection of technology and memory, the challenge lies in capturing not only the visual aspects but also the nuanced feelings and emotions associated with a place. This prompts us to explore innovative ways to leverage digital mediums to evoke a sense of connection, continuity, and shared identity, even in the absence of the physical structures that once shaped the city's character. This digital initiative not only played a crucial role in fostering community cohesion during a time of unparalleled upheaval but also brought significant attention to the dynamic changes in urban spaces, and the resilience of collective memory amidst contemporary challenges. All intangible assets, including feelings, thoughts, meaning, narrative, and associations arising from the relationship(s) people establish with the tangible aspects of cultural heritage, collectively constitute the spirit of place. The past and present experiences and reflections related to the place contribute to the 'cultural significance of place,' as defined by ICOMOS [ICOMOS 1999].

Anglo-Italian architectural historian Mario Carpo is a pioneering voice in the realm of 21st century digital preservation. In his groundbreaking work, 'The Second Digital Turn' (2017), Carpo underscores the ephemeral nature of digital media, emphasizing its variability and transience. He argues that the inherent transience of digital data poses significant challenges for preservation efforts and highlights the imperative of interdisciplinary collaboration in effectively grappling with these challenges. Carpo advocates for a convergence of expertise from various fields to address the complexities of digital preservation, emphasizing the importance of adopting a multidisciplinary approach to ensure the longevity and accessibility of digital heritage. His insights resonate with the collective memories captured through initiatives like the Beledna Memory Map.

In this paper, we have explored the profound impact of the devastating earthquake that struck Antakya, Hatay, Turkey, and the vital role of collective urban memory in preserving its cultural heritage post-disaster. Through the lens of the BMM, we have witnessed the emergence of a powerful tool for safeguarding both tangible and intangible aspects of Antakya's identity. This collaborative effort not only mitigates spatial memory loss caused by the destruction but also fosters a sense of community cohesion and resilience among its users. By leveraging digital

mediums and collective memory, we can bridge gaps, foster connections, and build resilience in the face of global challenges, including the increasing frequency of post-disaster events. Looking ahead, we envision an even more inclusive and forward-thinking future for the BMM. By allowing users to actively contribute to shaping the narrative of their city's past, present, and future, the BMM becomes a dynamic space for collective dialogue and visioning. This innovative approach to digital heritage preservation marks a significant step forward in our efforts to recover and reconstruct elements of the past that were once considered lost. As we navigate the complexities of the digital age, let us continue to harness the power of tools like the BMM to forge a path towards a more connected, inclusive, and culturally rich future for Antakya and beyond. In conclusion, the Beledna Memory Map stands as a testament to the resilience of collective memory and the power of technology in preserving cultural heritage in times of uncertainty and catastrophe. Through collaboration, innovation, and a shared commitment to preserving our history, we can ensure that the spirit of Antakya continues to thrive for generations to come.

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Francesca Melina
IUSS Pavia, Ca' Foscari University of Venice
francesca.melina@iusspavia.it

A paradigm of the contemporary city: Temperature as embodied perception

Key Words
Body-centred Paradigm, Commons, Perception, City

Our epoch appears to be one in which humanity has detached itself from what we can consider as physical and material. However, what this paper would like to defend is the hypothesis that we are already facing a new stage characterized by a renovated centrality of the body as a new orientation paradigm. Anthropocene is a shift from the world we were building and the envisioning of a new and different vision of humanity itself. The environmental crisis that we are facing requires the rethinking of all we have taken for granted in the past and, therefore, a total shift in the ways we are adopting to comprehend and act in the world. This is, for two main reasons: nature, which we have always considered immutable and a stable constant in human acting, is reacting to our violent actions; on the other hand, innovation and science itself – usually considered as what made humans stand apart from the rest – seem to be the cause of the environmental collapse we are witnessing.
In this frame, we need to look for new access to the world, not relying only on rationality, culture, and science but trying to embrace what is sensible, natural, and related to perception. Observing ourselves as organisms no longer connoted by rationality as the main characteristic discloses two different possibilities: firstly, to see how the body shapes our way of acting and building the surrounding world [Mancuso 2013], enlightening new possible understandings of human history; secondly, to recognize how our body is fully and constantly affected by the environment itself, unveiling how our different social structures are shaped to respond to the necessity of surviving in differently connoted spaces. This means that the boundaries between what is inside and what is outside can now be considered completely blurred, in a continuous action of mutual exchange [Morton 2017]. Adopting "the body" as a new paradigm of understanding, the human - bodily shaped - perspective on the world is one among the million possible: a new pathway directed towards the embracing of what is non-human and considered as "other" is now open.

This new perspective, originating from global warming and environmental risks, has to be generally considered a shift in how we produce knowledge as subjects but also leads to the need for a wider epistemological transformation [Renn 2020] involving the "social body" as a whole. Here we move from an individual level to a broader perspective by applying the two disclosed possibilities mentioned earlier to the social body itself: thus, we can recognize the mutual exchange relationship that society has with the environment and rethink the concept of social body as a perceiving element that acts shaping - and is shaped by - the environment. At a knowledge production level, therefore, the construction of new "cultural bodies" (i.e., forms of knowledge belonging to different social bodies in different parts of the world) – if it is still possible to speak of culture as separate from nature – has now to respond to the necessity of building a common vision of the world that embraces this openness.
Due to the need to produce new cultural lectures on the relationship between nature and culture, human and non-human, body and environment, it also seems necessary to reshape and rethink physical spaces themselves. Both built and natural, "space" is the place where we can actively enact this new vision of the world, building a more "eco-logical" relationship open to different perspectives and uses. The urban dimension, in this context, is taken as the "Second Nature" [Vercellone 2017] built by humans to adapt, creating their environment. The city symbolically represents humanity's emancipation from savage nature: in the context we have briefly described, it is also the place that can best represent and initiate the commutation towards new forms of inhabiting and acknowledging the world. If the city is the place of bodies – at least, but not only, human ones – we can now also rethink how the very concept of inhabiting the city can be rewritten. This article seeks to delve into the new world that a body-centered paradigm discloses in terms of rethinking space beyond our singular as well as social body-perspective: embracing "otherness" would make it possible to inhabit spaces in different ways, experimenting directly with the multiple actions of the environment on our bodies.

Within this framework, it may be useful to refer to the concept of "temperature" as the exchange of heat between bodies in contact in an interactive flow with space: the hypothesis is to account for the mutual exchange that characterizes the body/space relationship, including not only the human perspective but also that of other beings. Heat itself becomes a category to indicate the specificities of the motion of the particles of individual bodies, their peculiar characteristics of being, and their singular contribution within the interaction. Thus, going beyond the scientific concept of temperature as a measurement of heat variations placed within a scale, it rather intends a subjective or collective way of perception and attribution of meaning: it unifies the singular and the plural within itself and is characterized by infinite potential nuances. Moreover, the change in temperature can only be measurable thanks to the interaction between different "bodies": then, not only an inherently multiple concept but also inclusive in its deepest meaning, given the fact that everything has a temperature and perceives temperatures – human or non-human. From this perspective, all spaces/environments can be considered as places of interaction between different actors and acted, where these two different roles are interchangeable. In this context, "environmental temperature" refers to the combination of meanings that a social body, understood as a network of perspectives, or a singular body assigns to a place, encompassing nature and culture as part of the same environment. This is to account for the changing perception both over time and about different bodies involved.
What does it mean to apply this new way of understanding our habitats? What are the consequences? What will be attempted to demonstrate is that this new perspective is capable of redrawing the meaning of "Commons" in the urban context. The proposal is to adopt a new gaze – that doesn't look at the concept of "use" as a starting point – to see how the spaces affect us and, on the other hand, to address the different, not yet disclosed, potentialities for reuse of the spaces themselves. From a methodological point of view, this could mean starting from the investigation of "environmental temperature" – understood as a combination of meanings – attributed by a particular social body to an environment. This is both to raise awareness of these meanings and to "provoke" them through different practices, in particular art-based ones, to develop new qualitative nuances and thus new uses of the environment. It is about inviting the actors of a community to try to embrace other perspectives, seeking to unite human and non-human points of view: this is a possible step to build a "conceptual collective" that allows to imagine potential meanings of the Commons and, therefore, to create a new "material collective". The spaces are the same, but seeing them from a diverging perceptual perspective changes the potential interactions with the environment, disclosing new possible common benefits, uses, and access points. During this process, it is important to draw attention to "residual spaces" [Clement 2005], leading to new and more ecological forms of usage and reactivation. Building on this foundation allows for moving beyond the widespread

practice of "temporary reactivation" of residual spaces and could lead to environmental occupation, including by outsiders, as an enduring and evolving practice. To reach this goal, it is essential for subjects external to the inhabitants' community to participate in this process to integrate completely new perspectives as well. By confronting the past and depending on the needs and perspectives of different interacting subjects, new connections with space and the environment can be written and overwritten in the same place, offering us infinite possibilities to reactivate what has been forgotten and imagine new practices towards a more sustainable future. It is possible, then, to create new shades of "environmental temperature", producing and experimenting with different effects by different actions and bodies. Introducing this new approach as a "practice", which is no longer seen as a "temporary concession" of use, allows any space to be informed and reformed in multiple ways, truly becoming an experimental field for future ecologies.

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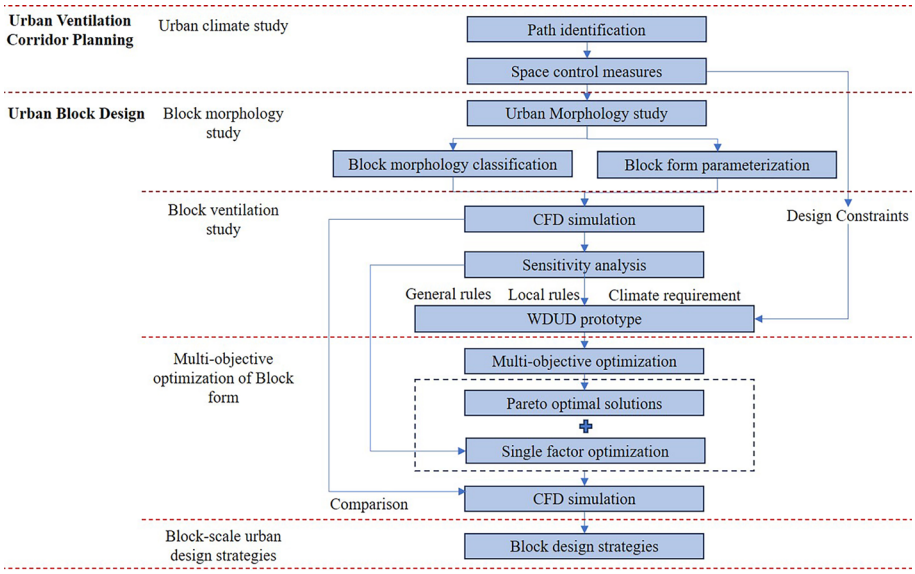
Urban Ventilation Corridor Planning
Urban climate study
Path identification
Space control measures
Urban Block Design
Block morphology study
Urban Morphology study
Block morphology classification
Block form parameterization
Block ventilation study
CFD simulation
Design Constraints
Sensitivity analysis
General rules
Local rules
Climate requirement
WDUD prototype
Multi-objective optimization of Block form
Multi-objective optimization
Pareto optimal solutions
Single factor optimization
Comparison
CFD simulation
Block-scale urban design strategies
Block design strategies

Zheng Wu
Politecnico di Milano. Department of Architecture and Urban Studies DAStU
10946302@polimi.it

Wind-driven urban design: Design urban ventilation corridors from the Block Scale

Key Words
Urban morphology, Wind environment, Urban design, CFD simulation, Multi-objective opimization

The passive increase in surface roughness and imbalance in the human-environment ratio caused by rapid urbanization has led to the global climate crisis of urban heat islands [Landsberg 1982]. In numerous studies related to urban cooling, optimizing wind environments has been proven to be an effective means of mitigating urban heat islands [Nakamura, Oke 1988]. Additionally, due to the complex synergies in urban climates, improving urban ventilation can positively impact various areas, including air quality [Tominaga et al., 2023], building energy consumption [Zeinab 2023], and public health. Consequently, countries have gradually undertaken research on Urban ventilation corridors, incorporating them into comprehensive urban planning agendas. [Chao et al. 2018; Kress 1979]
Urban ventilation corridors could utilize existing channels within urban areas to introduce fresh and cool outside air, promoting air circulation and improving the thermal environment of the city.[Kress, 1979] This approach plays a crucial role in alleviating urban pollution and enhancing thermal comfort in public spaces.
Drawing on the experiences of wind corridor construction in various cities, Ren proposed a three-step framework of "Analyze urban environment - Identify potential wind corridors - Control urban morphology".[Chao et al. 2018] It is evident that the current focus of Urban ventilation corridor construction lies in urban spatial development strategies. However, there are notable shortcomings, especially at the micro-scale, in the concrete design phase of urban morphology. These research gaps result in communication barriers among planners, architects, and residents. Therefore, improving urban ventilation through urban design at the block scale is beneficial for guiding urban spatial transformations based on the interaction between the environment and the human body. This approach bridges the gap from Urban ventilation corridor planning to block design, effectively enhancing urban comfort and addressing climate challenges.

Furthermore, the current urban climate studies, predominantly represented by wind environments, still have limitations in guiding urban design and spatial transformation. This is because existing research mainly falls into two categories: sensitivity analyses of urban environmental coupling relationships and ideal model-based automatic optimization experiments. The first type of research focuses on the impact of individual or multiple urban form factors on urban climate. While its conclusions can provide effective suggestions for transforming the urban built environment, it is incapable of generating super solutions meeting design requirements manually. Therefore, its reference value for the design of new urban areas is limited. The second type of research mainly generates idealized proxy models based on existing urban form characteristics. Using different formulas for calculating various urban form factors and employing artificial intelligence experiments such as genetic algorithms and neural networks, it conducts automatic optimization experiments. The final results present super solutions that satisfy all optimization goals. Although these experiments can demonstrate the evolution process of overall solutions during iterations, the results are mainly applicable to undeveloped areas, offering limited support for the urban redevelopment of built-up areas due to the lack of controlled variable experiments for single variables affecting optimization goals. To balance the equilibrium among residents, buildings, and the environment in the urban design process and better accomplish the task of "place-making," this paper introduces the concept of "Wind-Driven Urban Design." This approach considers wind flow as a connector to simplify the complex multiple mapping relationships between urban morphological factors and urban climatic environments.

Building on the above statements, this paper focuses on exploring the interaction between urban form and urban wind environments and how to provide guidance for urban design from the perspective of urban ventilation. Urban blocks are widely recognized as the fundamental units for constructing urban morphology, and the scale of urban blocks is closely related to residents' daily lives. Therefore, urban design at the block scale can offer clearer references for urban development.

Drawing from the active and passive urban design constraints proposed by Shi based on energy performance and urban morphology's interactive effects (Zhongming 2020), this paper comprehensively considers the holistic impact of urban ventilation on the urban environment and human body. It summarizes two scenarios of urban ventilation demand: demand-driven and restriction-driven. Demand-driven refers to enhanced urban ventilation research addressing issues such as urban heat islands and air pollution. On the other hand, restriction-driven pertains to research on limiting urban ventilation related to topics like wind comfort and winter thermal comfort. These conflicting urban ventilation requirements will jointly become constraints for urban design in this paper, combining both universal and local urban design rules.

The concept of wind-driven urban design is based on the assumption that there is a mutual influence between urban form and urban ventilation. By studying this interaction and integrating universal and local urban design rules, people aim to construct a city design model that optimizes multiple objectives for the urban environment. This model will be driven by the following questions: - What are the basic urban components that constitute city blocks? - What indicators should be used to quantify these components in the wind-driven urban design model? - To what extent do these components influence urban ventilation? What are the evaluation criteria for urban ventilation? - How can the design of these components help optimize urban ventilation?

To address the aforementioned issues, this paper proposes a five-step process to achieve a transition from Urban ventilation corridor planning to block-scale urban design.(Fig.1) The focus of this paper will be on the logic of block design and the process of generating block morphology, and the research area will focus on Berlin, Germany.

The first step involves using a simplified method based on urban morphology to quickly identify potential Urban ventilation corridors in Berlin. Additionally, control measures for different regions are proposed based on the analysis of urban wind and thermal environments, providing constraints for the subsequent Wind-Driven Urban Design(WDUD) prototype.

The second step involves reviewing relevant urban morphology methods to understand universal design rules constituting urban units. Street block typology is then defined based on urban morphology features, with the parametrization of spatial forms for various block types and the construction of a foundational database.

In the third step, combining data from the previous two steps, computational fluid dynamics (CFD) simulations are used to assess the ventilation performance of representative samples. The analysis explores the coupling relationships between block parameters and urban ventilation, with the conclusions serving as the data foundation for the WDUD prototype.

The fourth step employs a genetic algorithm to explore a solution set for optimizing block

morphology based on ventilation performance, developing an extensible generative framework. The generated super solutions simultaneously meet multiple optimization objectives, providing an ideal reference for new area construction. Meanwhile, the analysis of coupling relationships in the previous step guides controlled variable experiments for transforming single morphological factors, with the experimental conclusions guiding the transformation of the urban built environment. Ideal solutions and transformations of single morphological factors are then subjected to CFD simulations to validate the ventilation improvement effects. In the fifth step, based on qualitative and quantitative discussions, block design strategies are extended. This five-step framework is applicable to block configuration, tree cluster scale, and building forms to achieve the expected ventilation benefits, including thermal and wind comfort. The concept of wind-driven urban design will reveal the interactive responses between airflow, people, and blocks.

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FIGURES

Fig. 1 - Zheng Wu, Work flow of Wind-Driven Urban Design(WDUD), 2024, Drawn by the author.

Daniela Buonanno[1], Luciana Macaluso[1]
[1]University of Studies of Naples "Federico II", Department of Architecture DiARC
[2]University of Studies of Palermo, Department of Architecture DARCH
[1]daniela.buonanno@unina.it; [2]luciana.macaluso@unipa.it

Tree-space-body.
Urban forestry in Naples and Palermo

Key Words
Architecture, Landscape, Urban forestry, Aesthetics of the environment, Spatial analysis

The relationship among tree-space-body is at the core of the research project "RightTT, the Right Tree in the right Town. Urban Forestry for People, in Naples and Palermo", funded within the framework of the National Research Projects PRIN PNRR 2022. The study explores urban forestry initiatives financed by the National Recovery and Resilience Plan PNRR (Mission 2 - "Green Revolution and Ecological Transition", Component 4, investment line 3.1- "Protection and enhancement of urban and suburban green areas"). The PNRR allocates a funding of euro330 million for planting 6.6 million trees over an area of 6,600 hectares (based on the principal of 1000 trees per hectare) across Italy, with a focus on the southern regions and islands. The research team, comprised of units in Palermo (Principal Investigator Prof. Luciana Macaluso) and Naples (Co-Principal Investigator Prof. Daniela Buonanno), monitors this process by identifying areas for tree planting, in line with the PNRR slogan "the right tree in the right place". They propose guidelines to create living spaces where the vegetation integrates urban environment. The research aims to investigate on the co-presence of nature and artifice, bodies and tree space, and explore new relationships between the environment and the body.
Nowadays, greenery has often been planned in an abstract manner, following top-down master plans and agronomic laws, neglecting bodily experience. The research seeks to shift this perspective, responding to a common and widespread "desire for nature", coming up with a new contact with trees and envisioning urban spaces where trees are not confined but integral and structural components of the environment. Trees become part of the ideation and construction process, fostering interactions between the body, space, tree element, and other organisms.
Within architectural compositions, trees establish morphological parameters such as silhouette, size, orientation, and proportion between parts. They also contribute to perceptual elements like light, shadow, colours, and sounds, enhancing the sensory pleasure of humans

in tree spaces. Scientific studies demonstrate that among the numerous benefits provided by trees, the primary one is the alleviation of physical and psychological stress in humans. This perspective shift prompts the question of whether trees and urban forestry initiatives can contribute to human well-being. Starting from this query, ongoing actions to preserve forests and biodiversity can become a means of constructing high-quality spaces that harmonize environmental needs of tree species with human requirements. Which forest planting scheme to use? Are there primary habitat conditions where aesthetic pleasure in the landscape is heightened [1]? Are there natural spatial forms where everyone feels comfortable? These are the research inquiries focusing on two designated areas within the cities of Naples and Palermo. These areas differ significantly in size and position within the urban fabric. In each, the research aims to construct a relationship dimension between the built and natural environment/body aspect.

Urban forestry for people in Palermo
The resources assigned to the Metropolitan City of Palermo for the year 2024 are 12,947,844.00 euro in order to achieve the goals and final objective about 301,000 plants planted in 2024 in 301 ha. To the Metropolitan City's forestry call (22.04. 2022), municipalities featuring already partially wooded and internal areas responded. In the peri-urban areas around Palermo, where a lot of people live, there were difficulties in making proposals due to the fragmentation of the available soils, progressively eroded by sprawl and often subject to fires: the places where the challenge of urban redevelopment is most evident did not participate. Among the municipalities of the Metropolitan City close to the capital, Belmonte Mezzagno includes an often burned area of 126 hectares for which the municipality could respond to the next useful notice. About 8 km from the centre of Palermo, the village is located near a slope of Monte Grifone, in an area with high flood risk (PGRA Flood Risk Management Plan). Starting from a pass between Palermo and Belmonte Mezzagno, RightTT considers the northern side of the mountain as an area of possible forestation. A system of three smaller focus areas has been identified on the edge of the city: 1. Oasi della Speranza (social gathering center); 2. Cemetery of Santa Maria di Gesù; 3. Church of San Ciro (city aqueduct). In the wood of Santa Maria di Gesù will be planned temporary pavilions in order to explore new relationship between body and trees and a new way of being in the forest. The border between the slope and the town include peripheries and historical small villages, subject to high hydrogeological risk and soil pollution; oversized road infrastructures, and residual agricultural plots (Ciaculli with traditional terraced cultivation). Monte Grifone (ZSC - Special Conservation Area) is part of the Corona dei Colli of Palermo: a belt that, until the 60s, contained land consumption acting as a filter between the urban and the rural. This condition fits well with FAO's definition of the urban forests like the 'backbone' of green infrastructures, capable of connecting rural and urban areas. The selected area allows to explore an inversion of territorial transformation according to which, until now, the city overflowed beyond its limits (the hills), but tomorrow the vegetation of the Mount will cross the borders of its slopes, sprinkling the agricultural and urban plots with a new life, giving a new structure to the town. Forestation in this densely inhabited area can activate new ways of living in the suburbs, with an increase in pedestrian and slow mobility, in the provision of services and spaces to love.

Urban forestry for people in Naples
The research focuses on understanding the urban forest heritage of the Metropolitan City of Naples, examining factors such as location, size, physical-spatial characteristics, existing plant species, biological and ecological features, territorial and landscape planning tools, vulnerability to climate change, ecosystem services, community usage, accessibility, distance from urban centres, and the perception of well-being in space. The scouting phase is crucial for studying an area in the Ponticelli district (east-Naples), which is the subject of an upcoming urban reforestation project already funded by the PNRR program.
The Ponticelli district was built as part of the PSER developed after the 1980 earthquake based on the law 219/81 and on the Periphery Plan combining and making operational Local Plans 167 (L.167/62) and Recovery Plans (L.457/78). In 2020, this project was reformulated in a new Municipality-Region Program Agreement with a total funding of 110 million euros. The residential buildings are built on the edge of a central area, called the Integrated Service Center (CIS) in the plan of Marcello Vittorini (1982-85), who from north to south should have constituted the backbone of the neighbourhood, with equipment and services to support the houses. The services have never been realised and today there is a free area that the Urban Recovery Plan (PRU) plans to transform into a green area. The Municipality of Naples nominated this area for the reforestation plan, and it won, so about 7 hectares of land in the Ponticelli district will be reforested. The objective is to develop pilot projects in order to accompany this ongoing

reforestation process by expanding the user-friendliness, accessibility for different activities by the communities. Condition currently just sketchy in the tenders of the PNRR. The co-design workshop consists in the construction of spaces where architecture, art, photography, design, food and communication meet. The idea is to create dynamic environments that evolve over time thanks to the interaction between people. A microarchitecture to learn from the forest, to experiment with new forms of pedagogical interactions and encounters also between people, animals and nature (see "Bosco Colto" experience and "Platform for Humans and Birds", Ossidiana Studio). The forestation will have a strong impact on the future urban scene, already in the next fifty years. It is a huge opportunity for the towns, in order to invert some lines of their development for the benefit of the inhabitants and the ecosystem's well-being and sustainability. The idealization of the function of the trees and the vegetation could avoid the risks related to their inappropriate planting, which take just partially account of the surrounding conditions (soils, buildings, other historical and environmental pre-existence, building and urban green regulations). Urban forestry is the establishment of physical relationships between city ecosystems and citizens. The urban forest embodies the construction of a new community where there is room to embrace differences, a democratic space, and a common good.

ENDNOTE:

[1] Cfr. In The Experience of Landscape (1975), Jay Appleton introduces the notion of an aesthetic psychology based upon a primitive survival instinct. Specifically, he identifies three categories to help define one's relation to our environment: prospect, refuge, and hazard.

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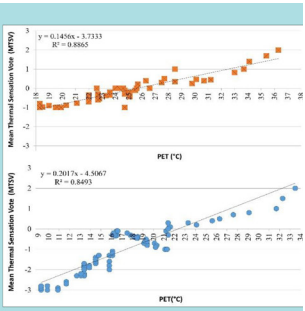
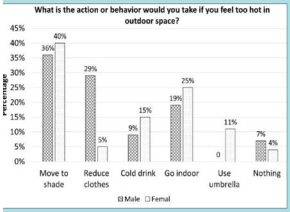
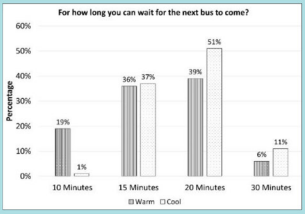
FIGURES

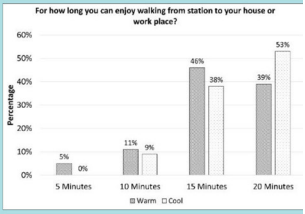
Fig. 1 - Performance and Installation, "Body, Tree and Paper" at International Summer Academy of Fine Arts in Salzburg, 1995.


Park questionnaire
Bus stop questionnaire
Metro station


y = 0.1456x - 3.7333
R² = 0.8865
Mean Thermal Sensation Vote (MTSV)
PET (°C)
y = 0.2017x - 4.5067
R² = 0.8493
Mean Thermal Sensation Vote (MTSV)
PET(°C)


What is the action or behavior would you take if you feel too hot in outdoor space?
Percentage
Move to shade
Reduce clothes
Cold drink
Go indoor
Use umbrella
Nothing
Male
Femal


For how long you can wait for the next bus to come?
Percentage
10 Minutes
15 Minutes
20 Minutes
30 Minutes
Warm
Cool


For how long you can enjoy walking from station to your house or work place?
Percentage
5 Minutes
10 Minutes
15 Minutes
20 Minutes
Warm
Cool

Deema Alattar[1,2]
[1] Qatar University, Department of Architecture and Urban Planning, College of Engineering
[2] Polytechnic University of Milan, Department of Architecture and Urban Studies
da0801752@student.qu.edu.qa

Examining outdoor thermal comfort and the use of public transportation system: A sustainable approach for Qatar's rapidly evolving cityscape

Key Words
Outdoor thermal comfort, Behavioral adaptation, Hot-arid climate, Public transportation

Introduction
The public transportation (PT) system in Doha, Qatar has recently been developed, including the operation of the Doha metro in 2019. However, the people of Qatar are accustomed to using private cars for door-to-door trips and may not fully embrace the new PT system. In addition, the harsh weather conditions in Qatar are also seen as a potential obstacle to the success of the system, as using PT often requires waiting and walking outdoors.
To ensure outdoor thermal comfort (TC), it is important to consider both microclimatic measurements and human adaptation. While physical measurements can only reflect 50% of people's actual sensory experience, human adaptation plays a significant role in the remaining 50% [Nikolopoulou 2001, 2006]. Previous studies have focused on enhancing outdoor TC in hot climates through various aspects of street design such as urban geometry, solar orientation, street orientation, shade, and vegetation [Ali-Toudert 2006; Johansson,2006; Park 2012].
Although TC studies have increased in recent years, research in this area in Qatar is still relatively modest. It is suggested to follow the ASHRAE standard for achieving TC in Qatar, but its applicability to the local climate has not been validated yet. Some researchers have criticized both Fanger's TC model and the ASHRAE standard for being limited to uniform comfort conditions [Indraganti, 2010]. To address this gap, an outdoor field study was conducted in Qatar for both warm and cool seasons. The study aimed to understand people's thermal perception of the outdoor microclimate in Qatar, their adaptive actions, and the characteristics of the outdoor built environment that would influence the use of public transportation. Where investigating the relationship of body/space along with the TC shapes the people experience of using the PT.

Research Method

The methodology of this research paper consolidates both qualitative and quantitative methods. In order to study outdoor TC [Nicol 2012] level III protocol of field studies took place focusing on the adaptive approach and using prediction and causality comparing two different groups of users [Groat 2002]. Incorporating physical measurements (objective) and human behavior (subjective) to grasp the outdoor thermal perception of people in Qatar's hot arid climate and its impact on the use of PT.

Climatic measurements were conducted during warm and cool seasons and measurements were planned every two hours from 8:00 until 18:00 hrs. Microclimatic data was collected by measuring air temperature, relative humidity, wind speed, and mean radiant temperature using data loggers. To calculate the Physiological Equivalent Temperature (PET) the climatic data was used as input into the radiation and bioclimatic model RayMan.

Simultaneously with the climatic measurements, the questionnaire was conducted, at the same time and in the same locations (right-now-right-here questionnaire). To be able to study the relationship between TSV and climatic measurements. The sample size was 200 participants; with two different groups, current user of PT were interviewed at bus stops, and non-current users were interviewed at Aspire Park.

Results and Discussion

Participants Thermal Responses

To examine how the human experience of using PT in Qatar is affected based on their level of TC, people's thermal sensation votes (TSV) were compared with PET values. A correlation test was performed using Excel's a "Linear regression analysis" test. The Mean Thermal Sensation Votes (MTSV) were used as a dependent variable (Fanger's 7 points scale), and the PET values served as an independent variable. Moreover, to identify people's e (TAR) and neutral temperature which is described in the following equations:

In the warm season: $y = 0.1456 (PET) - 3.7333$ $R^2 = 0.8865$ (1)

In the cool season: $y = 0.2017 (PET) - 4.5067$ $R^2 = 0.8493$ (2)

Based on the earlier equation, the TAR in the warm season is 22.2 to 29.1 °C, and for the cool season is 19.8 to 24.8 °C. This indicates that people tend to tolerate higher temperatures in the warm season than in the cool season.

Behavioral Adaptation

Location in the Environment

According to (Yao 2009), human behavior in an environment is a crucial aspect of human adaptation. If individuals feel thermally discomfort able, they may make various adjustments on a personal, environmental, or cultural level. The questionnaire asked participants about the steps they would take if they felt excessively hot outdoors. The primary finding was that a significant number of participants, regardless of gender, expressed their intention to seek shade, with 32% of males and 40% of females. This suggests that shielding oneself from solar radiation is seen as a vital method for enhancing TC.

Level of Activity

The level of activity is a component of behavioral adaptation that strongly affects the TC level of individuals [Clark 1985]. The study examined the relationship between participants' level of activity and their TC. Participants were asked about their preferred amount of time for walking or waiting. During the cool season, 51% of respondents said they could comfortably wait for 20 minutes for PT, compared to 39% during the warm season. Similarly, participants showed a greater willingness to walk for longer periods during the cool season compared to the warm season. These findings suggest that people have different expectations and tolerance for outdoor activities based on seasonal variations.

Physical Built Environment

The physical built environment should be designed to have a positive impact enhancing people's experience; particularly in hot climates where it has a significant impact. The study found that the PET values exceeded acceptable limits by almost 8 °C during both warm and cool seasons. Respondents agreed that finding shade was essential when feeling uncomfortably hot. Previous research in Qatar's Souq Waqif also highlighted the substantial temperature difference between shaded and unshaded areas reach up to 10C° [Alattar 2017]. In our case study, there is a lack of shade due to a low H/W ratio (0.3) and the absence of trees and shading devices. To enhance the microclimate and attract more users, it is crucial to incorporate vegetation and shading elements. Creating "vegetation islands" with shaded walkways can provide sheltered corridors and encourage people to spend more time outdoors.

Conclusion

The arid climate of Qatar poses a significant environmental challenge to the success of the newly developed PT system. Hence, this study aimed to assess the human perception of outdoor climate by combining climatic measurements, people's thermal sensation votes, and their behavior in outdoor spaces. The objective was to gain insights into people's behavior in outdoor spaces, specifically in the case of Doha.

The study revealed that PET values in Doha exceeded the TAR by 8°C. Providing adequate shade emerged as the most influential factor in achieving TC. Unfortunately, this is lacking in most of the urban areas in Doha. To address this issue, the implementation of vegetation islands was suggested. This approach not only offers an opportunity for environmental transformation but also creates an interactive urban setting that enhances outdoor spaces, making them more human-friendly areas.

From this study's findings, it can be concluded that the spatial configuration of architecture and urban settings directly affects the human experience of utilizing outdoor spaces and their level of TC. This relationship is complementary rather than contradictory. Architects, designers, and urban planners should prioritize maximizing shaded areas in Doha's streets to encourage more active use of outdoor spaces and thereby promote the use of PT.

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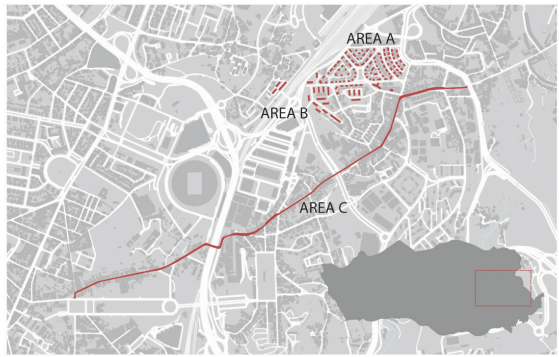
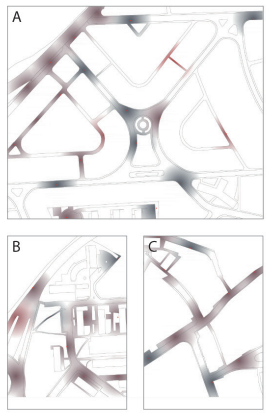
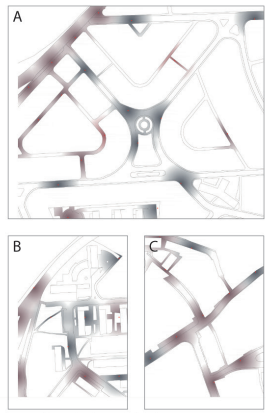
FIGURES

Fig. 1 - Site map shows Khalifa International Stadium, Aspire park, and Villagio Mall, locations of questionnaire responses where were collected (top left), Correlation between PET and TSV, warm season in orange and cool season in blue (top right) (Source: Author), Vote percentages of male and female respondents for various adaptive behaviors (bottom left) (Source: Author), Percentage of users willing to walk for a given amount of time (bottom middle) (Source: Author), Percentage of users willing to wait a given amount of time when using PT (bottom right) (Source: Author).

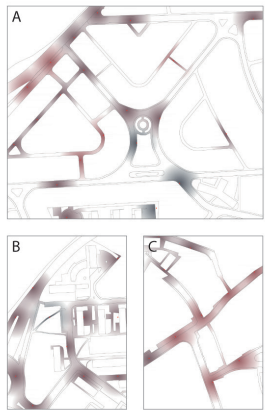




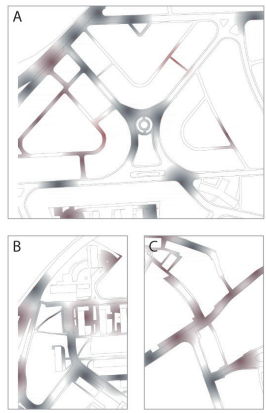
Aesthetics



Physical Activity Encouragement



Naturalness



Extent and Intensity

Catarina Freitas[1], Gisela Lameira[2]
[1,2] University of Porto, Faculty of Architecture
[1] catarina.freitas358@gmail.com

Visual urban quality and health.
A pre-intervention analysis method

Key Words
Urban development, Visual quality, Health, Well-being, Porto

Introduction
Living longer today presents challenges, as an extended lifespan doesn't necessarily equate to an improved overall quality of life or prolonged well-being. This realisation has prompted the World Health Organization [2015, p.6] to emphasize the urgency of redefining ageing and understanding the determinants of life quality. Recognising the profound impact of urban surroundings on health, we must acknowledge the architects' crucial role in advocating for increased quality years and in successful urban growth management, as 'acting bodies'.
However, current city planning lacks sufficient guidelines for health-focused urban design, with limited studies linking architectural elements to health outcomes. The proposed article addresses how the visual environment *affects* health and well-being. The objective is to establish a pre-intervention method for analysing the visual quality of space, aiming to identify urban elements that may *affect* the 'acted bodies'.

LITERATURE REVIEW
In recent years, several innovative approaches have emerged to assess the quality of the urban environment, supported by advanced measurement systems. Notable examples include the Urban Environment Quality Index [2024], the Gensler System [2024], and other methods employed in studies of urban quality, with emphasis on works by Karimi et al. [2022], Wan et al. [2022], Javandabkt et al. [2021], and Yanru et al. [2020]. Simultaneously, it's crucial to highlight studies delving into the urban environment's impact on health and well-being, spanning disciplines such as architecture, environmental psychology, sociology, and videoecology. Noteworthy studies include Zhong et al. [2021], Sinclair [2021], Yeang and Dilani [2021], and others that contributed significantly to this issue. Despite these advancements, no approaches were identified directly linking the visualisation of specific urban elements to individuals'

health and well-being. This study introduces an innovative spatial quality assessment method, drawing inspiration from influential studies, including the exploration of physiological data in urban environments by Dritsa and Biloria [2021], the visual quality analysis by Tang and Long [2019], and Gatersleben and Andrews' examination of intense and extensive environments [2013].

Study areas
This study involves a prototype analysis that examined the effectiveness of the developed method for assessing the visual quality of urban space. The focus is on three areas within São Roque da Lameira in Porto, Portugal: Area A (Affordable Houses Neighbourhood, intended for lower-middle-class social groups, 1939-43), Area B (Improvement Plan Neighbourhood, of reduced-cost housing, 1959-62), and Area C (section of São Roque da Lameira Street, an ancient Roman road that remains significant today). The inhabitants of these areas face challenges due to inadequate maintenance, deteriorating buildings, peripheralisation, and a high ageing index. Given its vulnerability and lack of prior studies, São Roque da Lameira was prioritised over other zones.

Methods
The developed analysis method is rooted in a theoretical framework which compiles the relationships between the visualisation of specific urban properties and elements and their impact on health. This database draws insights from diverse scientific domains, including neuroscience, videoecology, health geography, biophilic architecture, among others. Remarkably, this compilation of interdisciplinary knowledge represents a significant contribution to the field. Initiated in 2022, the ongoing development of this theoretical framework is currently supported by data from 41 scientific articles and 21 books. In order to unravel the theoretical information, synthesis tables were created based on the data. This methodological approach has facilitated the recognition of 126 urban properties and elements derived from the analysed literature. The initial step of the analytical procedure involves reviewing, developing, and updating the database, after which the practical analysis of the site can be initiated.
The proposed methodology is structured into two phases: quantitative analysis and qualitative analysis. The quantitative analysis seeks to identify the percentage of specific urban elements within the visual landscape. During this phase, the prototype analysis employed the following properties: monotony, diversity, homogeneity, exaggeration of elements, refuges, long vertical and horizontal lines, complexity, simplicity, depth of vision, scale invariance, and natural and artificial materials. The nuanced percentages of these urban elements and properties in the visual landscape give rise to distinct environments. For instance, homogeneity is linked to the establishment of the following environments: unaesthetic, extensive, and physical activity discouraging, which are associated with a negative impact on health. Therefore, a higher prevalence of homogeneous elements in an urban landscape is likely to result in negative health effects. In the qualitative analysis phase, the prototype assessment focused on evaluating the visual quality of the urban landscape concerning aesthetics, physical activity encouragement, naturalness, and extent/intensity. This involved comparing the percentages derived from the quantitative analysis with the ideal percentage of a particular urban element relative to these characteristics. Throughout this study, a five-point scale has been employed, with a rating of 1 indicating poor visual quality and 5 denoting optimal visual quality.

Results
Aesthetics: All areas received a final rating of 3, with Area C being the most aesthetic (3.30), suggesting, for residents in this area, potential cardiovascular benefits, improved mood, emotional comfort, and increased willingness to engage in physical exercise.
Physical Activity Encouragement: While all areas received a rating of 3, Area B stood out with a higher rating of 3.45. This indicates residents of Area B are more likely to benefit from improved cognitive abilities, sleep quality, social interactions, immunity, anxiety, stress, along with prevention of cardiovascular diseases, cancer, depression, dementia, and type 2 diabetes.
Naturalness: Areas A and B received a rating of 3, while Area C scored 2, revealing, for residents in this area, increased vulnerability to sedentary lifestyle, headaches, mental illnesses, anxiety, depressive symptoms, and mood disorders. Extent/Intensity: Only Area B reached a level 4 rating, while the remaining areas obtained a rating of 3. Therefore, the residents of Area B are likely to experience reduced fatigue, stress, boredom, social problems, blood pressure, and heart rate, along with increased confidence, sense of security, mental restoration, and concentration. Consequently, the overall assessment results in a neutral rating of 3 for the zone, obtained from the average of the ratings of the four characteristics: aesthetics, physical activity encouragement, naturalness, and extent/intensity.

Conclusion

In conducting this prototype analysis, it's recognised that, even if residents aren't currently vulnerable to the exacerbation of certain health issues, due to the neutral visual quality of the zone, architects or urban planners have the potential to proactively enhance residents' quality of life through strategic urban interventions. Assimilating the network complexity of the relationships between the visual landscape and the body requires a continuous study spanning various scientific areas. Therefore, the prototype analysis undertaken in this study results from a defined timeframe, with the obtained results being preliminary and open to further enhancement through the development of the database. Beyond the ongoing effort to supplement the database, an essential future prospect involves expanding the analysis to encompass additional urban areas or cities. This will enable a comparative assessment of visual quality across diverse urban landscapes, fostering a deeper understanding of the impact these visual environments have on health.

ACKNOWLEDGEMENTS

This study was developed within the funded research project CAOP - Climate adaptation for older people living in vulnerable urban areas (PTDC/GES-URB/2038/2021). This research project involves the Faculty of Engineering, Architecture and Pharmacy of the University of Porto and the University of Coimbra.

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FIGURES

Fig. 1 - Freitas, C., Results of the Visual Quality Assessment of São Roque da Lameira in Porto, 2024.

Gennaro Vitolo
University of Naples Federico II, Department of Architecture
gennaro.vitolo@unina.it

Contemplation and rebirth: Cemeteries between atmospheres and inner journeys

Key Words
Cemetery Atmosphere, Public spaces, Memory, Multifunctional landscape

The proposed contribution is part of the interdisciplinary research "Rethinking lastscapes Perspectives (R.I.P.)" – carried out at the University of Naples Federico II – which aims to identify design strategies and processes aimed at rethinking the tangible and intangible cemetery heritage in the light of the transformative dynamics of contemporary cities and societies. More precisely, as a result of a Master's Degree thesis research work carried out abroad and visits to multiple cemetery spaces, it is investigated here how bodies are affected by the cemetery environment and how the design of those places can open to uses other than burial, with reference to the case study of the Stockholm cemetery.
The rethinking of cemetery landscapes – the theme of the R.I.P. research – is based on a comparative analysis with national and international case studies, identified – with the possibility of extension – through a study that considers architectural and urban dimensions, the existing heritage, the regulatory and economic frameworks, and anthropological, cultural, religious aspects, as affirmed regarding the issue [D'Agostino, Vannelli 2024, p. 6]. Amongst these examples, The Woodland Cemetery is a contemporary case study of how the environment and atmosphere of a place can profoundly affect the perception of the stages of grief – during the funeral ritual – and how cemetery spaces – renegotiated in their urban role – can be rethought for the benefit of an interaction between urban spaces and extra-urban heterotopias. In a world in which the meaning of corporeality is questioned, which seeks to transcend the value of the experiences of places, exploring how the cemetery and its atmospheres affect the bodily experience can open to a dialogue between the tangible and the ephemeral, where emotions and memory intertwine with spatial relationships and materiality of the silent places of life and death. The elements that compose the cemetery environment define atmospheres that affect the ways in which these places are perceived and used, and these, in turn, take on symbolism that responds to the needs of the bodies that experience them: as Peter Zumthor

asserts "we perceive atmosphere through our emotional sensibility – a form of perception that works incredibly quickly, and which we humans evidently need to help us survive" [Zumthor 2018, p. 11].
The Stockholm cemetery stands as an example of a newfound unity between sacred place and public space. The Woodland Cemetery, designed by Erik Gunnar Asplund and Sigurd Lewerentz in 1915, is a sacred space that goes far beyond the mere function of burial: it needs to be traversed, seen, felt and introjected, becoming an emotional and physical refuge, revealing itself as a symbolic path that affects bodies and souls, as Luigi Franciosini states: "[...] is prefigured by a vision that is not at all unusual or extraordinary [...]. But this dimension does not require any narrative devices, leaving you to wonder whether the unexpected, the surprising and the sublime should not be sought within the most ordinary and simple things" [Franciosini 2011, p. 16]. The spatial, architectural and landscape qualities affect all users, who benefit from this public space as a place for meditation and reflection, a public park at the service of the community where burial spaces coexist with the places of life.
The design concept is rooted in the scandinavian tradition and its connection to nature, it aims to give new meanings the natural elements with a new value within the rituals and their effects on the users of the spaces, as described by Caroline Constant: "the architects relied primarily on enhancing attributes of the landscape – ridge and valley, earth and sky, forest and clearing, meadow and marsh – to evoke associations of death and rebirth" [Constant 1994, p. 1]. Every space, slope, density, gradient of light is conceived: the designers succeed in guiding the emotional condition of the visitor through the arrangement of a narrative sequence of architectural elements, which, working in concert with the natural elements, create a tension between environment/atmosphere – architecture/landscape – bodies/souls, a key tension for the awakening of what is intangible.
The definition of the spatial sequence directs the emotional effect during the ritual of the last farewell: it can overturn the vision of death, revealing it not as an end, but as the passage between cycles of life. Architecture and landscape become the settings for this internalisation: at first, the gentle slope marks the beginning of a new journey for the grievers, a slow ascent to an afterlife, at the end of which three architectures guide the funeral ceremonies, the Faith, Hope and Holy Cross Chapels. The ritual continues in a wooded path, the Way of the Seven Wells, which crosses the Forest of Memories: a space conceived, controlled in volumes, densities and contrasts of light and shadow, calibrated in rhythms, transparencies, nuances, but constantly changing, like life. At the two extremes of the Way of the Seven Wells are two polarities, figuratively opposite but symbolically connected, in tension but in harmony, architecture and landscape: the Chapel of Resurrection and the Meditation Grove. The former, in its composition and atmosphere, interacts with visitors to this place, marking the end of a cycle and the beginning of a new one; the latter, through defining a landscape, encloses and concludes a spatial, bodily, and spiritual experience. The space, the places, the atmospheres, the environment of the cemetery are weighted so that the bodies also make an inner journey, shifting from the dark solemnity of the forest to a luminous reconciliation from the top of the hill.
The poetry of these places constitutes a unique and meaningful experience for those who pass through them: the cemetery is not just a place of burial, but a landscape in which the corporeal and the spiritual connect during ritual. Rituals allow us to face the world in its complexity and upheavals. Of these, the funeral rite is the one that most confronts the human matter of our bodies, their fragility, their temporariness, their changes in the natural order of life.
In this we find the architecture of places: petrified externalisation of habits and emotions, of rituals and potentialities, synthesis between a tangible world and spiritual needs that affect our bodies in the appropriation of places. The spatial characteristics of the cemetery have also influenced other uses: it is a representation of peace and serenity, used by the living as a large public space where rest, contemplation of natural spaces and meditation can take place. In this type of relationship between the city and the cemetery, between the coexistence of public spaces and burial places, the research finds a basis for a change in the perspectives behind the design of these places: not just serving the dead one, but places capable of affecting the living.
In conclusion, the experience of grief requires physical environments and intangible atmospheres that carry expectations, responses and symbols that can be perceived and internalised by our bodies, but these elements can also be an incentive for other uses of cemeteries that go beyond burial, taking on the role of public spaces for the city. In the dual reading of these places, among which emerges the case study The Woodland Cemetery, the R.I.P. research finds a basis for new design demands to rethink cemetery spaces: not places excluded from life and the city – heterotopias –, but landscapes that embrace and affect and users, making them participants in a cyclic renewal of the relationship between environment/atmosphere – landscape/architecture – bodies/souls.

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FIGURES

Fig. 1 - Vitolo, G., Five spaces to live and overcome death, 2021, Photography, 24 cm x 16 cm, Skogskyrkogården, Stockholm, Sweden. Photos taken by the author. These five spaces narrate the journey led by the people who experience the Woodland Cemetery, both as a place to overcome mourning and as a public space to enjoy (1. The entrance slope, 2. The Faith, Hope and Holy Cross Chapels, 3. The Forest of Memories. 4. The Chapel of Resurrection, 5. The Meditation Grove).

Greta Caliendo
University of Naples Federico II, DiARC
greta.caliendo@unina.it

Cultural heritage and public space. Affecting social complexity of Contemporary City

Key Words
Cultural heritage sites, Public space, Contemporary City, Socio-spatial regeneration

This contribution investigates the affordances of cultural heritage sites, conceived as public space, in inhabiting Contemporary City, highlighting how these can address the ways of using public space and guide "socio-spatial regeneration processes" [1]. It proposes a critical analysis based on two extensive research involving respectively Naples National Archaeological Museum (MANN) [3] and Pompeii Archaeological Park [4] and their interplay with public space and the city.
Cultural heritage site can hold a crucial role in affecting the way we live and in providing interpersonal personal spaces. In a world where uncontrolled population expansion will eventually come to a head with the unavoidable reality of limited space and resources, it serves as instrumental "public space", promoting social interaction and inclusion. Simultaneously, it has the capacity to shape collective memories of residents and users and instilling an awareness of places and traditions.
Questioning cultural heritage as both a global public good and a spatial identity good, this research delves into the mutual interplay between body and cultural heritage space, and how it can impact on inhabiting Contemporary City, physically offering an interpersonal space to local community as well as cultural values in which the community can recognize itself. Conventionally, the role of cultural heritage sites is related to the preservation of artworks and their fruition within either buildings-containers (such as museums) or protection enclosures (such as archaeological parks). However, they can modify the ways they affect bodies, turning towards the city and providing their spaces for socio-cultural services and not merely for preservation and visits. By doing so, they can promote social interaction and collaboration, leading urban regeneration processes in their urban contexts.
In recent years the concept of heritage has been invested by a revolution that, in the early 21st century, UNESCO called the "museums of cities movement" [UNESCO 2006, p. 5], and that is

reflected in the increasing awareness of the significance of museums and archeological parks and their affect on the city. "Hypermuseums" [7] have become not only landmarks and icons for cities and their communities, but also drivers of vast urban regeneration processes.
All over the world there are numerous instances of cultural heritage sites, both Museums and Archeological parks, that can be considered as best practices in the national and international scene, for the demonstrated ability in profoundly changing urban public space and the interplay between cultural heritage site and the city, through the impact of architectural design and urban planning. Examples include: the Roman Theater in Cartagena [8], where the cultural itinerary involves historical ruins and open spaces, generating a process of rebirth of the City's historic center; or the Tate Modern Gallery in London [9], former industrial site, converted into a museum and public spaces, to redevelop that part of the City; or even the Medellín Museum of Modern Art [10], which represents a further piece of the urban, social and cultural strategies for regenerating the City and especially the informal settlements on its fringes. The cultural heritage site becomes, thus, an active component of a broader process of urban redevelopment and assumes the role of materially "producing" public space. Becoming a new square, a place for meeting and cultural exchange, it further expands the social significance of cultural heritage and aims, thus, at the idea of an "open museum". This is also related to the concept of "liquid museum" [Cameron 2013, p. 354], namely, an open-ended structure that, in the performance of his duties, is permeable, mobile, dynamic, relational, and adaptive, capable of interacting with the complexity of contemporary changes and needs. It stands, therefore, as an "active participant" in society, providing cultural and social services, and making its spaces available for uses and functions other than the intrinsic ones of preservation and visiting.
After surveying and analyzing some of these best practices, it is possible to further stimulate a reflection starting from two case studies which constitute a field of production of empirical knowledge and experimentation on the theme of this contribution: (a) the action that MANN Management has activated to open a section of the ground floor towards the City and make it part of urban public spaces, hosting new uses and functions even different from museal and exhibition ones [11]; (b) the will expressed by Pompeii Archaeological Park to open up to local community the space "outside the walls," that is the space in-between the ancient city walls and the park enclosure, as a freely accessible meeting place [12].
While different in type of place and specificity of the context, the two case studies show similarities directly related to the goals introduced in recent years by the respective managements. These allow to demonstrate how changing the spatial configuration of a place, opening up to the city and "breaking" the container or the enclosure, can affect the corporal aspects of human body. Despite the highlighted differences, there emerges a willingness of both "cultural stakeholders" to pursue an idea of "widespread museum" [13], a place of permeation between cultural heritage and territory, but also between cultural heritage and people.
Ultimately, the reflections of this contribution inevitably intersect with the issue of preserving and enhancing cultural heritage. Consequently, the results of this paper would address the task of cultural heritage in its "transition" between conservation and regeneration, surveying strategies aimed at protecting cultural heritage by acting on spatial modification and, thus, at integrating preservation with transformation of urban space. This can translate into opening up cultural heritage site to local community as a "producer" of contemporary public space, presenting an opportunity for the socio-spatial regeneration of contexts, through design, as well as the social usability of space as a container of practices and events, promoting not only spatial but also social and cultural inclusion.

ENDNOTES

[1] As stated by Caruso N. in Rigenerazione dello spazio urbano e trasformazione sociale Vol. 05, in Proceedings of the XXIII SIU National Conference, in a context of increasing demographic contraction phenomena, city transformation processes engage with various social issues. Transformation practices and projects are strongly connected to social demands and must necessarily deal with the territory and its practices. Therefore, urban regeneration means not only facing phenomena of innovation and experimentation, but also situations of social and economic marginality.
[3] Applied research agreement "Implementazione e valorizzazione della connettività urbana del MANN" (2018-2020) between Naples National Archaeological Museum (MANN) and Architecture Department of University of Naples Federico II (DiARC). Scientific coordinator: prof. arch. Carlo Gasparrini.
[4] Applied research agreement "POMPEI FUORI/TRA LE MURA. La cinta antica, le necropoli, gli ingressi moderni, la Buffer zone e il rapporto con i siti minori" (2022-in corso) between Pompeii Archaeological Park and Architecture Department of University of Naples Federico II (DiARC). Scientific coordinator: prof. arch. Renata Picone.
[7] As called by Ciorra P. and Suma S. in I Musei dell'Iperconsumo: Atti del convegno internazionale (2006).

[8] https://rafaelmoneo.com/en/projects/museum-of-the-roman-theater-of-cartagena/
[9] https://www.herzogdemeuron.com/projects/263-the-tate-modern-project/; https://www.tate.org.uk/about-us/projects/tate-modern-project
[10] https://51-1.com/MAMM
[11] https://mann-napoli.it/; Piano Strategico quadriennale del MANN 2016/19 e 2020/23 https://mann-napoli.it/piano-strategico/
[12] http://pompeiisites.org/; https://cultura.gov.it/luogo/parco-archeologico-di-pompei-area-archeologica-di-pompei; http://pompeiisites.org/eventi-parco-archeologico/
[13] The concept of "widespread museum" was first theorized by Drugman F. in Idee per un progetto di museo lungo il Trebbia (2016).

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576
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Francesca Zanotto
Politecnico di Milano, Department of Architecture and Urban Environment DAStU
francesca.zanotto@polimi.it

Diverse bodies, multiple scales: Architectural strategies for urban biodiversity

Key Words
Architecture, Biodiversity, Scale, Coexistence

Throughout history, humans have consistently tailored architecture to suit their own body, adjusting its size and features to meet their needs. The Roman centuriatio, which forms the basis of urban structure in much of the Mediterranean basin and beyond, initially relied on foot length for measurement—and in various regions globally, measurements still adhere to the dimensions of the human body. On the same lines, the fundamental elements of architecture are conceived in direct correlation to bodily measurements: the size of bricks that give shape, color and texture to historic centers, particularly in European cities, is precisely designed for easy handling by the human hand. The tatami, serving as a foundational module for traditional Japanese architecture, has maintained its dimensions based on the space required for two seated individuals throughout millennia.
Following this analogy, cities have been designed, more or less explicitly, to function as the human body does: from ancient cities to the ideal cities of Renaissance, when many attempts tried to mirroring with forms, hierarchy, and arrangements of streets and squares "that celestial harmony that Leonardo da Vinci embodied in his drawing for the Vitruvian Man" [Mancuso 2023, p. 32], to contemporary cities, where directional centers symbolically represent the head, while the peripheries, reached through arteries, house facilities for waste treatment and removal. The Modern Movement solidified the relationship between the body's size, its well-being requirements of air and light, and the urban form, as well as the scale of architecture and its elements. Le Corbusier developed, starting from the 40s, the Modulor, the well-known system of proportions based on the human body's measurements, aiming to provide a universal and mathematically consistent approach to design that reflects human scale and ergonomics; in the 60s, he stated that "a plan organizes organs systematically, thus forming an organism or organisms" [Le Corbusier 1960, p. 155].

Before and after the Modulor, throughout the 20th century, this relationship was extensively codified by figures such as Ernst Neufert [1], Margarete Schütte-Lihotzky [2], Francis de N. Schroeder [3], Henry Dreyfuss [4] and others. Many of these codifications marked significant progress in making architecture functional and purposeful. However, today, they also reveal their limitations: they tend to seek standard measures, simplifying the vast range of human singularities. This inclination, at times, implicitly asserts that only a specific corporeality is acceptable or foreseen in space. Additionally, the concept of 'user', frequently employed to denote those inhabiting architecture, is often considered problematic: according to Adrian Forty, for example, it suppresses all the differences – even corporal – that actually exist to create a homogenous and fictional unity [Forty 2004, p. 312].
Contemporary architectural research and practice are actively striving for the inclusion of bodies with diverse forms, sizes, and needs in the conversation around design [5]. Simultaneously, contemporary architecture is demanded to address critical issues such as the climate crisis and societal inequalities, to implement strategies against climate change and act as a "civil and sociopolitical infrastructure" [Lechner 2021, p. 443], essentially serving as a manifesto for fostering a more balanced coexistence among humans as well as among humans and other species. In this context, the need to preserve and enhance biodiversity, as highlighted in the European Union's Biodiversity Strategy for 2030, is crucial not only to ensuring ecological balance, human well-being, global food security, and ecosystem services, but also to envisioning non-anthropocentric systems where other species also find the space to thrive. Biodiversity is defined by the variable forms of coexistence, in the same ecosystem, of different microorganisms, animal and plant species, which manage to remain in balance thanks to their mutual relationships. As part of the scholarly work of Spoke 5 of the NBFC - National Biodiversity Future Center project (one of the five centers backed by the Italian National Recovery and Resilience Plan, which goal is to generate knowledge for conserving, restoring, monitoring, and enhancing Italian and Mediterranean biodiversity), scientific research is conducted in relation to the ways, strategies, and dispositions that architectural and urban design can adopt in order to help conserve and increase biodiversity in urban settings.
The nexus between architectural and urban design and biodiversity draws a field of inquiry and action that is open to different disciplines, areas, and dimensions. A project that aims, among other goals, to protect and/or increase biodiversity in the context in which it is developed and implemented requires not only the synergy between different knowledges, but, above all, a gaze capable of looking at the same time at different actors and, consequently, at different bodies, different dimensions, and different scales. This text, therefore, aims to briefly present how contemporary architectural design can operate in order to relate, in its composition, to the sizes and features of other-than-human bodies; it does this reflecting on the guidelines provided by a series of manuals issued in the last 20 years aiming to provide indications for architectural design for biodiversity.
Envisioning and implementing biodiverse urban public spaces, particularly in dense built environments, pose numerous challenges. Primarily, it necessitates consideration of bodies whose dimensions and needs are frequently unknown or whose knowledge and recognition struggle to find a place in design processes: these bodies encompass minuscule, imperceptible living organisms like microorganisms affecting soil conditions, as well as sizable, conspicuous entities such as trees, with whom urban and architectural design often engage at a superficial level, treating them as static objects to be arranged on an horizontal plane rather than recognizing them as living organisms with roots, trunks and crowns, occupying space in a complex and dynamic way over time.
With the aim of expanding the scope of design to various scales and taking into account the dimensions and needs of different species and bodies, contemporary design can operate in two ways. Firstly, by contemplating how architectural elements can interact differently with the bodies of different species, at different scales. Many contemporary experimentations successfully integrate nesting components on façades, roofs, and cavities [6], or incorporate porous walls or pavements to accommodate the smallest organisms within architecture [7].
The second perspective involves a more integrated view of architectural and urban composition, aiming to ensure the thriving of different organisms in environments that cater to their diverse needs. This is achieved through the discipline's capacity to control space by organizing factors such as extent, form, interconnection, accessibility, radiation, and ground footprint. A thorough study of these factors can contribute to creating a viable and habitable project for different entities across different scales, from microorganisms to trees, potentially generating urban spaces that are more livable for humans as well. This includes controlling the building footprint to prevent excessive site coverage and facilitate wildlife movement; managing building height to avoid overshadowing at the ground level; ensuring proper building orientation for adequate illumination of external areas; promoting natural movements of animals and plants; minimizing

impermeable surfaces to allow infiltration, to promote ecological processes [Barnett 2002, p. 4].
In conclusion, architectural and urban design, which relates to the human dimension, tasked with achieving goals related to the protection and enhancement of biodiversity in urban areas should adopt a strongly transcalar perspective, that considers the bodies' sizes and needs of various entities to implement strategies that operate from the minute to the bigger dimensions, fostering equilibrium among diverse organisms. Simultaneously, the focus remains on designing accessible, safe, and inviting architecture and urban spaces for people, contributing to the creation of livable cities. By transitioning from centuries of structuring cities solely based on the human body, designing for biodiversity may unveil "countless organizational possibilities offered by life forms other than humans" [Mancuso 2023, p. 12], better suited, perhaps, to current conditions. This shift can ultimately establish a framework for the cooperation between living beings as an essential driver of evolution [8], the collaboration evoked by Richard Buckminster Fuller when describing planet Earth as a Spaceship [Buckminster Fuller, 1968]: a closed system, wandering in the universe with its own crew, united in the need to cooperate to use the limited resources on board for their own survival.

ACKNOWLEDGMENT
This research has received funding from the "National Biodiversity Future Center - NBFC" project funded under the National Recovery and Resilience Plan (NRRP), Mission 4 Component 2 Investment 1.4 - Call for tender No. 3138 of 16 December 2021, rectified by Decree n.3175 of 18 December 2021 of Italian Ministry of University and Research funded by the European Union – NextGenerationEU. Project code CN_00000033, Concession Decree No. 1034 of 17 June 2022 adopted by the Italian Ministry of University and Research, CUP, H43C22000530001.

NOTES

[1] See Ernst Neufert, Architects' Data, Bauwelt-Verlag, Germany 1936.
[2] See Lorenza Minoli, Margarete Schutte-Lihotzky. Dalla cucina alla città, Franco Angeli, Milano 1999.
[3] See Francis de N. Schroeder, Anatomy for Interior Designers, Whitney Library of Design, New York 1948.
[4] See Henry Dreyfuss, Designing for People, Whitney Library of Design, New York 1955.
[5] See, for example, Ellen Lupton, Beautiful users. Designing for people, Princeton Architectural Press, New York 2014, proposing a more inclusive design perspective on ergonomics.
[6] See Kelly Gunnell, Brian Murphy and Carol Williams, Designing for Biodiversity. A Technical Guide for New And Existing Buildings, RIBA Publishing, London 2013; Thomas E. Hauck, Wolfgang W. Weisser (edited by), Animal-Aided Design in The Living Environment. Integrating the needs of animal species into the planning and design of urban open spaces, University of Kassel, Technical University of Munich, German Federal Agency for Nature Conservation (BfN), 2019.
[7] See, for example, the Biodiverse Wall developed by ChartierDalix in partnership with the Museum of Natural History (CESCO laboratory) and the Paris Malaquais School of Architecture (GSA laboratory).
[8] See Patrick Geddes, Cities in evolution: an introduction to the town planning movement and to the study of civics, Williams & Norgate, London 1915.

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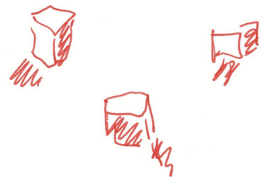
FIGURES

Fig. 1 - National Biodiversity Future Center, Department of Architecture and Urban Studies -



Giovanni Comi
Università degli Studi di Udine, Dipartimento Politecnico di ingegneria e architettura
giovanni.comi@uniud.it

Thinking in architecture.
Matter as mediation between body and nature

Key Words
Space-Time-Body, Gender-Space-Architecture, Built Environment

Introduction to the body
Reinterpreting the definition used by Cézanne to describe his creative work, "thinking in architecture" means that the architect, to fully express himself, must translate his thought into a built form through a language consistent with the grammar of space, time, and matter. In this dialectic between thought and form, the body becomes a necessary element through which recognizing the adequacy of the compositional choices which, on the other hand, the architect makes precisely because of his personal sensorial experience. In fact, as Wölfflin writes "one only understands what can be done first-hand" [Wölfflin 2010, p. 16].
From these premises the text proposes a reflection on the conditions that allow the spatiality, temporality, and materiality of architecture to be transcribed in an emotional register with which they are perceived. The declared starting point is the acknowledgment of the irreversibility of changes in architecture with regards to materials, methods of design, environmental awareness, the redefinition of social groups, elements of a crisis to be considered broadly and unitary. Each of these factors, in fact, represents a potential element of division, which risks depriving architecture of its value of appropriateness.

Matter that concerns us
In his commentary on Spinoza, Deleuze introduces a reflection on Uexküll – a German-speaking Estonian naturalist who lived between the nineteenth and twentieth centuries – who represents a fundamental contribution, in a historical and conceptual sense, to the understanding of the relationship between man-nature and body-mind [Deleuze 1991, p. 154]. Uexküll was the first to define the umwelt, the environment [ ] no longer in the cultural terms that had characterized it until then, but in naturalistic-biological terms, demonstrating experimentally that the structure of every living being is constituted by the unity with its own environment. No longer

abstract space, but a space where every man lives and builds his own specific environment. This relational dimension introduces an active and dynamic perspective that recognizes man's quality of transforming his environment and of being in turn transformed by it in a continuous cross-reference of perceptions, actions, and imaginations. "I know how to reflect only on what concerns my places" [Bachelard 2006, p. 222] Bachelard would later write, from which comes the idea that everyone perceives what is around him according to his specific sensitivity.
The theme of the contextuality of architecture, its complexity, its stratification, and definition in the man-nature relationship, thus unfolds through an approach to the themes of building and living according to a reflective, integrated, and systemic style. Designing is taken as an intransitive verb that is placed in the movement of thought that is generated when the space has already lost its abstraction and the place has not yet found its rooting. In fact, the project contains the incontrovertible facts of reality, but also the hidden and latent possibilities, which are waiting to be found in memory to become "invention". The dialectical relationship between man and the environment refers to an internal experience, because "when we enter a space, the space enters us, and the experience is, essentially, an exchange and a fusion between subject and object" [Pallasmaa 2012, p. 67].
Walter Renee Furst, later cited by Kenneth Frampton in Intimations and Tactility, instead brings out a new centrality for the body: "It is in the opposition offered to the body by space that it becomes possible for space itself to participate in the life of the body and, reciprocally, it is the opposition of the body that animates the spatial form. This baseless pillar rests on a horizontal floor block. It creates an impression of stability, of power to resist. A body approaches the pillar; from the contrast created between the movement of this body and the quiet immortality of the column, a sensation of expressive life arises, which neither the body without the column, nor the column without the body, could have evoked" [Frampton 1981, 57]. But the relationship between man and space requires further investigation. As Heidegger writes, space, in fact, "is neither an external object nor an internal experience. [...] since if I say 'a man' [...] and that is who lives, with this I already indicate with the term 'man' the sojourn in the Quadrature near things" and concludes that "the relationship between man and space is nothing else that living is thought of in its essence" [Heidegger 2019, p. 104]. An essence that finds expression in the sense of gravity that makes us aware of the relationship with the ground, and of the way in which the body and, by extension, architecture, takes root or distances itself from it, almost levitating above it [ ]. The categories of gravity and lightness, which configure the dialectic with space according to different degrees, on the other hand represent the polarizations through which we define matter and its character. However, knowing matter is only possible by deleting distances, introducing a degree of proximity; matter thus ceases to be pure exteriority and, precisely as it enters relationship, mediates between man and Nature. This relationship is not one-way, as one might think. In encountering matter, man becomes the object of comparison. "And by virtue of this [substance], however, the living participates in what they see and touch: they are stones, they are trees; they exchange contacts and breaths with the matter that encompasses them. They touch and are touched [...]" [Valéry 2011, p. 30]. Thus, Eupalinos explains to Phaedrus that architecture is a question of reciprocity between man and the world. However, matter is not the material; between these realities there is indeed a proximity but not a coincidence. Only when matter is subjected to a metamorphosis and removed from its original reality, does it acquire a new form and become material. The material does not only have a character, its own physical and measurable property, it cannot only be observed by the eye and identified by the hand but is perceived by the body as a multisensory complex and introjected to constitute a symbolic structure that becomes a set of memories and identity.
It follows that "the use of a material should never be given by choice or by calculation, but only by intuition and desire" [Fjeld 1983, p. 46]. In fact, if matter is manipulated outside of its sensorial and corporeal value it cannot be inhabited. What has been said is intended to underline that the use of a material requires in-depth knowledge of its properties so that it can be used according to a construction syntax that is truly consistent with the specific character to be attributed to the construction.

Conclusions

Each material must be considered according to its tactile, visual, symbolic values and used according to a thought that inserts it into the compositional process. However, in contemporary architecture we witness the use of new materials designed for specific performance, used in an exclusively technological perspective, considered the only expression, and guarantee of current architecture. The material is either a silent support or pre-exists the construction and the place; it follows that "design is no longer put in the form of materials, but largely coordination of products" [ ], an index of elements to be combined according to merely assembly logic. This condition not only interrupts the sensorial relation with architecture but distorts the

architectural design which becomes subordinate to the material.
Conceding that there are different, new, and unexplored possibilities offered by technology means recognizing the risk of operating freely, ignoring the essential relationship with a necessary obstacle. For these reasons, today, even more than in the past, architecture must monitor the compositional dimension. It means not limiting oneself to adhering to an innovative logic of improvement but grasping the transformative possibility of the project, connected to the Stimmung – the atmosphere – which is generated when man and his environment resonate together. This concept of atmosphere, which does not only have subjective meaning but takes on cognitive power, is what gives even to a small construction such as Ralph Erskine's Box, the energy to express the relationship between architecture and its meaning [4].

ENDNOTES

[1] Uexküll speaks more precisely of environments in the plural terms, *umwelten*.
[2] "Mass is the first name of matter, the most elementary, so much so that we can affirm that mass is matter without adjectives", Espuelas 2012, p. 17.
[3] Gregotti 1999, p. 57.
[4] This research is developed within the iNEST – Spoke 04 project. The project is funded by the European Union – Next GenerationEU. However, the views and opinions expressed are those of the Author only and do not necessarily reflect those of the European Union or the European Commission, which cannot be held responsible for said views.

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FIGURE

Fig. 1 - Sverre Fehn, *The architectural space creates the room*, 1970, sketches, © Sverre Fehn. Nasjonalmuseet, Arkitektursamlingene, Oslo.

Alessandro Frigerio[1], Laura Montedoro[2], Corinna Del Bianco[3]
[1]Politecnico di Milano, Department of Architecture, Built Environment and Construction Engineering
[2,]Politecnico di Milano, Department of Architecture and Urban Studies
[3]Politecnico di Milano, Department of Architecture and Urban Studies, Fondazione Romualdo Del Bianco
alessandro.frigerio@polimi.it

Overtourism in UNESCO sites and its effect on urban public space.
An EU project experience of research by design in Athens, Florence and Krakow

Key Words
Overtourism, Public space, Research-by-design, UNESCO cities

When discussing the contemporary evidence of the shift from the physical to the immaterial, from the corporeal to the virtual, there's a prominent phenomenon that reveals a strong persistence of the need and desire for an in-presence experience of places: tourism.
In the last decades, the interlace between the increasingly easier physical act of travelling/visiting and the socio-economic patterns driven by social networks dynamics and digital services has transformed the tourism industry and caused uncontrolled consequences on urban spaces. This phenomenon has taken the name of 'overtourism', described by the World Tourism Organization as "the impact of tourism on a destination, or parts thereof, that excessively influences perceived quality of life of citizens and/or quality of visitor experiences in a negative way" (UNWTO, 2018). Effects can be seen on gentrification processes, housing market, commerce patterns, de-signification of public spaces, risks for heritage preservation, and several others [Liberatore et al, 2022; Shirvani and De Luca, 2022; Gössliing et al, 2020; Celata and Romano, 2020; Koens et al, 2018].
The Covid19 pandemic has made clear the vulnerability of the UNESCO historic centers, which have reorganized their economies and the uses of their physical and intangible heritage on tourism, undermining the monocultural models dedicated to mass tourism and revealing new critical issues and fragilities of the urban systems.
With the restrictions imposed by health prevention systems, tourist flows have stopped and the historic centers have emptied, both in their streets and squares, and in their abundant building heritage dedicated to hospitality (restaurants, bars, hotels, short-term rentals, etc.). In this context, the public space, normally intended to welcome visitors, has been dramatically emptied of presences and functions, making the historic centers unwelcoming and unsuitable for the needs of residents; however, it has not been the subject of a real rethinking from a more resilient perspective, respecting the local cultural identity and environmental, social and

economic sustainability.
Starting from these considerations, the Erasmus+ (Call 2021 Round 1 KA2) project Sustainable Urban Space Pavillion (SUSPA) intends to produce alternative urban scenarios through the experimentation of new forms of international teaching - using innovative technologies and methods that allow an articulation of teaching in presence, at a distance and in mixed mode - aimed at investigating on the impact of the pandemic and to formulate intervention hypotheses, according to the practice of "research by design". The work focuses on the central areas of cities located in the countries of the partnership, registered in the UNESCO list of world heritage sites.
SUSPA is promoting a transnational discussion on the effects of overtourism with a specific attention to UNESCO cities in the European context, aiming at investigating how design actions on urban public spaces could mitigate the impact or readdress tourism dynamics to reconciliate residents' and visitors' agencies. UNESCO cities, in facts, are a significant example of these phenomena as they live the paradox of making the effort itself of protecting and promoting heritage (UNESCO, 2011 – 2013) one of the main drivers of the overtourism process that put that same heritage at risk.
The project focuses on three cities – Athens, Florence, and Krakow, inscribed in the World Heritage List in 1987, 1982 and 1978 – combining analytical studies and research-by-design through the organization of study-trips, seminars, and workshops in the field with the final aim of drafting guidelines to support the local decision-makers in addressing the increasingly urgent situation. In the three cities, dynamics affecting the public space are similar, even if contextually declined according to the local urban culture and climate: overcrowding, privatization and foodification of major attractive areas, together with the neglection of others, that can present traces of gentrification when tourism penetrates the residential city outside the historic center [Dodds and Butler, 2019]. Overtourism has social, economic, cultural, and environmental impacts all affecting the physical space of the city.
Being a complex phenomenon, it needs specific policy actions and planning tools supported by a strong political will to set the framework to reconsider the role of tourism on cities in a more sustainable way, as Florence is interestingly experimenting in the last years [Francini, 2022; De Luca et al, 2021; Del Bianco, 2020]. Moving in a complementary and spatialized urban design perspective [Del Bianco and Montedoro, 2023], SUSPA's preliminary outcomes trace four main trajectories focused on public space design, open to be further explored in supporting the broader policy-making effort. The common purpose is to explore possibilities to drive public investments or to manage private-public partnerships with an inclusive perspective able to have an effect on the full spectrum of the overtourism impact.
The first has to do with the need to better understand metropolitan dynamics in a systemic way, with the aim of rebalancing the effects of tourism in historical cores through the reconnection with their territorial systems by cultural and ecological itineraries and corridors. This could have several benefits, both from a cultural perspective of awareness and understanding, and from a socio-economic perspective of redistribution. This dynamic was especially explored studying the relation between Athens and Eleusis, a city in the metropolitan area of the Greek capital, historically connected by the Sacred Way. In 2023, Eleusis has European Capital of Culture, an occasion aimed at repositioning Eleusis out of its image of industrial city excluded from the tourism circuits and at strengthening its livability and cultural role through the regeneration of its industrial heritage and open spaces: a vision facing several challenges.
Secondly, the research project focused on the gates to the cities, questioning what it means today being welcomed in a highly visited heritage city, both in terms of logistics and in terms of diversity of the needs and desires patters of visitors. Also considering, of course, the variety of risen expectations and information that are remotely accessible through the internet and social media. This welcoming role can be performed by reinventing underutilized or undervalued open spaces in strategic locations and by reconsidering how residents will also interact with these spaces. These places could work as welcoming gates also for locals and metropolitan city-users, to raise awareness on their own city's history, present socio-cultural initiatives, and future transformations. This role of welcoming gates as broader intended 'urban centers' could be envisioned setting a more or less physical relation with existing cultural institutions, strengthening and expanding their role. Some design explorations on this issue have been performed both in Florence and Krakow. In Florence, discussing and building on the ongoing plan of the Municipality to transform part of the Santa Maria Novella complex, in front of the main train station, in a renewed visitor center. In Krakow, considering urban open spaces in strategic spots, like the ones in front of the National Museum and the Ethnographic Museum, as potential strategic locations for newly built pavilions interpreting the history of places.
A third design trajectories opens the reflections on diffused systems in the city fabric built by constellations of smaller interventions. The main hint came in Florence from the possibility

to reconsider the role of urban kiosks, partially abandoned, as providers of services at the neighborhood scale, both for tourists and residents. Going beyond the basic existing functions of flowers or newspaper selling (disappearing) or low-quality souvenirs shops (increasing), kiosks could become multifunctional hub interacting with digital services, providing a wide range of facilities and becoming a reference point for the neighborhood life, also transforming the public space around them.
Fourth and last attention has to do with the role of nature in improving urban livability, overlooking at how climate change is affecting European cities, in terms of temperatures, natural hazard and psychological wellness. Overtourism needs infrastructure and services that massively consume resources, produce pollution, raise heat islands. Driving tourism investments in improving the landscape quality, environmental comfort and ecological performativity of public spaces could contribute to heal urban systems and build more sustainable cities, setting compensation patterns potentially contributing to the reconciliation between tourists and residents. Design opportunities in this sense could combine the production of ecosystemic services and the building of new functional and aesthetic relations between cities and their landscapes, such as Florence with its river, Krakow with its parks and Athens with the sea.
All the four trajectories have to do with the value of places, that's also what push for the desire to experience cities in presence. However, overtourism determines an over-presence that turns public space from a common good and polysemous common ground [Lotman, 1985], able to host a great plurality of actors and practices [Montedoro, 2017], into a disposable commodity, to be rapidly used and consumed, with the risk of losing its sense of place and therefore paradoxically, its attractivity. How design actions can contribute to counteracting this process is the open question that the SUPSA project is investigating.

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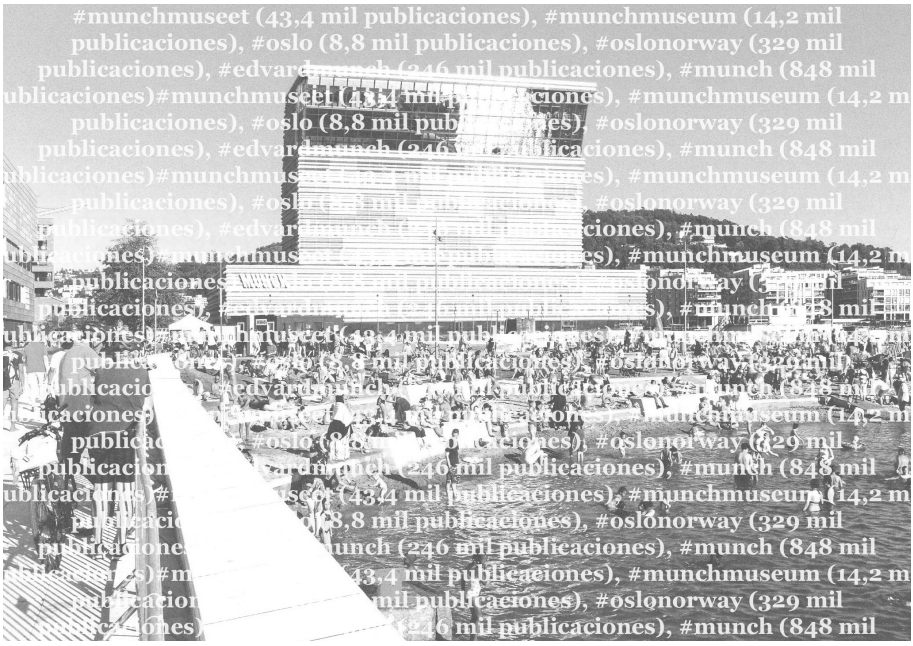
#munchmuseet (43,4 mil publicaciones), #munchmuseum (14,2 mil publicaciones), #oslo (8,8 mil publicaciones), #oslonorway (329 mil publicaciones), #edvardmunch (246 mil publicaciones), #munch (848 mil

Ayelén Betsabe Zucotti
ayelenbetsabezucotti@gmail.com

The tags associated with the Munch Museum and its relationship to the Oslo community

Key Words
Tags, Museum, Community

The Munch Museum has been an institution with great exposure to media controversy. The beginning of this project originates from the donation of the artist's works to the Oslo community; "In 1944 Edvard Munch died in Oslo, leaving in his will a valuable gift to the city, consisting of all the paintings, drawings, graphic work, photographs, correspondence and books that the artist had produced during his lifetime. It was a legacy of more than twenty-eight thousand items that could only be exhibited when, as Munch specified, a museum had been built that could display this unique collection as it deserved."[1] The entire collection had to respect these conditions and at the same time be approved by the representative of the local government. This means that the government of Oslo has the responsibility of guardianship of the works and receives, in a way, the task of realizing a museum.
The first museum dedicated to Munch opened in 1963 in the Tøyen district of central Oslo. As a result of the competition in 1953, "fifty entries were received and a proposal entitled Rondo Amoroso by the relatively young architects Gunnar Fougner (40) and Einar Myklebust (30) won the first prize."[2]. A building that, however, failed to meet international requirements in terms of safeguarding the works. "On August 22, 2004, the U.S. broadcaster Sky News suspended its programming, while the BBC and CNN reserved time for several minutes of live reporting from Oslo. The reason was that two masked gunmen broke into the Munchmuseet and escaped with two world-famous paintings: The Scream and Madonna."[3]. This event forced the authorities to reinforce security mechanisms, although it was finally decided in 2006 to close the doors of the museum and in 2008, the authorities agreed to call for a new architectural competition.
The excerpt from the competition report stated about the future museum: "that not only refers to the custody and exhibition of art, but also develops an urban role of responsibility as a cohesive element of public projection for the community it serves"[4]. The programmatic requirements had to be in favor of the urban interventions in the Bjørvika area, the site chosen

for the new museum and where the Oslo Opera House, built in 2007 by local studio Snøetta, is currently located.
Once the work was awarded to the winning team estudioHerreros in 2009, the project and construction process would last more than a decade, after constant conflicts between the authorities and the Oslo community, which exposed the building to a constant media confrontation.
In the year 2021, the building is about to be inaugurated and the design studio North will be in charge of creating the visual entity of the museum and the sign on its façade. The studio took the decision to synthesize the original title Munch Museet to simply MUNCH, with a gesture of tilting the typography used by 20 degrees, emphasizing, as a metaphor, the inclination of the building at the top. "In the middle of the darkest period of the year in Oslo, the sign on the facade of MUNCH lights up announcing the planned opening to the public in 2021."[5]
The synthesis chosen for the façade sign and the new location of the building are key to understanding the relationship of the labels to the associated metadata, such as the manifesto by the local and virtual community. Its new position in the territory linked to the word MUNCH, is also visible on Google Maps; expanding its punctual position of location to be geolocated from a word.
After the opening of the museum at the end of 2021, it is possible to distinguish how the labels associated with the Munch Museum reflect the Oslo community's sense of belonging to the artist Edvard Munch and his legacy. However, it is not possible to establish such a relationship of belonging to the institution of the new museum.
This text proposes to contrast the project from what is expressed in the monograph Lambda Files written by the authors of the project, against the narrative constructed in the social media through tags.
Tags associated with images were related from the Instagram platform, since it has been one of the media exposed in the monograph as part of the media repercussions. The reference tags are: #munchmuseet (43,4 thousand posts), #munchmuseum (14,2 thousand posts), #oslo (8,8 thousand posts), #oslonorway (329 thousand posts), #edvardmunch (246 thousand posts), #munch (848 thousand posts).
In the first stage of observation, there is no evidence of images of the museum. In relation to the number of publications registered, the hashtag #munch is almost two and a half times more than #oslonorway. The museum's official hashtag #munchmuseet, on the other hand, represents an estimated 5% of #munch, which coincides with the sign that crowns the museum's façade.
In the Lambda Files book, the participation or sense of belonging to the museum project is repeatedly emphasized "Throughout the conception process of the new MUNCH, estudioHerreros had to implement a work system in which participation in the public sphere was as important as the work at the drawing board"[6]. However, in the timeline of the same monograph, more than 75% of the meetings and publications are outside the Norwegian border.
The dynamism with which today's media operate makes it difficult to take fixed or stable parameters. However, from observation, there is clear evidence that at present the labels associated with the Munch Museum do not reflect the Oslo community in image. Whereas, on the contrary, the labels associated with Oslo are more reflective of the atmospheres painted by the artist in his paintings. In terms of image, Edvard Munch has managed to represent the atmosphere of the territory, resisting beyond the museum entity, which bears the artist's name on its façade.
Of the registered users, it has not been possible to define whether they are tourists or Oslo residents. Nor if these users have been part of the debates that took place in the media process prior to the inauguration of the building. The facts narrated in the monograph, regarding the instances expressed in the media, could have been simply the magnitude of a debate circumscribed to the field of the architectural discipline, in reference to a project of the same scale in any other location.
In the collective memory, the museum entity dedicated to the artist, has been around for more than 50 years. The word Munch was already on Google Maps, long before the opening of the second museum. The label Munch is 20 times more chosen than the official label of the munchmuseet. Although it is not possible to define the knowledge of the users about the artist, it is possible through the images to think that the museum exists since the donation of the works of Edvard Munch himself, and that the belonging of the community to the territory of Oslo revives in each of his paintings.

ENDNOTES

[1] Juan Herreros, Jens Richter, Lambda Files: The project for the Munch Museum in Oslo (GERMANY:Spector Books,2023),7
[2] Visita página oficial del Museo Munch, en febrero de 2024 (www.munchmuseet.no)
[3] Ibidem.
[4] Juan Herreros, Jens Richter, Lambda Files: The project for the Munch Museum in Oslo (GERMANY:Spector Books,2023),185
[5] Juan Herreros, Jens Richter, Lambda Files: The project for the Munch Museum in Oslo (GERMANY:Spector Books,2023),201
[6] Juan Herreros, Jens Richter, Lambda Files: The project for the Munch Museum in Oslo (GERMANY:Spector Books,2023),177

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FIGURES

Fig. 1 - Munch. Digital collage, own elaboration, on Iwan Baan's photography.


HAPPY BIRTHDAY

Krystallia Kamvasinou[1], Lorenzo Stefano Iannizzotto[2]
[1]University of Westminster
[2]ISCTE-IUL Lisbon
k.kamvasinou01@westminster.ac.uk

Bodies in the void: Addressing socioecological challenges through temporary practices in *Terrain Vague* sites

Key Words
Terrain Vague, Temporary Urbanism, Community engagement, Artistic practices, Experimental placemaking

Terrain Vague: an introduction
We live in an era of cities or planetary urbanisation [Brenner 2014]. With the world's urban population continuously growing and moving to cities, urban development affects ecosystems, biodiversity and natural resources on a planetary scale.
Rapid and uncontrolled urbanization coupled with economic restructuring generates Terrain Vague spaces [de Sola Morales 1995]: also known as Urban Voids or Vacant Lots. These are either undeveloped, leftover spaces or abandoned, derelict, post-development spaces that lie in a state of suspension, without any official function, the by-products of the process of urban space production [Lefebvre, 1991].
The definition of Terrain Vague [de Sola Morales 1995] does not center on the physical, morphological, legal, economic, or aesthetic aspects of these spaces. On the contrary, it focuses on: i) the passing of events and what happens in these spaces ("empty, abandoned space in which a series of occurrences have taken place", 119); ii) on those who inhabit or use these spaces, i.e. the people who care about and fight to preserve these spaces ("filmmakers, sculptors of instantaneous performances, and photographers seek refuge in the margins of the city", 122); iii) the sense of freedom, hope and possibility that these spaces evoke, a state of indeterminacy in which anything is still possible ("void, absence, yet also promise, the space of the possible, of expectation", 122). In fact, these spaces, due to their lack of control, their immediate availability and their flexibility and openness to any kind of activity, have been the privileged place for corporal artistic experiments and performances. A recent example is the DOM- collective [2013- , Rome]: "DOM- investigates the language of performing arts, contaminating it with the Environmental Humanities' militant approach and the issues and imaginaries of feminist and queer ecologies. Its practice revolves around the relation between bodies and landscapes, questioning the tangle of permeability, and observing how power,

nature and marginality interact in the public space" [Pirri, 2019].
Temporarily cut off from the city's economic production circuit and in a fragile and uncertain condition, subject to change, the Terrain Vague has historically been the place of artistic practices of resistance related to walking, from the walks of the Surrealists to the urban drifts of the Situationists, to the nomadic transurbance of Stalker collective [Careri, 2006]. Moreover, their uncertain future makes these spaces available for temporary uses not permitted or tolerated elsewhere, for spontaneous, artistic, self-managed, experimental design or alternative economic practices stimulating creativity [Zetti & Rossi, 2018]. LaFond (2010) and Kamvasinou & Roberts (2014) highlight that experimental approaches to urban spaces can breed opportunities for cultural, sustainable planning and transform vacant land into valued community spaces, serving as catalysts for revitalizing neglected areas. In conclusion, because of its characteristics and status, the Terrain Vague is a container that foregrounds and allows the emergence of bodies, both through movement and the act of walking, and through the temporary events and activities that can contribute to the strengthening of the community.

Temporary Urbanism
"Temporary Urbanism," as explored in "The Temporary City" (2012) by Peter Bishop and Lesley Williams, is a concept that revolves around the temporary use of urban spaces. Bishop and Williams (2012) highlight how vacant lots or underused buildings, can be temporarily repurposed for a variety of uses, ranging from pop-up shops and art installations to community gardens and event spaces, allowing diverse stakeholders, including artists, entrepreneurs, and community groups to contribute to the urban fabric. Some of the actions involved in temporary urbanism come under 'tactical urbanism' defined as 'an approach to neighbourhood building and activation using short-term, low-cost, and scalable interventions and policies' [Lydon and Garcia 2015, 2]. However not all temporary urbanism is tactical, so it is a broader umbrella term that can include larger scale interventions, characterized by its transient nature, often seen as a response to economic downturns, urban decay, the lengthy process of formal urban redevelopment, or providing interim solutions pending long-term development [Bishop and Williams 2012; Kamvasinou and Roberts 2014]. It represents a shift in urban planning, focusing on adaptation of urban spaces to meet changing community needs and desires, contributing to placemaking. While digital online platforms may be used to self-organise and bring groups together, the actual placemaking takes place in person, through strongly embodied practices of making, moving, training or events.
While adapting, reusing and repurposing urban spaces minimises waste and environmental impact, a 'light touch' intervention practice as advocated by temporary urbanism is more likely to preserve local site biodiversity and ecology. In that sense, temporary urbanism is not just a stopgap measure; it's a strategic approach shaping the way cities evolve over time [Bishop and Williams 2012].

Methodology: temporary practices in terrain vague sites
This paper aims to explore the potential of temporary urbanism practices and strategies in the Terrain Vague, demonstrating how this approach can preserve and enhance existing corporeal appropriations (human and non-human) and enable new ones, increasing socioecological benefits. We present indicative examples of a certain type of project in terrain vague sites, realized by applying temporary urbanism, which we call Vague Catalyst. This concept refers to projects addressing uncertain and fragile site prospects by avoiding permanent buildings or functions. Instead, they focus on temporary activities, using minimal and light interventions like impermanent structures, installations, artistic works, or sometimes no physical changes at all, rather allowing the everyday occupation of space and the movement of bodies, emphasizing their presence.
Methodologically, while our analysis is broad covering a wide range of such projects, we focus in more detail on two case studies from London, UK and Lisbon, Portugal, selected as indicative of North and South European regions, as well as for their experimental, community/artist-led approach, and longevity, and LABIC (2022).
Cody Dock, a community-led regeneration, river revitalisation and social enterprise project (2009-) located in a socioeconomically deprived yet diverse area within the London Royal Docks regeneration zone, has a rich history from pre-industrial times to post-industrial decline and recent regeneration. Since 2009, the Gasworks Dock Partnership (GDP), led by Simon Myers, has been transforming it into a community marina for live-in boats and arts hub. This transformation includes environmental restoration, history and ecology education, and diverse temporary community activities. The COVID-19 pandemic highlighted its value as a communal space supporting health and wellbeing, affirming GDP's slow, organic, and collaborative approach to placemaking.

LABIC (2022), a laboratory of community innovation, operates in Barreiro Velho, a city part of the Great Metropolitan Area of Lisbon that has undergone a recent shrinking process due to de-industrialization, partial abandonment and neglect. In this area, they identified and photographed 25 urban voids, totaling 4250 m2, equivalent to a football pitch. This was part of their 'map and identify' initiative, involving a collaborative effort with students, an architecture office, and local residents. Proposals were developed for regenerating these spaces, and the owners of the abandoned plots were contacted. The owner of "void number 12" temporarily entrusted their lot to LABIC, leading to its cleanup and community discussions about its future. This culminated in the "Festival a Rua é Nossa" in April 2022, featuring cultural and sporting events for the city and community. Created as a project of a temporary nature, the idea of LABIC is to activate long-term and lasting processes, leading to a stronger community that can take care of the spaces. Even a small, abandoned space can be a pretext and catalyst for larger, long-term changes.
By bringing side-by-side different time periods, practices and dimensions of placemaking projects through the case studies, we reveal how urban voids can operate as experimental sites/vessels of corporeity to creatively address current socioecological challenges in cities.

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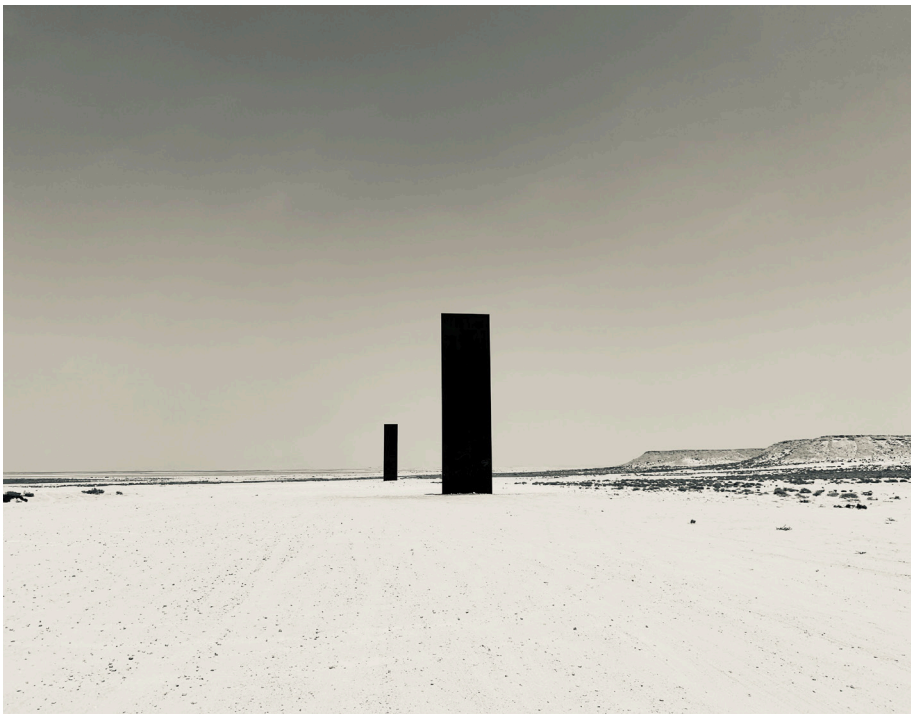
FIGURES

Fig. 1 - K. Kamvasinou, Cody Dock: Transformation Over Time, 2013/2022, Digital Photographs, Cody Dock, London. This composite image shows Cody Dock in 2013 with a temporary geodesic dome floating stage, and the same viewpoint in 2022 featuring newly installed artists' workspaces. Author's own.



Nadia Mounajjed.
Abu Dhabi University, Faculty of Architecture and Environmental Design
nadia.mounajjed@adu.ac.ae

The body and the architectonics of the desert

Key Words
Body, Desert, Anthropocene, Sublime, Uncanny

The desert has long been an important natural environment acting on (and interacting with) its subjects. Originally understood as a sublime ecology, a realm of openness and eco-equilibrium, the desert remains an unknown realm, ready to be explored and open for speculation. This essay explores the relationship between the body/space and other entities in the space of the desert. It examines the spatial agency of the desert and its impact on its subjects. It proposes a reading where body and space coexist in a physical and spiritual continuum — an 'intertwining of flesh' as explained in the work of Merleau-Ponty [1962]. By drawing on phenomenologists and anthropomorphic postulations, this text highlights the physical and spatial agency of the body in the space of the desert. In such an environment, the body is in a permanent state of experience – open to the realm of the desert and its investments. It is affected by the environment while also acting on it.

It has long been argued that the desert's agency supersedes humans. The desert, as Riceour argued, is 'pre-architectural', because it exists far from the matrix where we have yet to name the processes of flow" [Ricoeur 2016]. The desert defies any inscription in time and space and is therefore timeless and placeless. Its topography is encompassing; it precedes architecture; and it resists any sense of inhabiting or of 'home making.' Other perspectives view the desert as a site of exploitation, often seen as risky, mystical, and exotic. Deserts enabled occupations, extractive campaigns, and colonialist expansions [Kripa et al. 2023]. A byproduct of the Anthropocene, the desert even became a site for climatic simulation and commodities — a ground for an architecture that is adaptable to emergent conditions of scarcity within a planetary environment and economy [Turpin 2014]. The desert environment may therefore represent a manifestation of the uncanny - a fundamentally "unhomely" modern condition of alienation, imbalance, and estrangement [Vidler 1990]. As a result, and despite its rich scope,

the desert as a subject of investigation has not fully explored its corporeal nature — often seen as inaccessible and disembodied. However, there are other readings and analyses of the desert. For instance, desert literature and art practices confirm alternative spatial configurations and forms of embodiment, where subjects are invested and intertwined with the environment.

The desert, with its topography, light/shadow, energy, and temperature, has inspired an important body of work. For instance, desert art often tends to animate the viewer's visceral experience and engage with the metaphysical, and the sublime. Its environment informs/performs/forms the experience of body/space, allowing them both to mutually morph and transform each other. Richard Serra's sculpture in the Qatari desert titled *East-West/West-East*, and Olafur Eliasson's succeeding intervention a few miles away in the same desert are two examples. While Eliasson's artwork, *Shadows Travelling in the Sea of Day* [2022], investigates the relationship between body and environment through studies of visual illusion, shadow/light, and thermal comfort [Eliasson 2022], Richard Serra's monumental steel plates stand tall against the limitless landscape and a shimmering horizon, carrying what Hal Foster describes as the sublime through the juxtaposition of "a Malevich like supermatist geometry" to the desert topographic landscape [Foster 2014]. Geometry acts as an interface and a signifier in this continuum between the human body and the expansive space of the desert.

Yet perhaps the most striking work is Mike Heizer's recent work: *City* [2023]. Located in the American Desert, this is a transformative work that aims to redefine the relationship between the body and the space of the desert. After fifty years in the making and despite its monumental architectonic nature, the work inspires a reconnection between the desert and its subjects but also forewarns against eco-imbalance and environmental risks. The work is intended to be perceived and experienced corporeally, slowly, at eye level, "where the site swallows you up," as Heizer confirms, "You're meant to suffer its distances, its depressions, and swells, and hear the crunch of gravel — to give yourself over to the peace, which itself takes on a sculptural presence" [Goodyear 2016]. Being the maker of the work, Heizer engages as a geological agent, digging up, mobilizing, and radically transforming the earth's surface morphology. His subjects (the viewers of the work) are invited to explore and perceive the work through an affective, embodied journey. In this way, *City* builds on Heizer's previous work, *Double Negative* [1969], and his notions of entropy, privation, accretion, and chasm. What makes this work very powerful is the vocal agency of the artist as subject/body, as a perceiving force, comprehending, and interacting with the environment, and creating opportunities for environmental transformation. Directly investigating the role of corporeity on the natural territory — making a place in non-place.

Literature has also offered insights on the body/space relationship in the desert. In her novel, *Mauve Desert*, Nicole Brossard [1987] depicts an environment where everything is fragile and the boundaries between the body of humanity and the desert landscape morph. Brossard's subject "experiences the desert discretely, but she also experiences both positions (subject and object), "simultaneously occupying an ontologically interstitial space." She exposes herself to desert phenomena on a sensory level (light, noise, vibrations), which enables her to experience "a corporeal continuum with her surroundings." [Hernandez 2008, p. 333]. A continuum that corresponds to Merleau Ponty's body *(le corps propre)*, a body that is not a thing but is a permanent condition of experience, a constituent of the perceptual openness to the world and to its investment [Merleau Ponty 1962]. Brossard presents the experience of the body in the space of the desert as "a metaphysical paradox: simultaneously corporeal and transcendent" [Hernandez 2008, p.333]. A peculiar form of existence at a sensory level that echoes Kate Nesbitt's review of phenomenologist postulations of the sublime [Nesbitt 1995]. This sublime can is evident in the work of another author from the North African Sahara, Ibrahim al-Koni, who presents the desert as an ecosystem where all parts are interdependent and exist as an indivisible unity [al-Koni 2002]. In *The Bleeding of Stone*, al-Koni emphasizes the agency of the desert. It is depicted as a space of limitless oneness in which all elements are interconnected within a perfect cosmological order. Eco-balance is a key driver of this order: the balance between body/space, environment, and other species, between inner and outer selves. Ultimately, Al-Koni's work opposes this pure ontological unity with the current overconsumption and exploitation of the desert. He forewarns against the extremes of ecological imbalance—an imbalance that may constitute a threat of delusions and destabilizing the order of this continuum of body/space.

To conclude, the history of architecture confirms an evolving body/space relationship explained through a long-lasting anthropomorphic tradition [Dodds et al. 2002]. In this tradition, the body/

space relationship was incomprehensible without a mediating structure that linked different ontological realities. If this tradition is rarely addressed in the context of deserts, then it may be time to do so. The examples listed in this paper reflect alternative experiences and relationships from the sublime to the uncanny. On the one hand, the desert offers a body/space spatial continuum, ontological unity, and Eco balance. On the other hand, it is disembodied, estranged through exploitation and overconsumption. In this context, body/space relationship vacillates between correspondence and otherness; illustrative of the eternal interconnectedness between the body (the body of humanity) and land (the body of the desert).

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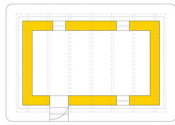
FIGURES

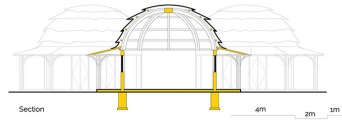
Fig.1 - Photo credit: Mark Major, *East/West, West/East*, 2019.



Plan

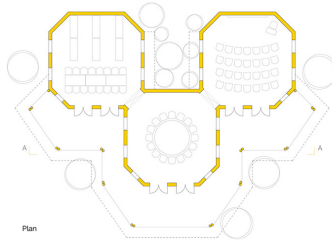
Elevation

2m 1m 0.5m

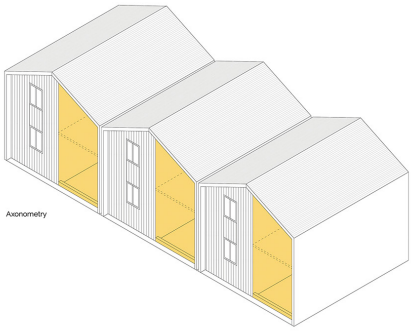


Section

4m 2m 1m



Plan

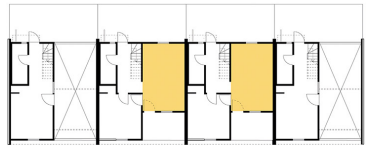


Axonometry

Elevation

5m 2m 1m

First Floor Plan



Ground Floor Plan

Francesco Airoldi
Politecnico di Milano, Department of Architecture and Urban Studies DAStU
francesco.airoldi@polimi.it

Every-Body.
Spatial education as a co-design strategy for risk reduction, mitigation and adaptation

Key Words
Co-design; Anti-fragility; [Spatial] Education

> No man is an Iland, intire of it selfe;
> every man is a peece of the Continent, a part of the maine;
> if a Clod bee washed away by the Sea,
> Europe is the lesse, as well as if a Promontorie were,
> as well as if a Mannor of thy friends or of thine owne were;
> any mans death diminishes me,
> because I am involved in Mankinde;
> And therefore, never send to know for whom the bell tolls;
> It tolls for thee
> [Donne 1624] [1].

Since ancient times, the starting point in the study and practice of architecture has been the space occupied by the human body, a very well-defined space between heaven and earth, between God and death. This space, which spans three dimensions, is ultimately the discipline's main object of study: it can be experienced, traversed, perceived, contemplated. It does not only passively undergo human action, but actively generates emotions and sensations: through the projection of these, translated into memories and future wills, the presence of the individual transforms a space or a set of them into a place. In many eras of History, from antiquity to the present, the space occupied by the human body has taken on the role of the very measure of architecture: just think about the Lecorbusian modulor and the Renaissance heritage. For this to be possible, the entire project must be conceived as an experiential object, a generating element of future sensations: every aspect of it, every existing binomial or dualism, must be interpreted according to a body-centered narrative.
However, investigating the topics of body and space also means considering the possible

relationships and actions of the environment on them. In this way, the pair is approached by a third narrative level: it invokes an important point of view that moves architectural design away from a purely anthropocentric conception, introducing a necessary sensitivity to contemporary issues of climate crisis, an urgency related to changing scenarios in increasingly contracted temporalities. Moreover, delving into the issues of architectural design in a condition of natural risks and from a perspective centered on the relationship between body and space, means, on the one hand, observing emergencies by understanding and interpreting the transformative phenomena affecting everyday life; on the other hand, embracing a communitarian conception of bodies by projecting those who inhabit fragile contexts into a condition of preparedness. Consequently, it means questioning current resilience practices and post-disaster actions.

The present contribution draws on studies from a PhD research in progress [2], investigating co-design theories and practices for architecture to address place transformation, mitigation of risk and uncertainty, resilience and preparedness of affected communities and territories. It is a doctoral work involved in the PNRR Return program "multi-risk science for resilient communities under a changing climate", an extended partnership that aims to strengthen research chains on environmental, natural and man-made risks at the national level and promote their participation in European and global value chains. The goal of the program is to study community-based approaches to develop projects, plans and policies for disaster risk reduction (DRR), disaster risk mitigation (DRM) and climate change adaptation (CCA). Natural risks and environmental changes are thus key topics, related to violent events and transformations that are increasing for all of us, but affect the world's population differently, depending on location.

The role of a PhD research in architecture within a multidisciplinary project of this kind is to restore the spatial and architectural aspects of the issues analyzed and to connect them to the dimension of corporality. Shifting the focus from the individual to the communal sphere, one can speak here of a collective corporality, a group of bodies or a community. Considering users not only in an isolated way but also inside a plural dimension – seen in a huge non-anthropocentric way – the thesis aims to investigate effective co-design strategies for architecture in order to reach anti-fragility conditions in at-risk contexts.

The proofs of concept chosen to test a design-driven methodology that addresses the above issues are marginal places and inner areas, with predominantly rural and mountainous landscapes, where problems of risk and uncertainty led to depopulation. These kinds of problems, when read through the lens of a community-based approach and a body-centered perspective, can be effectively addressed by architecture if we work in the direction of redefining the possible tools and methodologies of co-design. Alongside classical participatory practices related to decision-making meetings, there is a need to engage residents of at-risk contexts in spatial education processes through workshops, self-construction activities, and seminars related to community self-determination. These are project tools that have been poorly tested in Western contexts, which are still strongly tied to an ideological conception of participation indebted to the experiences of the 1970s. The community engagement that co-design processes related to spatial (body-centered) education generate can lead people to better understand the places where they live, increasing risk awareness and leading to a state of preparedness and DRR-DRM.

In front of the lack of co-design experiences focused on community spatial education in Europe, exploring case studies in non-Western contexts becomes crucial, where the pressing challenges of climate change and environmental crises have accelerated the need of actions for resilience and preparedness. To grasp the potential coexistence of various participatory approaches within a project, examining recurring experiences in the works of certain architects proves invaluable over isolated instances. Yasmeen Lari's work can be a first example of architectural participatory practice against fragilities, a contemporary form of co-design blending traditional knowledge with spatial implications in DRR, DRM and CCA. She co-founded the Heritage Foundation of Pakistan in 1980, a non-profit organization dedicated to researching, publishing, and conserving cultural heritage, particularly focusing on humanitarian and low-cost architecture. Lari's thought revolves around the concept of "barefoot social architecture", emphasizing low environmental impact and community-built objects. One standout example of her work is Karavan Ghar, a project of self-built houses with traditional materials, co-designed with communities affected by the 2005 Kashmir earthquake. Lari's approach blends self-determination with appropriation, fostering a vision of resilience and community-driven development. Inspired by circular economy and zero carbon construction, the DRR–Compliant Sustainable [Lari 2012] is an illustrated manual that provides technical solutions to improve traditional building techniques, and to engage and train artisans for the reconstruction of disaster-affected settlements. Since spatial education and training are relevant parts of risk prevention, other tools developed by Lari are the Disaster Preparedness Manual and DVD [Lari

et al. 2013], edited both in English and Urdu for a widespread comprehension [Corradi 2021]. Alongside the guidelines for building efficiently and safely, the manual contains illustrations and photographs that describe actions to be taken before, during and after disasters, that could be easily understood and communicated by population. The second case study is Elemental S. A., coordinated by Alejandro Aravena with Andrés Iacobelli and Pablo Allard: a program with social aims that proposes solutions for fragile populations in South America. Often the projects promoted there must deal with contexts subject to risk and uncertainty of various types: this is the case of Villa Verde Housing in Constitución (Chile), a key neighborhood for post-earthquake and tidal wave reconstruction of 2010, which is inspired by models of informal settlements spread across the continent and encourages residents to take an active role in reconstruction through seminars, workshops and incremental design. The owners were invited to participate in activities centered on how to realize the completions of their housing: the opportunity to customize buildings looks at the theme of appropriation of space through education, which is accompanied by an awareness of risk and projects reconstruction into future temporalities with the activation of bottom-up processes. «These workshops, given their technical nature [...], tend to be conducted by architects; however, it is essential that they are well-coordinated with the institution that is coordinating the community, [...] whoever is in charge of the on-site social work with families» [Aravena and Iacobelli 2016, p. 462].
In conclusion, this work of re-signifying co-design methodologies by looking at non-Western contexts can be an effective process for DRR, RRM and CCA if considered as a shared knowledge building with a bottom-up orientation around the themes of spatial education with a bodies-centered perspective. Because the awareness of one's body in the space and of belonging to a community of bodies coincides with the knowledge of being in a place [Bianchetti 2020, p. 8]: this calls into play the ability to recognize oneself in it, in a set of meanings that juxtapose the identity of the place with the identity of man [Norberg-Schulz 1979].

ENDNOTES

[1] "No man is an island entire of itself; Every man is a piece of the continent, a part of the main; if a clod be washed away by the sea, Europe is the less, as well as if a promontory were, as well as if a manor of thy friends or of thine own were; Any man's death diminishes me, because I am involved in mankind. And therefore never send to know for whom the bell tolls; it tolls for thee" [Donne 1624].
[2] Co-design. Theories and practices for transformation, mitigation and resilience. PhD candidate: Francesco Airoldi; supervisor: Prof. Emilia Corradi. Politecnico di Milano, AUID PhD program, Dipartimento di Architettura e Studi Urbani.

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FIGURES

Fig. 1- Prototype of the self-built Karavan Ghar, developed by Yasmeen Lari (top left); the INTBAU Training and Resource Center in Makli (Pakistan), designed by Yasmeen Lari and built with a collective effort by residents in 2019 (top right); the incremental design of Villa Verde Housing project by Elemental S. A. in Constitución (Chile), 2010 (down). Graphic reworkings by the author.


LES [RE]SOURCES AUTOUR DU LAC
LYCÉE TARIK IBNOU ZIAD
COMMERCES
LE DIWAN
HAMMAM AMBAR
L'ENVOL DES OISEAUX
Les nombreux oiseaux qui prennent leur envol depuis le lac crée un attrait dans le quartier grâce à l'installation d'un observatoire naturel. Réveil matinal, l'envol des oiseaux rythme la vie du lac et de ses alentours.
Niché en haut de la falaise, en retrait de la route, le paisible belvédère offre un endroit qualitatif pour contempler le quartier Al Firdaous et au delà.
LE BELVÉDÈRE
L'ILE AUX OISEAUX
TERRAIN DE FOOT
RECYCLERIE DES RAMASSEURS
HAMMAM AL FIRDAOUS
LA PLAINE
À la croisée des chemins du collège, du lycée et des habitations, et du futur quartier, la plaine urbanisée ménage un corridor d'accès vers le parc et le lac d'Oufa.
LA FORET INVERSEE
LES JARDINS
CENTRE CULTUREL
LA PROMENADE DES DUNES
LA COIFFEUSE DU LAC
CLUB SPORTIF
CLUB SPORTIF
AMPHITHÉÂTRE
PLACE AL FIRDAOUS
MOSQUÉE AL FIRDAOUS
LE JARDIN DE LA PRÉFECTURE
LE COMMERCE SOLIDAIRE
La vie du quartier s'anime autour de services et de commerces autrefois informels, et devenus aujourd'hui un commerce social et solidaire dans le quartier.
LE HERON DU LAC
La réalisation de l'artisane a inspiré la création d'une réserve naturelle, elle favorise aujourd'hui une grande diversité d'espèces animales.
LES EQUIPEMENTS CULTURELS
Le club sportif, le centre culturel et l'amphithéâtre rythme la vie du quartier en offrant une programmation tout au long de l'année.
LOUPI LAND
LOUPI LAND
LE RAMASSEUR DE LA PLAINE
Les ramasseurs de la plaine sont à cheval ou à pied. Ils tirent à longueur de journée les déchets divers. Ils les apporte aux recycleries du quartier, assurant le maintien de la propreté du lac et du quartier

Hocine Sally Aliouane-Shaw[1], Daniels Sally[2]
[1]ENSAP Bordeaux
[2]University of West England (UWE), Department of Architecture
[1]hocine.perso@free.fr

Using situated pedagogies and the concept of interdependence to engage with the environment and call its future into being

Key Words
Space-Time-Body, Gender-Space-Architecture, Built Environment

As essential contributors to the shaping of the living environment, we are faced with an ongoing paradigm shift which invites us to approach the contexts in which we intervene in all their spatial and cultural complexity. In our fields of thought and practice, this means transitioning from the inherent reductionism associated with cartesian thinking, to a systemic understanding of both the tangible and intangible dimensions of the environments in which we act as space shapers, operating in the fields of architecture, landscape and planning.
In light of this perspective, it is imperative for both practitioners and educators to recognize that cities, and the living environment more broadly, should be viewed as complex systems (Portugali, 2012). This challenges the oversimplification of a comprehensive 'diagnosis' of the environment, which aims to identify key issues for the subsequent application of relevant design solutions. It calls for a deeper comprehension of fundamental properties inherent in complex systems, such as interconnectivity and adaptivity (Portugali, ibid.). It also demands an understanding and appreciation for the emergence of novel properties and behaviors resulting from the interdependence among various components of the system. Thus, the concept of interdependence, intrinsic to complex systems, emerges as a critical element to integrate into processes aimed at understanding and guiding the evolution of living environments. This holds true in both the realms of research and education, as well as within the context of professional practice.
The concept of interdependence appears to be particularly woven into situated pedagogies that recognize that knowledge is not abstract or disconnected from its application but is deeply rooted in the social, cultural, and environmental contexts where it is practiced. This pedagogical approach emphasizes learning within specific, real-world contexts and situations. It advocates the immersion of students in authentic, situated learning experiences to foster a deeper understanding of the interconnected relationships within their environment. In the

context of architectural and urban design education, the concept of interdependence emerges as a crucial element to consider throughout the spatial design process, starting from the initial encounter with the living environment and extending to subsequent interventions.
This article examines various ways of facilitating the understanding of the complexity of the living environment by integrating the concept of interdependence at the core of the architectural and urban design process. The exploration is based on pedagogical experiences conducted jointly or separately by the authors within the context of their teaching in architecture schools in France and the United Kingdom, at foundation, graduate and postgraduate levels.
These experiences of situated pedagogies favor investigative approaches that draw on tools and practices from other disciplines -such as performative arts and geography- to explore the living environment, as an attempt to an "undisciplined" approach (Sheppard, 2017) that aims to provoke questions outside of the discipline, while keeping the methods of response within the discipline.
These instances of situated pedagogies promote investigative approaches, incorporating tools and practices from diverse disciplines, such as performative arts and geography, to explore the living environment. This reflects an 'undisciplined' approach (Sheppard, 2017), aiming to provoke questions beyond disciplinary boundaries while maintaining responsive methods within the discipline. To this end, the concept of interdependence is woven into the design process at three key stages: Tuning in to the environment (1), Bringing back the environment through creative representation (2) and Playing-Out (3).

Tuning Into the Environment
The design process kicks off with the students being physically immersed in the environment, through Derive or collective walks. This approach is inspired by ideas initially carried out by the lettrist and situationist movement (Debord, 1956). It worth noting that, walking was considered as a crucial aspect of the "civic survey" concept developed by Patrick Geddes (Geddes, 1915) to enable firsthand experience and direct engagement with the urban environment and gain a holistic understanding of the city. Several key figures have since extensively reflected on the cultural and philosophical aspects of it (Solnit, 2001) and explored the idea of walking as a way of understanding and experiencing the built environment (Careri, 2002).
Prior to engaging with the environment, a "transect"- a theoretical section crossing through an environment along the areas with the maximum occurrences of a specific phenomenon - is positioned on the site "at a distance", using available data and information in the studio and a theoretical path to be experienced is drawn. On location, obstacles are encountered and bypassed, prompts are triggered and situations are located and documented. Along the way, routes and maps are updated. Interactions and inputs from local inhabitants are encouraged to allow local narratives to emerge and give an insight into the dynamics that drive the context. A specific filter or agenda may be brought by the students to give them more confidence when engaging with the environment with something more pragmatic. The students share a collective experience with the ability to pull away at different moments to recenter themselves on their personal experience.
This initial phase of "subjective" investigations of the environment exposes the students to unforeseen and random events that encourage unexpected discoveries – such as places and narratives – and allow them to identify critical "situations" in the environment. The serendipity inherent in walking allows for the occurrence of unpredictability and the observation of interdependence between different phenomena, both core properties of complex systems.

Bringing back the environment through creative representation
This second phase is that of bringing the site back into the studio, whilst avoiding reductionism and holding on to some of the environment's complexity. At this stage, the question is not to know what to do with the environment by projecting new intentions or visions but to identify what existing material and immaterial resources may inform and furthermore structure future evolutions and spatial reconfigurations.
Students begin to work from memory to recreate a sense of place. Normative spatial representations are temporarily put on hold in favor of more creative and "low-tech" mediums that encourage manipulation and remove the preciousness of the material, (scrap models, hand-drawings, ...). One of the key devices utilized is collaborative mapping, seen as an evolving tool that enables and sustains a conversation between the students and the local community and allows further inputs. Main on-location findings are collectively discussed and represented in visually (drawing, modelling, collage, etc.) and verbally (using keywords referring to concepts, ...). Identified situations are mapped, pointing out connections and interconnections (Senel, 2014). In parallel, more focused research on specific topics is conducted by students, with the support academics and field experts on the investigated issues.

This stage which sees the creation of new knowledge appears to be in a sort of constant dance with the previous one (Tuning into the environment), both continuously connecting and reconnecting. It provides the grounds for a better understanding of the past and current states of the environment and helps the students sense and anticipate the main conditions of its evolution. Tools such as mapping or model making reinforce the common and shared experience of working from memory and contribute to bringing students together. The knowledge gathered and represented at this stage generates a dynamic and evolving common reference, that the group (students and community) can keep adding to. It is an open source information that isn't owned by anybody.

Playing-out the environment's evolution
In this conclusive stage, two main approaches are set in motion and implemented, building on the knowledge previously created to engage the evolution of the environment. The first approach is the use of storytelling and narrative fiction to change the community's perception and representation of their everyday environment to foster a state of mind that will opens their minds to possible and unforeseen evolutions. Narrative devices such as the graphic novel are used to open the design process to a broader and non-specialized audience, making the multiple inputs that came into the design process - such as stories collected in stages 1 and 2 - visible to everyone. Within this framework, the spatial project is no longer introduced as closed and final solution but rather as a device to foster a conversation with the local community, with the ability to grow, change and inform the future project.
Simultaneously or subsequently, constructed devices and arrangements are conceived and carried out by the students. If programing and design are mainly studio-based, they remain open to inputs and adaptations as the building process unfolds on site. The use of simple construction techniques and updated traditional ones allows local skills and know-hows to take part in the making, with people stepping in, using their skills and learning from one another.
Through these shared pedagogical experiences both at ENSA Bordeaux and UWE Bristol, we try to emphasize real-world experiences and collaborative learning, and seek to bridge the gap between theory and practice. Through hands-on exploration, creative representation and community engagement, we encourage students to navigate the complexities of their future practices, using a holistic, context-aware, and interdisciplinary approach to environmental and spatial design, where the concept of interdependence plays a central role.

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FIGURES

Fig. 1 - Lea Demongeot. Les Ressources du Lac. 2023. Drawing & collage. Produced as part of the workshop "La Fabrique du Lac #04" in Casablanca (Morocco) in 2023.

Silvia Di Mauro
Politecnico di Milano, Department of Architecture and Urban Studies DAStU
silvia.dimauro@polimi.it

Relational stratifications.
Body-centered approaches for an adaptive reuse strategy

Key Words
Adaptive reuse, Affected bodies, Community, Resilience

In the context of the climate crisis, reflecting on the transformation of the existing built environment by focusing on the space-body relationship and the effect of space characteristics on it is a central theme in a resilient design perspective. Considering architecture as part of the climate [Till 2023] and, more precisely, as part of the built environment, one of the scalar climatic factors that affect the environment [Bovati 2017, p. 63], the phenomena of abandonment and underutilization of existing buildings emerge by relevance as a huge risk factor about the body. Abandonment inherently contains problems related to the exclusion of bodies. Here, the role of the body and the possibilities of space occupation claim a rethinking, even more so when the previous use provided for human exclusion, as in industrial or stocking spaces.
In the search for transformative strategies capable of reflecting on a renewed relationship between body, space, and environment, it is crucial to consider the relational shifts related to the role of the body introduced by the ecological paradigm.

During modern and techno positivism, in being immersed in a system that replicates its measures -man as measure and search for the standard- how its parts organized, or that meets its primary needs-The Cuchicle (1966) by Mike Webb- or related to consumption -Toyo Ito PAO1 and PAO2 (1997)- [Espuelas 2009] the body sees the partial exclusion of the role of the mind and immaterial relations in spatial experiments. Architecture here reacts to man as an individual, excluding intangible relationships.
The most significant experiences that reframe this view, characteristic of the last century, insist on the space-body relationship from a perceptual point of view. Those are connected to sensations and the irrational/behavioral side and also embedded in a community logic in which the intangible bonds between bodies occupy a primary role. Immersed in a scientific system

of measurements and data, in the age of climate change the irrationality of the body is not understood as the opposite of the scientific rationality of body measure or body organism but as complementary to it [Adams 2016, p. 190].
Excluding practices that don't question perceptual character focusing only on performance, innovation brought by a systemic logic of body involvement should, according to Kengo Kuma, aim to manifest the three-dimensional totality of place [Kuma 1997, p. 49].
While design experiments in this sense reevaluate the role of the nature and texture of climatic elements, using terminologies such as sensoriality and atmosphere [Berlingeri 2021, p. 125], in the field of transformation of the existing words such as identity, and collective memory enrich the involvement of the body by going beyond reference to the individual.
In opening thinking from the needs of the body, to space dedicated to community, design thinking that aims for sustainability goes through a deep understanding of users' needs [Stone, 2020]. Design actions focusing on human and behavioral aspects in space must suggest environmentally friendly behaviors, leading modes of space use, and the relationship to the behavioral sphere in the center of thinking [Till 2012].

Supporting an idea of architecture that finds in precise formal qualities the possibility of framing a complex activity [Arìs 1990], emerges several adaptive reuse practices that, working on the theme of engaging bodies through typological reasoning, propose ways of living that engage perceptions, memory, and the environment. Here, are pivotal attitudes oriented toward the interweaving of multiple interactions between systems (with climatic elements, urban space, plant elements, between levels of privacy) that use existing features to multiply the habitability of buildings.
The Lacaton e Valssal's transformation of 530 dwellings supports experimentation oriented to change the perception and spatiality of a building dedicated to users in fragile conditions. The research for a new interpretation of the building, based on giving a new comfort to inhabitants through the feeling, atmosphere, possibility of multiple uses, and connection with the context, takes shape in the double space through the minimal devices that composed the mediation between interior and exterior, identify a set of mutually related conditions and spaces.
When the transformation aim is public, designing the interpretability of ways of living is a fundamental element for the time-life of the building. Community centers, designed to accommodate differentiated amounts of people and spaces with overlapping uses distributed throughout the day, are places intrinsically connected to experimentation with modes of appropriation.
The Harquitectes' project Civic Centre Lleialtat Santsenca 1214 proposes an inward layering in the existing volume that, detached from the existing wall and with a double roof, forms an in-between of climatic mediation that allows the independent distribution of all spaces and some portions that can be opened during the seasons. The needs for aggregation- started bottom up by local associations- are interpreted in the arrangement of multiple informal spaces capable of accommodating different social behaviors in size and location. Instead of imposing arrangements of people, the architecture works on the theme of variation in a perspective of future interpretation in connection also with the outdoor climate.
In Architecten De Vydler Vinck Tallieu's PC Caritas or Unless Ever People project with BAVO, acceptance toward the impossibility of foreseeing the use of is the driving force behind a project dedicated to reconnecting psychiatric patients and social interactions. The delicacy of the theme led to deep reasoning regarding the possibilities of interaction between space, body/body, and perceptions. The interior of the building is presented as a public space in continuity with the park. The space works on the theme of persistence and flexibility to be an unfinished building that can be modified over time for experimental purposes. The design enhances the modes of movement, the possibilities of occupation, standing alone, and the aggregation of bodies, taking advantage of the specificity of the place and the relationship between temporalities.

The involvement of bodies according to multiple strategies related to perceptions, climate, and uses turns out to be central in thinking that takes an ecological stance toward proposing new ways of experiencing existing space. The uncertainty toward future needs and the failure of functionalist logic even about the effect on the body, shifts the focus from the search for a new use to the proposal of a way of living and perceiving space, through the present components: body/community, built space/existing stock, and climatic and plant environment.
The behavioral interpretation of bodies stimulates the formation of a space capable of holding together the role of the individual body and the community without contradiction, recalling perceptions open to both subjectivity and collective memory.
The discarded and extra space represented by abandoned buildings should be returned to the community as commons -even when belonging to the ordinary- and the project should

question how to affect habitability. New layering should release spatial potential, either through novel relationships with the environment, maintaining original use or subverting original distributional characters, or by investigating the possibilities of aggregation and exchange between bodies.
Although the single building scale can't solve individually broad urban problems, the direct relationship with the human dimension and the possible impact on the everyday life of these projects amplifies their importance and research possibilities related to spatial characteristics. Opening new points of view, new interactions in buildings in favor of an urban attitude directed toward adaptation, conditions behavior toward a more sensitive vision of the future, and if in connection with the environment, open to the sustainable interpretation of the inhabitants.

ACKNOWLEDGMENT

This paper reflects on issues related to the research: "Tactical recycling. Transformation of ordinary architecture for the ecological transition of minor center" supervisor Marco Bovati, cosupervisor Andrea Oldani, in collaboration with the municipal administrations of Bottanuco, Lallio and Stezzano, PNRR scholarship of cycle 38, AUID PhD School, Politecnico di Milano, Department of architecture and urban design DAStU.

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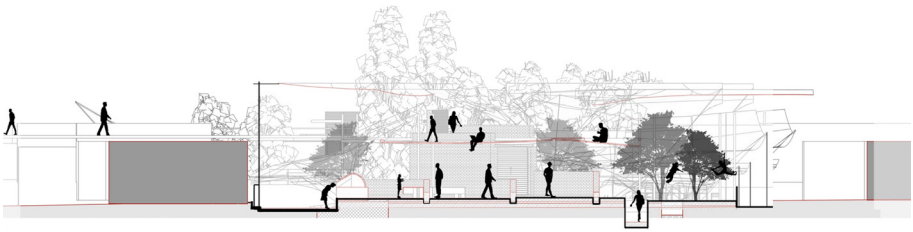
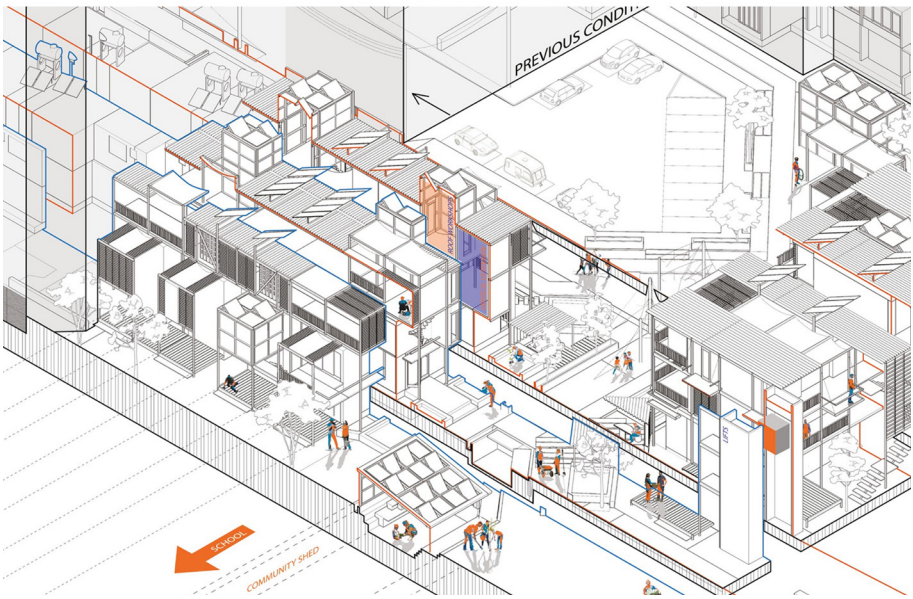
I BROUGHT MY FLOWER POTS WITH ME, SINCE I MOVED HERE
I LOVE THEM BUT AS I'M GROWING OLD, I CAN'T TAKE PROPER CARE OF THEM.


CAME FOR A WHILE.
STAYED FOREVER.




PREVIOUS CONDI
SCHOOL
COMMUNITY SHED

Alessandra Swiny[1], Maria Hadjisoteriou[2], Teresa Tourvas[3]
[1,2,3]University of Nicosia, Department of Architecture
swiny.a@unic.ac.cy

Unsettled.
Creating community in a displaced environment

Key Words
Unsettled, Displaced identities, Urban commoning, Fragility, (Im)permanence

Introduction
In this paper we investigate the notion of the unsettled body as understood within the context of spatial displacement, forced by post disaster transformations. We address the topic and its spatial implications, examining 'Aspres', one of the 69 refugee housing estates designed in the late 1970's to house over 60,000 displaced people moving from the North to the South of Cyprus following the Turkish invasion in 1974.
If we consider a settlement as a place where people establish a community, in times of crisis, then the body becomes unsettled or transient and lacks a sense of order or stability. The inhabitants feel they do not belong; they are in an unfamiliar and often uncomfortable environment. What then, are the processes that serve to transition into a stable place of being, at home, allowing for a sense of domesticity, and belonging? What makes a group of people a community, and what are the collective commoning processes that create this new community? Stavrides quotes "we reinvent togetherness" in "processes of exchange and cross-fertilization" [Stavrides 1988, pp.158].
This paper presents the process and outcomes of the research thematic through the work of the 'Unsettled' design studio. The architectural design studio explores notions of agency and effect through architecture, while examining the idea of the home and spaces for empowerment through spatial commoning practices.
Working with the refugee housing estate of 'Aspres,' focusing on a fractured community that was violently displaced from their previous social structure, prompted us to explore ways of identifying, recording, and proposing new ways of restoring a sense of belonging among its inhabitants. The challenge lies in how an architect can devise interventions, processes and programs, considering the physical and social body as a perceiving element, that comprehends and interacts with the environment, catalysing spatial opportunities that foster

urban commoning. In building upon the notion of Agency, "... as one that effects change through empowerment of others, allowing them to engage in their spatial environments in ways previously unknown or unavailable to them, opening up new freedoms and potentials because of reconfigured social space" [Awan, Schneider, Till 2011, p.69], the studio explores an architectural methodology of empowerment through the lens of design.

Setting the ground

To understand the case study of 'Aspres', one must look at the urban challenges of the settlement and the policies and decisions that influenced the creation of these governmental refugee housing estates. In the aftermath of the war in 1974, where one third of the Greek Cypriot population, over 200,000 people, were displaced. In a large government initiative, to house the refugees that were at that point living in tents, resulting in 69 new neighborhoods, the sinikismoi as they are colloquially known. Their design was driven by necessity, speed and budget constraints. In what we can call a social experiment, the displaced people were distributed to housing estates, according to family size and financial capacity, disrupting existing social structures. The estates were built on state land in the periphery of urban centers and close to industrial areas to offer jobs to the postwar landless and jobless populations. They were isolated, and introverted, composed of simply built, low-cost row housing of varied sizes combined with low-rise apartment blocks. They did, however, have over 50% of the space allocated to open and unprogrammed space.

For decades, the narrative that the solution was temporary, and that the refuges would soon return to their homes kept the estate residents in a "permanent state of temporariness". While maintenance was allocated to the state, this perpetuated the temporary status of the residents 50 years later, these estates remain introvert, lacking integration with the surrounding neighborhoods, while the residents still carry a social stigma associated with these neighborhoods and their refugee status. Of the following generations, those who were able to, sought housing elsewhere, resulting in a demographic of mostly elderly original residents and over the years, a growing minority of foreign migrant workers, newly arrived international refugees, low-income families, and more recently speculative investors.

A Site for Action

The Architectural Studio Unit 9: 'Unsettled' approaches the topic framed around displacement, the commons, home, and spatial practices within the context of social housing estates. The studio delves into diverse topics, keeping the lens of Randall Teal in mind, "to discover the richness of 'place' through architecture, the designer must engage with the specificities of culture, location, and experience that make up everyday existence", [Teal 2008, p.144]. The following research thematics are explored: inclusivity (removing physical/social barriers, integrating varied users into society); environment (current climate crisis/change, limited resources, pollution, soil health); hybridity (as a cultural process); identity (memory, issues around displacement, belonging, (im)permanence, boundaries, ownership) and the notion of urban commons (collective processes such as cultivation, gardening, food production, small scale economies and creative spatial expressions).

The Unit explores new urban processes that challenge the privatization of public and shared space, focusing on how design can create opportunities for the collective body to interact and relate to one another, as well as create new cultural spaces and traditions. Henri Lefebvre's argument is expanded upon, "the dynamics of the social space require a dissolution of architecture into a momentary enjoyment...an ephemeral situation created by activities of groups that are themselves ephemeral" [Lefebvre 2014, p.56], resulting in a sense of empowerment of the affected body.

Ideas of narration

Under the umbrella of Unit 9, an international student Workshop introduced the idea of 'Architectural Narration' as a methodology for reinterpreting findings and considering architectural processes (material and operational) as a tool for empowering collective identity in the neglected urban site of 'Aspres'.

The workshop concentrated on the following five key themes.

Connectivity: addressing the problematic segregation of the public green network and the isolation of the dis-abled elderly body from public spaces, a place of connection that creates social opportunities of encounters is introduced. This activated ground level brings together the different social groups of the settlement, maximizing communal space, parallel to providing physical mobility to those in need.

Hybridity: addressing the appropriation of the individual body into the public space by sub-dividing, cutting, and adjusting the threshold between private and public domain. A narrative

of an inhabited hybrid threshold is discussed, focusing on the river edge and communal infrastructure, church and school areas. Social hybridity and space negotiation for solve for the individual and collective body as equal and active partners of public space, allowing for appropriation and transformation over time.
Productive landscapes: getting inspired by the passive harvesting that already exists in the green public areas, a narrative of transforming the settlement into a productive landscape, self-sustained and managed by the inhabitants is introduced. A diverse program based on cultivation and food preparation, where existing knowledge on agriculture, harvesting and traditional cooking is passed on from the elderly to the younger generation, is superimposed as a new layer on site. A network of agricultural fields, food processing workshops and food related festive events is interweaved in the existing urban fabric.
Boundaries: by identifying existing boundaries, their materiality and performance, a narrative of a porous public space is studied and discussed as an inclusive urban environment. Thinking of the 'edge' under the category of a spatial typology, that can be inhabited, planted, expanded and treated by the affected body.
Social cultures: recognizing the need of bridging the existing intergenerational gap, the narration orchestrates permanent and temporary activities distributed in a diverse network system. A few of the nodes and paths that make up the spaces in this ephemeral urban narrative are newly inserted access points that activate existing paths and gardens and offer new opportunities to inhabit rooftops.
The studio (as an academic tool), seeks to combine forces with the Municipality of Strovolos (a governing body), to enable the students (young, engaged individuals from diverse international backgrounds) and the community of Aspres (a mixture of locals and immigrants) to engage in a collective dialogue, that will hopefully result in positive learnt experiences and future forward design solutions.

Conclusion
The 'Unsettled' studio offers a space for identifying and addressing opportunities for creating commoning processes through architectural interventions and programs that begin to catalyze change through the understanding of the users from within. In 'The City as Commons', Stavros Stavrides advocates that common space is not an accomplished state of things but a process. The proposed methodology of the Unit explores this idea and the notion that architecture is not fixed, and does not offer fixed solutions, but is a sum of dynamic and parallel processes, an enabler of social relations, with the capacity to shape societies and create new dynamic communities. This brings into mind Smilijan Radics's interest in how, "architecture revolves around an immediate requirement" [Radic 2013, p.89], giving inhabitation a new sense of purpose through a new use. This notion of what one could call 'fragility' is interesting, as it can be used to describe the potential of the living conditions, the context, and even the user. Aspres, in all its complexity, offers a multifaceted and diverse environment that can be used to generate both fascinating and dynamic solutions for the ever increasing 'unsettled' communities that exist around the world today.

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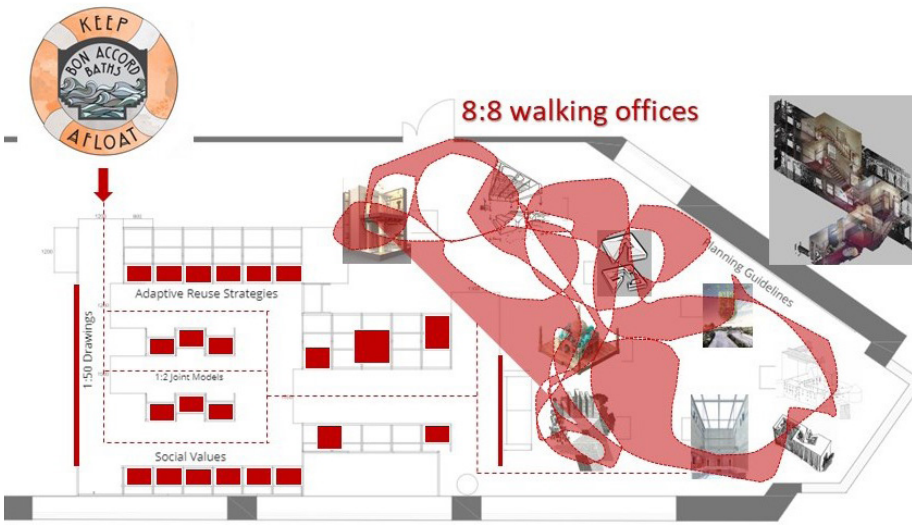
FIGURES

Fig. 1 - Swiny.Tourvas.Hadjisoteriou. Unit 9 'Unsettled' and Arch 202 student work. 2023-24. Mixed Media. Aspres, Cyprus



Each office will have one rack of shelves.
Can be moved so layout will change

Silvia Bassanese
Robert Gordon Universit
s.bassanese@rgu.ac.uk

Bodies - Figure[s] - Ground[s].
Practices that enable conflictual society to find form of coexistence

Key Words
Temporary duration, Spatial containment, Collective bodies in (polis)

The lines of influence that bodies outline in the space and the ways they produce frameworks for interventions in the urban space is still considered of secondary importance in our societies. The process of identification of key-factors that orchestrate the choreography of urban change through quantitative data, mainly based on objective statistical patterns, is overall preferred over qualitative methods that reveal subjective and inter-subjective narratives. Basically, there is the tendency to suggest that quantitative rigour and evidence-based design can justify architectural quality. Bodies, instead, with their movement and unpredictability modulate the space; they mediate encounters and geographies of experimental participation [McCormack 2013, pp. 17-37]. And by doing it, they become agents of transformation on different physical-spatial levels including steps towards peaceful form of coexistence in the urban space.
The form of the city with its contested spaces is a field where architects can confront problems in the attempt to reframe the public debate and ensure that multiple perspectives are embraced. According to Pier Vittorio Aureli, the form of the city arises from the constant interaction between ideas and spatial conditions, where the latter are generated through the relationship between the built and the un-built [Aureli 2013, p. 10]. This work explores how the relational nature of the body triggers the relational aspect of architecture, because the body is never acting as self-contained entity independent of an outside environment [Abrahamsson 2011]. In detail, we refer to the dynamics activated by the pervasive presence of urban voids in our cities, in line with the definition of these spaces as always "tensioned" and "relational", occupied by "destabilizing forces" that challenge "relations of structured organizational contiguity" [Stoppani 2014, p. 99]. By focusing on the active interactions in the body-space relationships pushes us to rethink the reality of urban voids in terms of relations, instead of objects, entities, or substances, where all properties are interconnected. The process of acknowledgment and build upon the network of relationships, of which the architectural is only one of the possible

codified forms of expression, becomes the agent of any form of intervention. Anything that exists does so thanks to, as a function of, or according to the perspective of something else.

Starting from these considerations, the Architectural Design Studio at the Scott Sutherland School of Architecture and Built Environment RGU in Aberdeen has dedicated attention to projects and forms of spatial mediation. Since 2018 during the design process, the Studio has integrated activities and practices strongly linked to the spatial characteristics of the various types of urban voids in the city of Aberdeen in Scotland. The specific interest in the hidden potential of these peculiar urban spaces is embedded into the broader subject of researching-by-designing spatialities that offer opportunities to imagine and conceptualize an alternative type of public, or new defined civic space with quality of affective spacetimes [Deleuze 1988, p. 158]. Sergei Gepshtein, who directs Collaboratory for Adaptive Sensory Technologies and Spatial Perception and Concrete Experience research, shows how the space of experience is articulated by boundaries that arise from the human body and how architectural experience has intricate spatial structure that has to be studied from the perspective of a mobile observer [Gepshtein 2020, pp. 37,41]. The prevailing model of the city as a complex network of social and economic relationships that must be managed, and whose increasing intricacy can be addressed through sophisticated instruments of analysis, design and control pursues smoothness, erases conflicts, eradicates the possibility of negotiation and resistance and therefore undermines the political agency of architecture in the construction of the city. The boundary of experience is an important feature of design that deserves its own representation [Gepshtein 2020, p. 40].

Urban voids are characterized by contested realities, temporary duration and spatial containment [Lopez-Pineiro 2020, pp. 73-105]. These prevailing characteristics have inspired the research for settings able to stimulate co-presence of bodies in a contained space. Each temporary setting has been identified during the design process in relation to the core of the conflictual element of the project conceived for each specific urban void in Aberdeen. Excess of linearity in the pedestrian path Deeside Way, problematic residual space in the under the railway arches, lack of awareness in the Bon Accord Terrace Garden, opposition between community and council in the adaptive reuse of the Bon Accord Baths, to name a few examples. The observation of the dynamics of the bodies moving for a limited time within a contained setting designed around that contentious issue, suggests recurrent patterns of convergent thinking, processes of negotiation of ideas, and active participation that stimulates further civic effort towards projects for the city. Platforms for dialogues on possible forms of intervention become viable way to overcome the polarities of the initial positions.

A sort of reversibility has been noticed: the figure becomes the ground and vice versa. First the spatial arrangement acts as figure with the participants in the ground, while later the bodies with their relational movements become the protagonists (figures) against new contexts in the background. The relational aspect of bodies in motion triggers the relational aspect of the space. Dialogues are suddenly possible, and projects may become reality. To demystify a space (built or un-built), we must closely read its form and be immersed in its spatial characteristics such as how the place has been appropriated or not, constructed or left empty and equally or unequally distributed. This is why a project is not just about design, but also the act of carefully reading the anatomy of the place in order to uncover its existing power relationships and conceive an alternative scenario. Apparently, this process is more influential if it is not an isolated act of an individual body, rather the result of a collective performance in a contained space.

Traditionally, the space between figure and ground, solid/occupied and void, theory and practice, mind and body, has been seen as dualistic if not oppositional. By outlining parallelism with the figure-ground urban theory and its representation [1], the observation of various case-studies embedded in the activities of the Architectural Design Studio suggests that a new order occurs. It may be more productive to understand the relation between ideas and spatial conditions as a moment of creation and transformation of both the imaginary and the real as a political moment of negotiation. In this perspective, form does not belong exclusively to one of the two sides of the dichotomy, as it is neither a result, nor a goal. We can argue that form occupies the space in-between, and it is what makes this in-between productive. Human bodies may be considered the agents of this process, because they may articulate and represent experiences within this powerful and porous boundary of relations.

ENDNOTES

[1] A systematic chronological analysis of the origins of Figure Ground placed by Colin Rowe in Collage City and of the difference between architectural form, idea of the project and its representation can be found in: Aureli 2011, pp. 85-140.

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FIGURES

Fig. 1 - Bassanese S., *Example of Temporary Setting in a Contained Space*, 2023.

Alisia Tognon[1], **Ekin Olcay**[2]
[1,2] Politecnico di Milano, DAStU
alisia.tognon@polimi.it

Mountainous Mastery. Architectural adaptations and urban fabric in Trentino's challenging terrain

Key Words
Domesticated Mountains, Cultural landscape, Adaptation, Alps, Trentino

The purpose of this paper is to explore architecture's role in characterizing the territory of the mountainous regions, with an in-depth focus on the Trentino region. The mountainous landscape, examined through its environmental, cultural, and economic dimensions, is an outcome of settlement practices that contributed to getting a complex terrain "inhabitable." Further exploration investigates the relationships between the nature and topography of the places, the architectural solutions that historically answered the geographical challenges posed by the terrain and the climate, and how these adaptations have influenced common life and affected the relationship between the body and the surrounding context.

Research context. The Alps as architecture.
According to Le Corbusier, the Dolomites are "the most beautiful natural architecture in the world."[1] Throughout history, the Alps, as a cross-border region, have witnessed a story of human intervention and resilience. The inhabitants of this landscape have not only co-existed with their environments but crossed the prominent barriers given by the challenging ecosystem to develop thriving communities and their built-up land [2].

Research questions. Mountain adaptation for common living.
The paper examines the complex relationship between the architectural adaptations on the morphological characteristics and the typological features of the villages in the mountainous terrain [3]. This highlights how it is possible nowadays to translate the building methodology from previous examples to future needs. We emphasize how humans have settled the site to adapt to the harsh climate conditions with the evolution of innovative and artificial approaches, which not only accommodate but also simultaneously conquer the Alpine land [4].
The groundwork of the research emphasizes the unique living dynamics that have emerged

through these adaptive interventions [5], including the use of space on different vertical levels of mountain slopes, the strategic positioning of villages for optimal climate exposure, and the combination of several traditional elements such as sloping roofs for the buildings and narrow paths for the aggregation model of living. According to this concept, appropriate architectural strategies have been created to handle the changing climatic conditions at different levels. These are responsive challenges posed by the mountain region, whereby buildings either isolated or in clustered arrangements had to cope with extreme conditions, very harsh and long winters, heavy snowfall, and sunlight exposure that was both short and, in some cases, absent throughout the winter.

Research activities. Readings into body and space.
The research examines how the built environment functions as a shelter and a buffer against natural elements, embodying a dynamic balance between human intervention and the landscape that must demonstrate resilience. Throughout the Alpine region, a unique and harmonious blend of functionality, strength, and aesthetic considerations are evident, albeit with their characteristics from region to region [6] Architectural typologies of mountainous dwellings are characterized by their intricate specificity, tailored to achieve diverse requirements stemming from mountainous topography. In this sense, architecture moves a relationship between form and function, where morphological and typological characteristics are crucial aspects of the built space in high-altitude villages. Moreover, the morphological arrangement of buildings, typology and architectural details reflect a functional response and define a strong integration with the natural landscape.
In the Alpine context, specifically, a symbiotic relationship is revealed between architecture and the environment, in which the peculiar features of traditional architecture are (as for the vernacular architecture globally) the outcome of an extended adaptive capacity to the context's conditions, such as pitched roofs, the orientation of the buildings on specific axes and morphological relations with the sloping ground plane, material details and structural elements, the study of façades, and spatial sectoralisation.

Case study. The Trentino area
The region of Trentino, settled in the heart of the Italian Alps on the border with South Tyrol, is a peculiar case study of the coexistence between human productivity and the challenges of the Alpine landscape. Precisely because of the territorial conformation and orography of the landscape, in addition to the specific cultural aspects, the Trentino architectural tradition has defined different architectural typologies over time in every valley, which today constitute elements to be preserved and renewed even in the definition of studies on mountain areas.
Orographically, Trentino is characterized by a succession of plateaus and broad valleys that, in the past, have been deforested to establish new crops. Moreover, despite the high percentage of land exceeding 1000 meters (70%), Trentino has always been a densely populated region, with permanent settlements located at moderate altitudes. Nonetheless, due to the verticality of the terrain, since ancient times, the inhabitants have been forced to build the spatial organization of the landscape through the practice of deforestation, the organization of pastureland and agricultural fields, as well as artificial terraces in dry walls, sheep tracks for vertical transhumance, and building the collective shelters for animals, "malghe"[7] and "masi" [8].
The typology, morphology, and materials used in the settlements reflect ethnic and cultural practices (Latin or Germanic origin). Moreover, the medieval colonization of the Trentino region stems from the feudal lords' purpose to increase their holdings and enhance income by developing their domains by cultivating wild lands and fostering immigration from regions beyond the Alps [9]. The appeals of exploitation land via the "Enfiteusi" regulation [11] attracted families from Germanic areas who, aware of the potential enhancement of their finances through the increased productivity of the estates, actively undertook the reclamation and transformation of entire territories, with the creation of an artificial and domesticated landscape [11].
Germanic colonization has also introduced a new model of 'house' and a way of living scattered along the slopes (isolated "Masi"), according to the tradition of building these typologies in the middle of the cultivated lands. On the contrary, Neo-Latin settlements built clustered villages as family dwellings, in accordance not only with the rule of political authority but also because of Latin hereditary law [12]. In most of cases, what is evident is the juxtaposition of three main building typologies, characterized by structures with reticular frameworks, masonry buildings, and blockbau. These three typologies underwent hybridization, resulting in different architectural solutions, mainly utilizing local materials (stone or timber) but achieving varied compositional aspects. Depending on the various territorial areas of Trentino, the typology of buildings (scattered or in clusters) also presents different compositions of forms and

construction materials [13].
Moreover, as is generally the case in mountain settlements, Trentino hamlets are also characterized by their relationship with the terrain type (conoid, slopes, and saddles). Also, the morphology (nuclei, axial expansion, etc.) was defined based on climatic responses (exposure to sunlight) and orography [14]. Indeed, the interconnection between the residential fabric and spatial relations emerges as a paramount theme in the mountainous context, where inhabiting the slope constitutes a strategic and functional decision in response to the specific seasons, characterized by long and shady winters juxtaposed with short summers.

Conclusions.Concept, discussion and challenges
In conclusion, this ongoing research provides a broad exploration of multiple aspects at different levels, from the morphological scale as a response to a given context to the architectural scale in terms of typology and technological reply, reflecting on the complex relationship between human settlements and the challenging mountainous environment.
As we dive into the environmental and cultural components of Alpine architecture, it becomes very apparent that these essential adaptations are of profound cultural importance in addition to their practicality. The preservation of the local heritage and the tradition that it brings merged into the new architectural fabric in a highly complicated and delicate manner [15]. As a result, a balance between human intervention and environmental conservation is created. In essence, the architectural narrative of Trentino serves as a delicate example of the harmonious coexistence of artificiality, artificial interference, and the natural landscape itself.
This analysis is fundamental to understanding how the contemporary situation, exemplified in Trentino, highlights a risk of loss of cultural heritage and local identity. The need for modernization defined by changing uses and technological advancement in production activities has led, in many cases, to the modification of traditional architectural features and the replacement of synthetic elements and materials that result from standardized architectural norms. As a result, these settlements have become detached from their indigenous context.
This paper focuses on a small part of broader research that creates prototyping for finding generative solutions for underutilized contexts in mountain areas. This can be accomplished by creating a catalogue [16] of existing conditions that require solutions. This exploration seeks to unravel the connection between if and how these environmental factors affect architectural solutions, contributing in the future to a more profound understanding of the possibilities embedded in these complex landscapes by understanding how smart solutions have been created in the past for the definition of better living solutions. An analytical part of this research is proposed in this paper, which focuses on Trentino as a region of interest.

ENDNOTES

[1] This was reported by Le Corbusier from the airplane with Durafour over the Atlas Mountains (Al-giers-Ghardaia) on March 18th, 1933. Le Corbusier (1935).
[2] Guichonnet (1984), Batzing (2005), Salsa (2019).
[3] Tronconi (2008).
[4] Gabert, Guichonnet, (1965), pp. 59-69.
[5] Viazzo (1990).
[6] Zanzi (2004) argues for 'saving the Alps to save Europe' based on political and historical data. Zanzi's approach can be defined as 'eco-history' whereby the evolution of Alpine communities is investigated in close relation to the natural environment in which they settled. It goes beyond anthropic exclusivism to highlight how natural factors have influenced people's cultural history. Zanzi calls the Alps an "environmental region" in which lifestyles, productions, behaviours, and traditions are expressions of adaptation to the environment. This environment has been transformed, preserved, and enhanced in its ability to produce resources. That status was maintained until the establishment of nation-states (18th century).
[7] "Malge" is a typical name for the Pasture structures in the High mountains in the eastern Italian Alps, where animals, specifically cattle and shepherds, stay during the summer. Usually, it consists of a barn and some spaces for cheese and butter production. In some areas, it can be known as "Casera". "Malga" for singular, "malghe" for plural.
[8] "Masi" is a term used in the eastern Italian Alps to refer to landed property used for agriculture and forestry, a farmhouse, or a temporary dwelling connected with livestock raising. Partial sales cannot reduce these properties but must be passed on in their entirety by deed between living persons or by inheritance to a single preferred heir. Masi are usually located mid-height in the mountains and contain multiple buildings. "Maso" for singular, "Masi" for plural.
[9] Castagnetti, Varanini (2005).
[10] Enfiteusi (from Late Latin emphyteusis) is a fundamental right of enjoyment over land belonging to another, typically agricultural, whereby the holder (emphysema) enjoys full use (beneficial ownership) of the land itself but is obligated to improve the land and additionally pay an annual fee in money or goods to the owner.

[11] Angelucci, et alii (2013).
[12] Dematteis (1986).
[13] Cereghini (1966), Dematteis (1986), Frattari, Dalpra (2000).
[14] Cecchetto (1998).
[15] Frattari (2002).
[16] See as references: Buzzi 1994, 1999, 2000 and Bonapace 1997

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FIGURES

Fig. 1 - Val di Rabbi ©Tognon 2022

Yi Guo
University of Camerino, International School of Advanced Studies
yi.guo@unicam.it

The affected body in hyper-dense urban habitats:
Exploring embodied architectural experiences in Hong Kong and Shenzhen

Key Words
Affected, Embodiment, Hyper-density, Everyday tactics, Sensory ethnography

This paper examines the complex interrelationship between the body and built environment in the context of high-density Asian cities like Hong Kong and Shenzhen. Adopting the thematic perspective of "affected," the study elucidates how the body gets impacted by and imprints itself on external spatial conditions and material qualities of these hyper-dense habitats. Grounded in sensory ethnography, mental mapping exercises and in-depth interviews with residents, the research elucidates nuanced bodily experiences within contested environments undergoing rapid transformation. Amidst relentless intensities, how do high-rise habitats modulate moods, forge collective ways of knowing, and imprint themselves on the body's perceptual apparatus? What kinds of somatic burdens, but also sensory potentials might exist within such ascendant 21st century urban contexts? Core themes encompassing environmental stresses, social capacities, everyday adaptations and creative placemaking practices emerge through detailed investigation. The study builds on and extends scholarship on embodied urbanism and everyday tactical dwelling, advocating for more inclusive placekeeping policies and architectural approaches attentive to nurturing collective life amidst density's strains.

The proposed paper is framed by phenomenological perspectives from architecture and urban studies foregrounding the reciprocity between body and world. Philosopher Maurice Merleau-Ponty (1962) conceived of the body as an interconnected "nexus of living meanings" moved by and moving through the world in a continual process of sensory participation. Anthropologist Kathleen Stewart (2007) envisions cities as pulsating "atmospheres" where moods resonate through bodies, interweaving material conditions with ways of sensing. Architect Juhani Pallasmaa (2012) contends experiences are fundamentally multisensory, critiquing ocularcentric design. This conceptual lens of affected embodiment illuminates the body's nuanced imprinting upon and by external environments. Theorizations of everyday tactical

practices equally ground the study. Michel de Certeau (1984) examines how imposed spatial orders are subtly adapted through lived "arts of practice" asserting autonomy. Anthropologist Edward LiPuma (1993) highlights how rhythmic routines provide refuge within constraining environments through repetition. Such works reveal how creative dwelling re-shapes space from below. This research synthesizes phenomenological and tactical perspectives to elucidate nuanced bodily experiences within rapidly transforming Asian cities like Hong Kong and Shenzhen.

Methodologically, the study adopts three complementary approaches. Sensory ethnography methods based on in-situ immersion document the dense multisensory atmospherics of polluted air, cacophonous soundscapes, humid microclimates, tactical rhythms of passage, and affective moods that permeate everyday habitation within compressed urban zones lacking green relief. Mental mapping exercises capture cognitive spatial perceptions of over 50 residents across housing estates and informal areas, tracing how they perceive, remember, use and imagine hyper-dense spaces. Finally, in-depth narrative interviews with 25 long-term residents in each setting using open-ended probes unpack nuanced themes of dwelling, placemaking, identity and reactions to overwhelming material conditions. Together these complementary phenomenological methods elucidate how high-density environments imprint themselves profoundly upon the body's perceptual apparatus and lived experience, frequently exceeding its filtering capacities. But they equally reveal how creative rhythmic practices allow residents to reciprocally reshape imposed spaces through subtle reinhabitation. The study elucidates an intricate dialectic between bodies and their dense built contexts. It counters reductive narratives of urban density as abstracted statistic or technical problem, foregrounding grounded realities of living with and contesting relentless intensity.

Key empirical themes around environmental stresses, social capacities, everyday tactics and sensory potentials emerge through analysis of the robust evidence: Excessive ambient environmental burdens like pollution, noise, humidity and exhaust fumes are widely reported to induce significant somatic stresses and sensory overload, resulting in reactions of nausea, anxiety and practices of mental detachment from noxious affects as coping tactics. Bodily capacities for processing relentless stimuli break down, provoking experiential strains. This highlights the need for more salutogenic policy and design interventions mitigating negative health factors rather than amplifying stresses through uncritical densification. However, creative rhythmic practices of dwelling including spatial appropriation, nocturnal routines and communal placemaking rituals provide modes of repossessing autonomy and carving out respite within intensely congested and confined habitats. Everyday routines like improvising informal markets in leftover alleyways or choreographed dances in repurposed void decks allow marginalized residents to subtly reshape imposed developmental orders through tactical reinhabitation asserting alternative possibilities. This highlights an agency of placemaking practice.

Together, the nuanced analysis reveals how adopting "affected" as a conceptual lens acknowledges the body's embeddedness within surrounding environmental conditions, casting high-density architecture as more than a technical challenge. Amidst relentless intensity, the body itself becomes a conduit channeling the environment's overwhelming energies into generative collective action geared towards spatial justice. Embodiment links the material, the political and the experimental. Broader implications emerge regarding rights to the city, participatory placemaking, policy reforms and architectural responsibilities. The study demonstrates how foregrounding multisensory experience provides grounds for reimagining more inclusive urban futures within existing contested landscapes. It advocates for design approaches proactively nurturing collective sensory and social flourishing rather than privileging technical optimization alone. Dense futures must enable plurality.

Urban policy equally should be re-grounded in social practice, not just fostering economic flows. If we begin by listening to marginalized voices and honoring creative embodied practices, more caring people-centered habitats may yet emerge amidst capitalist city-making's relentless intensities. Affected embodiment reveals unrealized potentials within overburdened cities to recalibrate everyday life toward hope. Even the most congested urban environments contain possibilities for reclaiming spaces of refuge, care and collaboration if we attune policies and architectures to enabling rather than constrain collective tactical practice.

In conclusion, adopting the analytical perspective of "affected" foregrounds the body's imprinting upon and reciprocal shaping by surrounding material contexts. High-density Asian

cities like Hong Kong and Shenzhen exemplify these complex dialectics between external environments and internal somatic states. The study elucidates how creative placemaking tactics rupture imposed spatial logics to facilitate collective dwelling and alternative identity construction. Further research grounded in social practice and multisensory experience can illuminate generative openings within intensely transformed urban regions worldwide. Amidst the 21st century's escalating developmental pressures, insights on embodiment and everyday practice provide grounds to contest injustice, reclaim place and prefigure more equitable urban futures through cooperative reinhabitation. Even in the most crowded, contested, capital-colored cityscapes, spaces of hope persist. Acknowledging the body's generative capacities amidst intensity reveals potentials for more just urban worlds. Creative solidarity can blossom between high-rises if we shape policy and design to nourish collective life. This study illuminates fragments of possible city futures from the crucible of hyper-density. The concrete utopias of participatory place await activation.

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FIGURES

Fig. 1 - The multilayered fabric of urban congestion. Source: Author.

3 / AFFECTED ENDNOTE

Di Mauro Silvia, Santus Kevin
Politecnico di Milano, Department of Architecture and Urban Studies

The "Affected" perspective, as anticipated in the introduction, aims to trace the relationship between the environment and the body from the point of view of the possible actions of the environment on the body. Considering how architectural and urban configurations impact bodies, we delve into the experiential aspects defined by the environment.

The conference collected contributions from which four macro subtracks emerge, with flexible and intertwined limits, oriented towards the social and the community, particular relationships between the body and a defined spatial typology, the sphere of ecology, performative nature, and the relationship between the built environment and the environmental phenomena.

Connected to the community, the space is investigated both in its experiential pedagogical role, in the construction of awareness also towards natural risk, and in its ability to trigger situations of sociality and sharing. At the same time, relating the theme "affected" with the community, looked at as a collectivity of bodies, frames the theme of temporary emergency conditions for refugees, as well as the concept of reuse of existing buildings as a possibility of new corporeal interactions. In these conceptions, the contributions treat the body both as an individual and a community. As "individuals" highlighting the relationships triggered by the movement in space, the observation and exploration, and as a community, approaching the idea of the corporeity of the crowd as a single body that conditions the space and the urban environment.

In this term, affected stresses the idea of the body as a physical presence, which becomes fundamental in investigating how space informs and stimulates its spontaneous occupation. On the one hand, high density in cities raises the issues of over-tourism, slow mobility, and the search for individuality through re-appropriation; on the other hand, the theme of underuse in fragile contexts recalls the need for regeneration and re-appropriation starting from the links with the environment.

From an ecological point of view, an interest emerges concerning the influence of nature – framed as a space of vegetation and non-human life – and climate on the body. In this regard, contributions include theoretical considerations toward coexistence with nature and the perceptual resonances between body and matter. The link with the natural environment is deepened both in living and in the possible urban impacts, in the practices of integrating vegetation in the city, or in the influence they can have in encouraging the stratification of uses in the existing space. Finally, well-being, atmosphere, and corporeal conditions are further investigated, specifically in the bond between body and environment, which entangles the human perception of space with the immaterial sphere of the environment.

This opens the space to a series of reflections on the performative idea of nature, where the influence of specific climatic conditions could shape and affect the corporeal experience. Ventilation and temperatures are framed in their direct impact on environmental comfort, both at the architectural and urban scale. Hence, performance and impact are understood as investigative tools to identify the places of the project where well-being could guide the redesign of public spaces and personal care, especially regarding the perceptive aspects connected to spatial devices. Moreover, the interaction of the body is not only related to the external climate condition but also to the contact with a broader sphere of living species, reflecting on the impact of morphology on biodiversity.

Then "Affected" could be synthesized as the various potential interactions between environment and body, presenting a plurality of themes able to frame the topic both within a historical perspective and within a contemporary discussion of projects and spatial dynamics. Thus, addressing these themes stresses the importance of looking at external factors' influence on the body(s) and the way these could be a foundational character of the design choices, and not a consequence of them, delving into design approaches and theories

Edited by the Inter-Active Scientific Committee and the Milan Organising Committee, see p. 21

4 / VULNERABLE

/ On the potential role of a design approach that investigates the relationship between vulnerable bodies and space.
We live in a time of interconnected crises that have manifested a stratification of different forms of vulnerabilities. To disentangle the complexity of this crisis the design disciplines and practices have recentered the attention towards living bodies as a medium to refocus our disciplines. The intertwining of vulnerable bodies and vulnerable places challenges the preconception of 'normality', where the diversity of bodies calls for deconstructing fixed interpretations. Addressing various forms of vulnerability related to gender, ethnicity, class, religion, age, impairments and fragilities of bodies places the design exploration at the forefront of care, inclusion, safety, and accessibility.
Historically, our cities have been built according to a 'universal and neutral user', flattening the everyday experience with the idea of 'one size fits all'. However, space is not neutral: it becomes a place of constraint and a chance for practices to get formed in space, but it is also a place of conflicts, encounters and expulsions. In this sense, vulnerability is intended as a temporary or permanent condition of living bodies, which, because of how our cities, territories and buildings are designed and perceived through their visible and invisible barriers, struggle to access, use and inhabit spaces as well as be welcomed and recognised.
The discourse about vulnerable bodies and their agency in the built environment calls for an interdisciplinary exploration where the different domains that converge in observing, interpreting, and modifying the cityscape raise the issues of unveiling the unseen bodies and the unheard voices, identifying the proper tools and methodologies.

We encourage a cross-disciplinary reflection on how vulnerable bodies can generate a sense of agency and purpose in making visible their rights, their knowledge, and their identities in space, welcoming contributions that include but are not limited to:
/ The Vulnerable Body in Vulnerable Places;
/ The body threatened: migrations and wars;
/ The segregated/decolonized body, new geographies of body-space justice;
/ The queer and gendered space, the space of minorities;
/ Vulnerabilities Contextualized in space and time;
/ From Awareness to Design: multidisciplinary practices and methods on body-space-centered justice;
/ Changing the Rules: Regulations and Guidelines beyond the standard and the quantitative parameters.

Allana Avila Dorneles
University of Beira Interior, Department of Architecture
allana.dorneles@gmail.com

Vulnerability and neuroarchitecture. Approaches to care in healthcare environments: a narrative review

Key Words
Vulnerability, Neuroarchitecture, Healthcare environments, Proper care

Abstract
This article explores the intersection between neuroscience and architecture, emphasizing the importance of built environments in promoting proper care and well- being for vulnerable patients. Through a narrative review, we will explore analyses of case studies and works by renowned authors, such as Juhani Pallasmaa and Alvar Aalto, wherein the study highlights the need for a multidisciplinary approach in neuroarchitecture. The results underscore the relevance of architecture in adapting to emerging challenges, such as the COVID-19 pandemic, and emphasize the importance of projects sensitive to human needs for a holistic healing experience in healthcare environments.

Introduction

Human beings are, at their core, vulnerable from birth to death. However, when confronted with illnesses or ailments, this vulnerability becomes even more evident and challenging. Patients facing health issues require special care, and therefore, they must be placed in environments conducive to proper care [Jencks 2017]. In this context, the importance of architecture as a crucial element in shaping environments conducive to proper care emerges.
In recent decades, there has been a growing interest in a deeper understanding of the impact of built environments at various scales on individuals. Physical space is an intrinsic component of the human experience, accompanying humans throughout their existence. For every human activity, there is an environment to which it can adapt [Pallasmaa 2012]. In this perspective, medical offices are designed to better meet the needs of patients, classrooms are designed to foster the individual development of each student, and homes with welcoming spaces contribute to comfort and promote harmonious interpersonal relationships.
Architecture is profoundly influenced by theories and discoveries from various areas of re-

search and knowledge, rather than possessing an independent theoretical basis [Pallasmaa 2013]. Within this vast field of knowledge, neural architecture emerges, where neuroscience, a branch of medicine dedicated to the study of the human nervous system [Paiva 2018], has been applied in various areas, including architecture. This interdisciplinary approach has been evidenced since emblematic projects such as the Paimio Sanatorium, conceived by Alvar Aalto in 1929. The central idea of this project was that the building itself would contribute to the healing and rehabilitation of tuberculosis patients, configuring itself, in Aalto's words [1940], as a "medical device".

Thus, it is evident that considering that neuroarchitecture should be investigated to understand how built environments influence the health and well-being of individuals, especially those facing illnesses or ailments. Therefore, by analyzing concepts of neuroarchitecture and relevant case studies, this narrative review intends to explain how they can affect people's health, on the potential role of a Design approach that investigates the relationship between vulnerable bodies and the physical environment.

Objectives and Methodologies
This study aims to delve into the fundamental principles of neuroarchitecture within healthcare environments, examining its profound influence on individuals' health and its intricate connection with vulnerability. Employing a narrative literature review, the research seeks a comprehensive understanding of neuroarchitecture, acknowledging its longstanding study while also addressing contemporary concerns, notably the impact of the COVID-19 pandemic. This approach allows for a nuanced exploration of neuroarchitecture's multifaceted aspects, necessitating a contextualized analysis to grasp its full scope.
Given the exploratory and interpretative nature of the study, a qualitative methodology is adopted to delve deeply into the interplay between neuroarchitecture and human health. This approach facilitates a thorough investigation into the complexities, underlying meanings, and vulnerabilities inherent in the relationship between individuals and their built environments. By integrating insights from neuroscience, psychology, phenomenology, and related disciplines, the research endeavours to provide a holistic understanding of how architecture influences human well-being within healthcare settings.

To enhance comprehension and broaden exploration, the study examines relevant case studies such as the Paimio Sanatorium and the Maggie Centers. Additionally, it delves into various factors that intersect with neuroarchitecture, as emphasized by scholars like Pallasmaa and Robinson. Recognizing architecture as a multidisciplinary field, the research underscores the necessity of integrating diverse knowledge domains to gain a comprehensive understanding of architecture's impact on human health. Through this multifaceted approach, the study aims to contribute valuable insights into designing healthcare environments that cater to individuals' needs while addressing their vulnerabilities.

Results
The main results derived from the articles considered in this narrative review can be grouped into three distinct themes:
1. Importance of Architecture in Promoting Proper Care: The results emphasized the relevance of architecture in shaping environments conducive to proper care for vulnerable patients. This underscores the pressing need for architectural projects sensitive to the specific demands of individuals facing health issues.
2. Necessary Adaptations in Healthcare Environments: The analysis of the recent situation of the COVID-19 pandemic revealed the urgency of adaptations in healthcare environments to meet the emerging needs of patients. This included considerations related to social distancing, hygiene measures, appropriate access to medical care, ventilation and natural lighting, as well as the presence of natural elements.
3. Need for a Multidisciplinary Approach in Neuroarchitecture: Through the concepts of Pallasma and Robinson [2015], the results highlighted the crucial importance of a multidisciplinary approach in neuroarchitecture, integrating knowledge from neuroscience, psychology, phenomenology, and other related areas. This underscores the inherent complexity and interdisciplinarity of the field, highlighting the imperative need for collaboration between different specialities for a comprehensive and holistic understanding of the impact of architecture on human health.

Discussion
[Pallasmaa & Robinson 2015] affirm that architecture transcends its merely physical defini-

tion, being also a means by which we perceive, understand, and interact with the environment around us. It is argued that our bodily experiences play a significant role in shaping our perception of space and place, influencing both our navigation and habitation in architectural environments. In other words, human presence in a vulnerable space can be influenced by this environment as much as, inversely, it can influence its condition.

Conclusion

The integration of neuroarchitecture principles into healthcare design aims to optimize patients' overall well-being by considering the intricate relationship between the built environment and the human body. This approach, grounded in architectural and neuroscientific insights, emphasizes the creation of healthcare spaces that address physical, emotional, and mental needs. By fostering holistic healing, neuroarchitecture contributes to enhancing patient care quality, highlighting the significant impact of the environment on human health. This reflection challenges professionals in architecture, design, and research to adopt a human-centred approach, recognizing the transformative potential of the built environment in promoting comprehensive well-being for individuals.

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Ground floor plan

Michela Bassanelli [1], **Carola d'Ambros** [2]
[1,2] Politecnico di Milano, Dipartimento di Architettura e Studi Urbani
[1] michela.bassanelli@polimi.it [2] carola.dambros@polimi.it

Bodies, Work, Care.
How office and domestic space is changing

Key Words
Care spaces, Working spaces, Remote work

Studies emerged during the pandemic have pointed out that the adoption of telecommuting (erroneously referred to as smart working) has led to an overload of daily commitments for those who perform care work (raising children, caring for elderly relatives, household management) and which correspond to various figures such as mothers, "new fathers", singles and caregivers in general. Hiring of this new contractual form known as smart working has continued to grow despite some slowdowns in the last two years. The latest document of the Observatory on Smart Working of the Politecnico di Milano shows continued growth in large enterprises, while the decline is in micro enterprises and Public Administrations [Osservatori 2023]. While the advantages are well known in terms of environmental sustainability, reduced pollution, and the new importance assumed by neighbourhoods and suburbs, for office workers, middle managers, freelancers, the workplace has become synonymous with super-work without hours or limits, with the co-presence of online commitments and with a lack of human relations and empathy [Bassanelli, Forino 2021].
Among the main repercussions of the spread of remote working is the transformation of corporate workspaces in order to reduce and dematerialise the office, abolishing workstations or modulating their use on a time basis [Bassanelli, Forino 2022]. At the same time, people start working from home without always having the conditions to recreate work-friendly solutions. For many people, the home has become the only place where they can carry out their work outside the office and, as a result, they have had to equip themselves - mostly at their own expense - with faster web connections, purchase modern IT devices, change family habits, reorganise living spaces to have more privacy, improvising studios in the bedroom, living room or kitchen [Meloni 2021]. These new working habits are in addition to the transformations in the idea of the family, moving from the traditional nuclear one to "family constellations", which include different cohabitation patterns and figures: the single person, the couple, the couple

with children, separated couples - with children and differently recomposed -, the elderly, either alone or in couples [Guetto, Pirani 2021]. In Italy, for example, one in ten family is a single-parent family, most of them composed of women, but the trend also shows an increase in those formed by fathers alone.
The paper, resulting from the ongoing national research "ESCAPES-Experimental Sustainable & Collective Architectural Places for Employes-Carers" [1] (PRIN2022), aims not only to offer a critical state of the art on the topic, but also to analyse some case studies that can offer a better balance between work and care commitments. The theme of new forms of work must absolutely be considered in the design or redesign of domestic and working spaces. The organisational structure of non-manufacturing enterprises, especially those engaged in advanced services, will undergo substantial transformation in the coming years [Capitani 2022]. Central offices will have increasingly limited physical space. At the same time, individual production will be entrusted to the domestic environment, although not everyone will have the opportunity to create suitable furnishing solutions for work activities in their own homes. Reflection on the house becomes an opportunity to reconsider an idea of care and thoughtfulness that has often been lacking in our cities in recent decades. Scholars are putting back at the centre of the project a different idea of care, not only related to practical tasks but also to those of one's relational and physical environment, local development and solidarity. The impact that new models of smart working, and thus of home-office combination, have on the general wellbeing of the individual and, even more specifically, on psychological wellbeing, is a firm point of ongoing research. The goal is to avoid the erroneous consideration of smart work as the sole and unequivocal means of protection for "fragile workers" - albeit a valid one - in a broader view of the healthy relationship that the individual can enter into with his or her work space, also considering the risks of technostress and overworking [Osservatorio Smart Working 2023]. On the one hand, the text focuses on the transformations of offices by analysing those presenting spatial solutions that respond to worker care needs [Otero Verzier, Axel 2018]. Flexible and modular projects that allow space to be used individually and privately but also intended to accommodate group activities, fostering social well-being and a sense of belonging to a team. Multi-purpose spaces, capable of satisfying multiple needs and at the same time recreating a domestic, intimate and welcoming dimension. Spaces that combine work with areas dedicated to relaxation, reading, sports, sharing meals, and environments intended to become nurseries for employees' children. These are projects that, as the architect Massimo Roj claims, transform the idea of the "work place" into a "living place" [Mancini 2020], where the main objective is to reconcile private and work life.
On the other hand, it is necessary to rethink the configuration of the house: from collective/public to indoor/private spaces. The typologies of contemporary housing supply, of which the notion of flat is a synthesis, do not respond to complex and diversified housing practices. Several examples will be analysed, on a micro-scale, which, starting from the co-housing experiments widespread in northern Europe since the 1970s, up to contemporary co-living, show strategies for containing costs and sharing ways of living, in which the network of solidarity between inhabitants predominates and where care work acquires a different value. Finally, will be presented new housing typologies that combine work spaces within domestic environments.

ENDNOTES

[1] The Project ESCAPES funded by MUR is composed of three research units: Politecnico di Milano (coordinator), Università degli Studi di Milano (partner), Università degli studi di Cagliari (partner), www.escapes.polimi.it.

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FIGURES

Fig. 1 - Lacol, La Borda ground floor, 2018, Barcelona. Image source courtesy of Lacol.

Nadia Mounajjed
Abu Dhabi University
Nadia.mounajjed@adu.ac.ae

Pedagogies of care: Practices and methods for a non-ableist body-centered design

Key Words
Disability, Care, Education, Architecture

Today, there is growing awareness of the fact that predominantly ableist bodily conceptions underpin architectural discourse. When researching disability, it becomes quickly evident that specific mobility and/or access needs of disabled people rarely feature in the theories and practices of designers or architects. How do we design for equitable and ethical communities while living in a world that mainly favors the able body? What are the measures taken to include people with visual impairments or mobility limitations? How may architecture help produce more hybrid entanglements between our bodies, with their perfections and imperfections, and our environments. What are the opportunities and challenges for adopting an 'architecture of care' approach in practice and design education?

This paper aims to trace back the relationship between body and space by outlining a brief history of the shift from an ableist to a non-ableist-centered design. This is understood in the context of a long anthropomorphic tradition showing an ever-changing relationship between bodies and spaces. Based on this historic overview, I trace relevant practices and methods used in architectural education to promote a culture of care in design. The aim is to challenge one-dimensional approaches to the architectural subject as universal and disembodied, and to provide a space for reflection on the inequities and power imbalances in our society as manifested through architecture.

Historically, our cities were conceived according to a universal and neutral subject. A lot of this tradition was based on a long-lasting anthropomorphic tradition that was central to architectural thought. From Vitruvius to Le Corbusier, the human body served as a measure in the architectonics of embodiment. Vitruvius' famous treatise, *De Architectura*, exemplified the strong alliance between the body, architecture, and the world [Vitrivius 1960]. For a long time, this tradition prevailed. And the search for forms of spatial perfectibility was premised on a pure body type—the perfect, able, idealized body [Rykwert 1996]. With modernism, "the body

slowly continued with the humanist tradition and eventually was perceived as a mechanical component of industrial productivity" [Diller + Scofidio 1994, p. 40]. The modernist subject allowed for commensurability, and so architecture turned into a smoothly running machine tailored to this subject's needs. Le Corbusier was prominent for his depiction of the human body; *Le Modulor* was standardized, regulated, and freed from all disorders. It presented the subject as a measure of prefabrication, allowing for efficiency and proportion [Le Corbusier Date]. Eventually as many critics argue, this archetype led to the objectification of the body, a hegemony, and a sort of fetishism, compliance, and obedience. All aiming to protect self-integrity by effacing difference, otherness, and the outside [Wigglesworth 2000].

With postmodernism, a radical shift emerged. Recent cultural and technological change has led to a growing appeal for more relationality between the body and the environment [Mounajjed 2008]. Cultural theory that focused on post-modern, post-structural, and feminist perspectives rejected the demarcated definition and neutrality of the modernist body. While some discussed a body beyond organism spatially expanding in sensations and intensities, [Deleuze and Guattari 1988]. Others emphasized on new subjectivities, hybrid forms of embodiment [Palumbo 2000]. The body by then is perceived as a conscious subject who performs an act. It exhibits a multiplicity of different subjectivities, vulnerabilities, and needs in space. To this end, current cultural theory recognizes the multiplicity of bodies and the fact that subjectivities are rarely neutral and identical. It accepts the post-modern subject with its virtual affect, sensations, and intensities, needs and desires, and often imperfections.

This shift in thinking about the body opened the ground for a discussion on design for all kinds of subjectivities including the vulnerable and disabled. Rob Imrie noted that we are surrounded by discriminatory architectural design. Sadly, for the disabled, the built environment can often be experienced as a series of hostile, exclusive, and oppressive spaces [Imrie 2017].

In this context, one perspective becomes particularly relevant. That of an architectural education that links designing to caring. When practiced from a position of care, design can lead to innovative solutions, and positively contribute to our broader social, cultural, and material challenges [Nodding, 1984; Vaughan 2018]. And since care and uncare are so present in our surroundings, as Gubauer explains, it is vital to focus on inequalities in caring relations and the ways they manifest and transform our spaces, societies, and practices [Gabauer 2022]. When architectural discourse adopts an ethic of care, it can examine and help define how spaces of care shape our affective, material, and social forms, from the most intimate scale of the body to the scale of our cities [Utting 2024]. An 'architecture of care' can define the relationship between vulnerable bodies, spaces, and environments. Practices and pedagogies that depart from the ethics of care help identify body/space issues related to disability and the marginalized bodies, as well as propose new forms of embodiment and environmental care. As Fitz and Krasny note, a caring architecture becomes a response to the planet's urgent condition by weaving together tenets of ecology, economics, social justice, feminism, and politics [Fitz and Krasny 2019].

Architectural education has an important role to play in helping build awareness of the diversity of vulnerabilities and various subjectivities amongst the next generation. By addressing the specificity of experiences and exploring the possibilities and challenges that can come with the incorporation of non-ableist, embodied architectural discourses and practices. In this article, care ethics serves as the theoretical framework against which architectural education can engage with pedagogies of designing with care. The study presents design projects that focus on inclusion, embodiment, and spatial equity. The vulnerable bodies of the disabled are observed, understood, and explored in the design process through empirical research and creative exploration. Examples of projects dedicated to subjects with special needs include the blind, the visually impaired, and children with autism. These projects speculate through sensory zoning, careful transitioning, spatial familiarity, degrees of enclosures, and stimulus regulation. An ethics of care necessitates a sense of agency and purpose in making visible the vulnerabilities of the body in/and space. As agents of care, students-designers are encouraged to share their knowledge and examine identities in space through research, and participation in their communities. They are trained to apply specific methods of 'caring' for disability and impairment with the aim not only to provide for the needs of vulnerable bodies but also to participate through social reconciliation and awareness building; an educational model that endorses designing with care for the vulnerable body.

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Luca Lana
Monash University
luca@lucalana.com

The Gardening Body:
The queer ecology of Prospect Cottage

Key Words
Body, Gardening, Queer ecology, Queer practices

Recent efforts led by actor Tilda Swinton secured filmmaker Derek Jarman's dwelling sanctuary Prospect Cottage, off the southern coast of Dungeness UK, to continue as a queer pilgrimage site for those reflecting on Jarman's life and works and the enduring impacts of AIDS. This contribution delves into Prospect Cottage to glean insight into the relationship of a politically motivated gardening practice with queer ecological dimensions; it sparks a dialogue on how queer spatial practices foster the interconnectedness of the body with the material of the environment to shape ecological futures.

Elvia Wilk's critique of immersion in nature, Death By Landscape, is named after a haunting short story by Canadian feminist writer Margaret Attwood, where a woman is lost in, or more appropriately, she is lost to, the woods where it is implied she has become one of the trees. The title becomes the metaphor for Wilks's positioning of a post-human subjectivity in literature where the "sudden absence of a human actor occasions a sudden presence: the presence of landscapes, the presence of plants" [Wilk 2022, p. 20]. In discussing post-human, or "weird" literature, Wilk also critiques its opposite, post-modern 'system literature' where the protagonist, usually a "mystified (white) guy", is the predictable vehicle through which technical and social systems (and not nature) are experienced. In Attwood's story, the forest of trees silently accepts human bodies likely subjected to bodily trauma, just as the decaying infrastructure of industry, war and nuclear power in Dungeness serves as a reminder of an environmental trauma that Jarman must have felt a peculiar kinship.

Scrawled across the side wall of Prospect Cottage is a poem by John Donne, *The Sunne Rising*. Written in Dunne's metaphysical style, this poem is strewn with acclaims of love and a bothersome sun chastised for disturbing his lovemaking. As the sun's rays pass over the

body, time touches all, Dunne's obstinacy towards the sun perhaps reflects a desire to be free from nature and its cycles. Just as Jarman also had to come to terms with the finitude of life, he embraced and chastised his shortened time in the world through gardening. He says, "[...] gardening is central because [when] gardening one is entering into another time, returns and cycles, those are the resurrections in my life" [M. Kidel 1991].

> "Derek still seems to me the best as well as the most political nature writer because he refuses to exclude the body from his sphere of interest, documenting the rising tides of sickness and desire with as much care and attention as he does the discovery of sea buckthorn or a wild fig." [Laing 2020, p. 66]

Seeking out objects and detritus from the beach, Jarman began work on tending to Prospect Cottage not long after he knew about his HIV-positive status. In an interview, he discussed how gardening, for him, was a way to contemplate the temporality of toxicity, nuclear radiation, and the immediacy of AIDS at the same time. Riding the tides of health, public opinion, and the turbulence of weather, the garden surfaces through anecdotes

> "[...] how one might confront these politically [...] the ways one might memorialise those who died of AIDS and other disasters, and how to do so without making peace with their deaths." [Zeiger 2017, p. 21]

In *Queer Ecology*, Timothy Morton, summarising Judith Butler ", holds that nature can be revised through ecological notions of interrelatedness" queer alliances can take on active or associative dimensions to nature x. [Morton 2010, p. 274] Olivia Laing recounts how Jarman's first sexual experience of sexual liberation with another boy- their bodies plunged deep in a garden, "licking and caressing in muddy ecstasy in a glade of violets", where upon being discovered, this encounter felt "the first and most agonising experience of being cast from Eden" [Laing 2020, p. 67]. Laing suggests the associative dimension of the garden as a place of ecstasy for Jarman but also a place to return to in defiance of a hostile society. What also can be added in light of queer ecological and spatial consideration of Prospect Cottage is the garden's location and its fenceless openness to the remoteness of Dungeness shingle plains. A place that can be read in the broader queer practice of finding freedom and refuge in places deemed periphery.

For some while, queer geographers have described the places of queer cultures; however, most fail to describe the consequential spatial and material practices of this spatial production. Sarah Ahmed's *Queer Phenomenology* situates the queer and discusses psychological and bodily acts performed in the service of queer spatial and material production. [Ahmed 2008] Gayle Salamon uses a similar approach to discuss trans materiality, this time via the trans bodily experience. Trans-corporeality challenges the traditional understanding of the body as a fixed entity and instead argues that bodies are constantly in flux, shaped by various social, cultural, and political forces. [Salamon 2010] Both writers use a framework where the psyche works to expand what the body calls its own. Similarly, eco-critical author Stacy Alaimo in *Bodily Natures* suggests that trans-corporeality reveals interconnections between various bodies and forms "productive alliances among environmentalism, disability activism, and an ethical and political conception [...] cutting across bodies and places." [Alaimo 2010, p. 2]

In his essay, *The Temporality of Dirt: Queer Materiality in Jarman's Modern Nature*, Jim Ellis suggests that, for Jarman, the act of toiling in the soil became "an ethical practice that reflects very seriously on the damage done, both to the self and to its world". Accordingly, this practice "places us in a different relation to time by reminding us of the dirt we haunt and our obligation to it". Not only do these statements exemplify the practice of an act(ed) body' and an 'acting bod(y)', but they also highlight in essential ways that queer spatial practices are often formed in both defence and celebration of the body. Ellis links the body to place through Jarman's compost-making and toiling in the soil. He writes that

> "the ethical implications of a shared materiality with all the other animate and inanimate things with which digging in these discarded knowledges is a way to challenge common-sense understandings of disease and health. Digging in the earth is an act of communion in the most elemental sense." [Ellis 2014, p. 12]

Importantly, he helps us consider how Jarman was tending towards possible futures in the very act of digging the past and gardening his way out of this world.

The body, so rejected and perceived as toxic, became one with the world. Not far from Prospect Cottage and within the grounds of the Romsey church, Jarman's body and material were eventually returned. Prospect Cottage remains a poignant place to discuss coming to terms with a human nature that is so often unkind to queer bodies. Nevertheless, it also shows how, amongst adversity, becoming part of nature allows other futures to bloom. The combination of experiencing and reflecting on Prospect Cottage structures an argument towards ecological practices that serve as a poignant reflection on the enduring queer political convictions that weaves the body in and out of history, time, and context. The garden at Prospect Cottage is dutifully maintained today by a queer community, building lasting connections in that same soil because practising making a home in such ruinous worlds is what many queers have been forced to do and therefore do well.

The Sunne Rising John Donne

Busy old fool, unruly sun,
Why dost thou thus,
Through windows, and through curtains call on us?
Must to thy motions lovers' seasons run?
Saucy pedantic wretch, go chide
Late school boys and sour prentices,
Go tell court huntsmen that the king will ride,
Call country ants to harvest offices,
Love, all alike, no season knows nor clime,
Nor hours, days, months, which are the rags of time.

Thy beams, so reverend and strong
Why shouldst thou think?
I could eclipse and cloud them with a wink,
But that I would not lose her sight so long;
If her eyes have not blinded thine,
Look, and tomorrow late, tell me,
Whether both th' Indias of spice and mine
Be where thou leftst them, or lie here with me.
Ask for those kings whom thou saw'st yesterday,
And thou shalt hear, All here in one bed lay.

She's all states, and all princes, I,
Nothing else is.
Princes do but play us; compared to this,
All honor's mimic, all wealth alchemy.
Thou, sun, art half as happy as we,
In that the world's contracted thus.
Thine age asks ease, and since thy duties be
To warm the world, that's done in warming us.
Shine here to us, and thou art everywhere;
This bed thy center is, these walls, thy sphere.

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FIGURES

Fig. 1 - Prospect Cottage Photo by: Luca Lana

Fabiola Cristalli
University of Naples Federico II, DiARC - Department of Architecture
fabiola.cristalli@gmail.com

Sewing along the Borders.
Spaces and identities in and through modern cross-border cities

Key Words
Border, Threshold, Passage, Identity

This text is part of my personal doctoral research which began few months ago, and aims to investigate, within the broader debate on the theme of boundaries, the role of cross-border realities in the formation of new territorial identities and new imaginaries of border space. The sociocultural, historical, and morphological phenomenon of cross border cities, situated across two or more states, is a transversal occurrence that involves various themes and raises numerous questions about the border space role and potential. Those cities have developed over the centuries insisting on natural or anthropic frontiers each one following a singular historical and morphological process of genesis. Therefore, each conurbation is characterized by its own border landscape, its own urban morphology, its own settlement patterns, its own typological models, finding itself to be more or less dependent on the border on which it stands: sometimes we speak of cities not only located on a border but that owe their existence to the fact of being on a border to the point that without it they would not be there [Buursink 2001, pp. 7,8]. Morphologically stating, adjacent fabrics speak differently to each other and present ever-changing borderline element, dividing or blending them. The numerous presences of cross-border models worldwide admit insistently the need for a mapping that can build a design network, trying to provide food for thought for the resolution of more and less complex cross-border landscapes and spaces. Comparing European and non-European literature on cross-border cities reveals substantial differences in the imagination of the border space: in the literature of non-European cross-border metropolises is possible to find a certain correlation between urban phenomena and national processes. The idea that there is a cross-border metropolis – and that therefore any other group of cities on either side of the border forms a single city or region – implies that the two parts share interests and perspectives for the future. This view uses the proximity between the two sides to support the thesis of "uniqueness between two sides". However, highlighting the characteristics that drive urban growth, which

are quite different between the two sides, supports the thesis of the "uniqueness of each side" [Aleria 2007, p. 27]. At the USA – Mexico border, the frontier - still attributable to the Roman *limes* - still plays a defensive role, highlighting the need to rethink internal and external policies related to migration and, consequently, the need to redefine from scratch an imaginary of the border to allow reading new possibilities in the relationship between adjacent urban fabrics and communities. On the other hand, this is where the European cross-border model acquires an unprecedented potential that finds precisely in the *limen* – in the threshold – its dimension, a condition of active exchange and a space in which something can be transformed into something else [ ]. The Schengen space has allowed for a rethinking of the role of borders that "instead of remaining divisive, [...] have increasingly become shared borders" [Joenniemi 2011, p.8] relegated to simple layered landscape elements, links between past and present. European cross-border cities represent a unique phenomenon in the panorama of border landscapes because they tell of urban spaces that have had to face radical changes in conformation and of historical frontiers that have had to adapt to the demands of contemporaneity, always addressing a temporal dimension, which is informed by the movements of the border and corresponds to phases of transition between two territorial statuses [Rodani 2023, p. 242].
Here, the dimension of living, understood as a process of attribution of shared meanings practiced in individual places, provides a key to understanding their identity process. Settling in a certain place is equivalent to sharing that territory with other people, with all the social, cultural, economic, and political consequences that this entails [Banini 2011, p.12]. Wondering where the life of a community might be found, usually leads to focus on the centre, but, as anthropologist Richard Sennet argues, in the contemporary era, the tendency to intensify the "vitality of the centre" has brought to a neglection of the edges. However, giving importance to the edges could instead breathe vitality into the contact between various communities, thereby restoring porous and permeable boundaries [Sennett 2013]. These territories have developed by allowing a heterogeneous coexistence of identities [ ] not only with the ability to generate new relationship perspectives but also to outline new border landscapes closely tied to the political, social, and economic changes.
A positive reinterpretation of the border is possible if the goal is to make it a complex element composed of fluid and fluctuating spaces, constituted and crossed by a plurality of bodies, practices and relationships that reveal continuous definitions and re-compositions of divisions between inside and outside, citizen and foreigner, host, and guest. This appendix of the concept of "borderscape", theorized by Chiara Brambilla in an Italian essay exploring the infinite crossings of the border concept, allows for a better understanding of the role of politics as a process and the community as disconnected from the rigid territorial spatiality of the nation-state, defining new irregular and fluid spaces and communities through its operation. The critical potential of borders must be sought in their evoked dimension as "paradoxical structures" because, on the one hand, they are "marks of belonging" and, on the other, "places of becoming". The border is not where something ends but where something begins [Brambilla 2020, p. 175]. Consequently, they become evolutionary structures that end up being crossed and transformed into contact zones, exchange areas, and passages. In this perspective, borders do not disappear; on the contrary, they assume new forms and invade new central spaces constitutive of new vitality [Lazzarini 2020, pp. 132,133]. However, for the border to foster such changes, it is necessary to maintain the inherent vagueness in its meaning, an intermediate character that refers to the "threshold" imaginary [Basso 2011, p.10]. The philosopher Walter Benjamin talks about the threshold as a zone of passage, understood as a zone of active exchange totally distinct from the boundary, understood instead as a place where things come to an and. Endorsing the thesis of biologist Stephen Jay Gould, the border is an edge where different groups interact: at the edges, organisms become even more interactive, precisely due to the encounter of different species and physical conditions [Nicolin 2014, p.52, p.52-57]. In this sense, the cross-border border becomes a valid study model that allows for a clear and original interpretation of the urban threshold and the urban space challenging, subverting, claiming, or affirming them. It becomes necessary to delve deeper into the border imaginary to devalue its stigmatization and recognize its value in its anthropological and urban dimension, capable of revealing the multiple attitudes of humans in living and inhabiting spaces. In this process, the architectural project can become the tool through which to mend disconnected urban fabrics, bring conflicting communities closer, help fragile territories find dignity, and enable a new inclusive, resilient, and identity-bearing border space.

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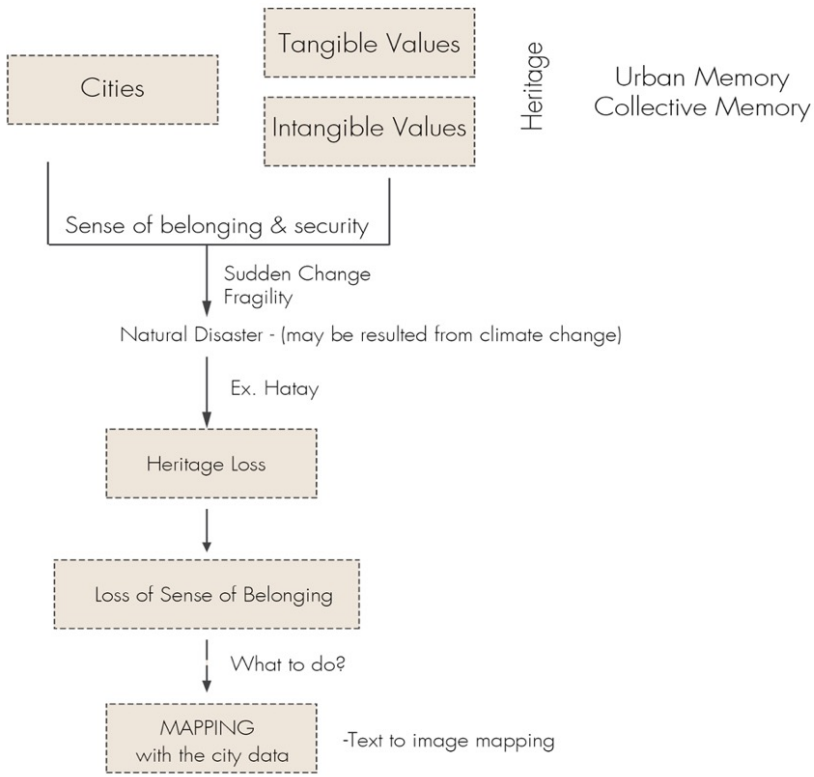
Cities
Tangible Values
Intangible Values
Heritage
Urban Memory
Collective Memory
Sense of belonging & security
Sudden Change
Fragility
Natural Disaster - (may be resulted from climate change)
Ex. Hatay
Heritage Loss
Loss of Sense of Belonging
What to do?
MAPPING
with the city data
-Text to image mapping

Gamze Akyol [1], Ekin Olcay [2]
[1] Suleyman Demirel University, Architecture
[2] Politecnico di Milano, Department of Architecture and Urban Studies
[1] gamzeakyol7@gmail.com, [2] ekin.olcay@polimi.it

Echoes of heritage:
Navigating the intangible heritage and urban memory in the post-disaster

Key Words
Urban memory, Urban heritage, Fragility, Documentation, Mapping

Research topic
Cities are the centers of human civilization and embody the collective memories and experiences of their citizens. The real value of a city lies not only in its material structure but also in the intangible cultural heritage that is embedded in the fabric of urban life. While tangible elements include physical structures and monuments, intangible aspects such as urban memory and collective experiences contribute to people's deep sense of belonging and feeling of security. However, these collective urban narratives exist in fragile states, and due to their dynamism, cities are subject to sudden changes, often caused by natural disasters.
As a result of the natural events, the resilience of cultural heritage buildings, particularly older buildings, has been highlighted, as well as the importance of preservation and restoration in the recovery process. While the tangible aspects were acknowledged, the intangible cultural heritage features a dangerous journey into the realm of collective memory loss. Maintenance and continuation of urban memory [Sokolova & Sheina 2017] became essential for maintaining group identities and supporting the sense of place and place attachment within architectural settings. The fragility of contemporary economics, societal inequalities, and the loss of cultural memory were identified as critical challenges, underscoring the complex interplay between urban development and cultural preservation. In addition, cities face a variety of threats, and natural disasters are formidable forces that can erode a city's landscape and wipe out its cultural wealth.

Research Question
After such a loss, the following question arises:
How can cities re-establish or strengthen their identities after such profound changes?

Focus
Though the concept of memory is fragile, the maintenance and continuation of collective urban memory are considered very much essential tools for preserving group identities and supporting the sense of place and place attachment within architectural settings [AlSadaty 2018]. It brings focus to attention the inseparable connection between urban memory and the identity of society. In the context of urban heritage, the conservation of historical heritage is distinguished as crucial for preserving the collective memory of urban residents and the city's development history [Wang et al. 2019]. Additionally, the preservation of urban heritage districts is linked to the revitalization of collective memories, emphasizing the role of place identity in this process [Ginting & Rahman 2016]. The fragility of contemporary economics, societal inequalities, and the loss of cultural memory are identified as critical challenges, underscoring the complex interplay between urban development and cultural preservation [Haley et al. 2021].

Methodology / Proposal
Considering these vulnerabilities, protecting, and documenting urban heritage becomes a crucial issue. As a proposed solution, this paper advocates for the implementation of a comprehensive city mapping system. The development of a city mapping system for heritage preservation and management is pivotal for documenting and safeguarding cultural heritage areas. According to Suwardhi, emphasize the importance of creating a 3D city map to manage cities, particularly cultural heritage areas, and involve the community in participatory mapping [Suwardhi et al. 2022]. This suggested mapping system, acts as a repository of urban data, seamlessly stitching together 2D images and texts to create a holistic representation. The technical utility of mapping systems lies in their ability to serve as safeguarding the documents and complete inventories of physical elements, providing many, but primarily architects and urban planners with a valuable resource for the reconstruction and preservation of historical buildings by cataloging and visualizing the diverse elements of urban heritage. These maps integrate traditional mapping techniques with modern technology to provide a comprehensive understanding of a city's cultural identity. Citizens actively participate in the mapping process, contributing their knowledge and experiences to create a dynamic representation of the city's collective memory. Moreover, Besmonte demonstrates the effectiveness of cultural mapping projects in documenting and inventorying cultural properties, providing baseline data for conservation projects and policies to protect a city's heritage resources [Besmonte et al. 2022]. Today, technological advances, especially artificial intelligence (AI), offer new opportunities to improve the effectiveness of memory maps. AI helps with data analysis, pattern recognition, and creating interactive and dynamic maps that evolve with the changing urban landscape. Harnessing the potential of AI in cultural memory mapping not only streamlines the documentation process but also ensures more resilient and adaptive preservation strategies.
At the societal level, the Memory Map will serve as a holistic approach to conservation, keeping collective memories unharmed. It weaves threads of urban memory, collective experience, and urban essence into visuals and narrative webs. This collective memory map gives society a new sense of belonging. Through interactive 3D models, citizens can explore the city's history, visualize the evolution of their surroundings, and rekindle a connection to their roots. Giving the latest best possible creation of these maps can be with the help artificial intelligence especially text to image tools or text to 3d models.

Case Study: Hatay, Antakya
Therefore, preserving this heritage and memory is essential for sustainable development of cities, as it shapes identity, promotes social cohesion, and provides a sense of continuity over time. Natural disasters, pose a serious threat to urban heritage. As a case study, on February 6, 2023, in South-East Turkey faced a seismic catastrophe, with a 7.8 magnitude. The earthquake's tremors fatally impacting the Mediterranean city of Hatay, a multi-ethnic metropolis, one of the largest cities in the ancient world and a major staging post on the newly opened Silk Road, the central point of the province, and one of the most significant historical settlements for the Anatolian lands. This city has a rich cultural layer of more than 2,300 years from the Roman Empire to the present Republic of Turkey, and the consequences of this destruction are today still being dealt with. Aftermath disturbances were not just geological: they also triggered a wave of personal experiences that included narratives of loss, trauma, resilience, and recovery. Throughout the history of Hatay faced extensive damage, underscoring the fragility of urban environments, causing significant physical damage and a serious need for restoration. However, the extent to which the immediate focus is on the restoration of visible structures increases the risk of overshadowing and neglecting Hatay's intangible cultural heritage.
The case of Hatay, a culturally rich and diverse city is a stark example of the urgent need for

proactive measures. In the Cultural Memory Map had been in place before the earthquake, it would have been an exhaustive collection of Hatay's urban heritage, which could have allowed the preservation and reconstruction of the city's historical layers. This study shows that a proactive approach based on cultural memory mapping could go a long way in mitigating the impact on cities of natural disasters.

Conclusion

To conclude, the vulnerability of cities to natural disasters highlights the importance of proactive measures to preserve urban heritage and cultural identity. The loss of tangible and intangible heritage has disturbed urban continuity, caused a fracture of collective memories, and entangled into the sense of separation. Cultural memory maps have proven to be effective tools, providing a dynamic and integrative approach to documenting the diverse layers of a city's history. The proposed mapping system advocates a collaborative approach involving citizens, urban planners, historians, and engineers. Involving communities in the mapping process not only enriches the data but also promotes a sense of ownership and responsibility for the city's heritage. Moreover, citizen participation contributes to the democratization of urban memory, allowing diverse voices and perspectives to be represented in maps of cultural memory. Hatay's example as an urban vulnerability archetype is a powerful reminder of the fragility of urban environments and the earthquake is a stark reminder of the urgency of implementing such mapping systems in cities around the world.

Discussion and Future Studies

It is anticipated that the Hatay example will have a significant impact on the mapping after it disappears. The same place may contain different ideals from a holistic perspective, but in order to avoid confusion, the map must be created prior to its destruction. Regardless of whether tangible or intangible heritage disappears, a memory map can provide insight into preservation studies. As a case study at the city scale, the great loss in Hatay would be an excellent topic for future research.

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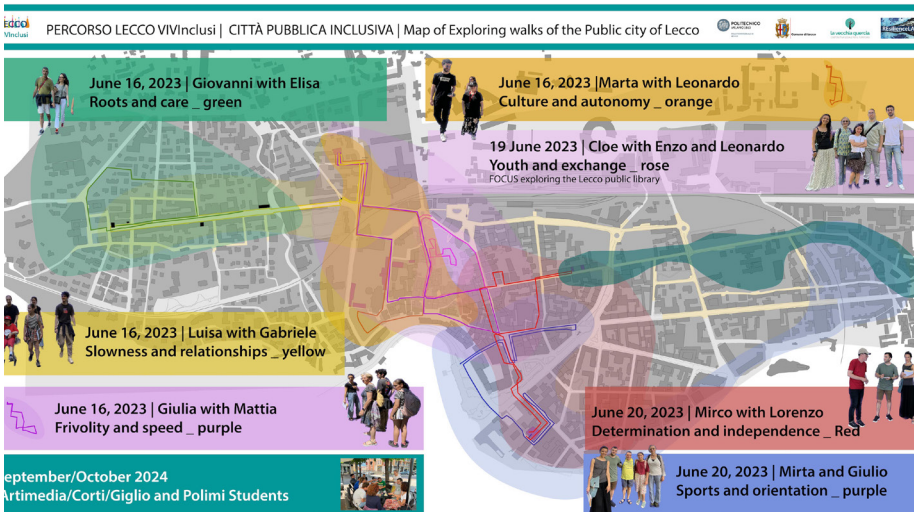
FIGURES

Fig. 1 - Urban Collective Memory. Figure created by the authors.


PERCORSO LECCO VIVInclusi | CITTÀ PUBBLICA INCLUSIVA | Map of Exploring walks of the Public city of Lecco
June 16, 2023 | Giovanni with Elisa
Roots and care _ green
June 16, 2023 |Marta with Leonardo
Culture and autonomy _ orange
19 June 2023 | Cloe with Enzo and Leonardo
Youth and exchange _ rose
FOCUS exploring the Lecco public library
June 16, 2023 | Luisa with Gabriele
Slowness and relationships _ yellow
June 16, 2023 | Giulia with Mattia
Frivolity and speed _ purple
June 20, 2023 | Mirco with Lorenzo
Determination and independence _ Red
June 20, 2023 | Mirta and Giulio
Sports and orientation _ purple
eptember/October 2024
rtimedia/Corti/Giglio and Polimi Students

Angela Colucci [1], Antonella Cuppari [2], Anna Schellino [3]
[1] Politecnico di Milano, DABC
[2] La Vecchia Quercia
[3] Resilience LAB
[1] angela.colucci@polimi.it

Diversity as a resource for inclusive public city. Exploratory walks for public city co-production and co-design

Key Words
Inclusive city, Co-production/co-design, Creative diversity, Learning city

Introduction. The Lecco Vivinclusi Path and the Pilot Project on the Inclusive Public City
The paper presents experimental co-production research-in-action activities developed under the framework of the Lecco VIVInclusi path (Agreement between Municipality of Lecco and the Lecco Campus of the Politecnico di Milano), which intends to foster inclusivity as a crosscutting principle in the Lecco policies, considering creative diversity as an essential resource for urban resilience to face current and future challenges. With this perspective, the Lecco VIVInclusi path supports process activation to make urban spaces, services, and functions inclusive and welcoming, promoting cultural advancement on the inclusiveness issue.
The Inclusive Public City Pilot project (IPCP), as part of the Lecco VIVInclusi path, activated experimental and innovative co-production/co-design labs acting on a selected strategic area intercepting several strategic urban public nodes (e.g. the Lecco Campus of Politecnico di Milano, several schools of different types and levels, public urban facilities, and local nodes of social activation). All the co-production/co-design activities engaged these actors and the communities gravitating around them.
The IPCP project refers to the sustainability principles of the 2030 agenda. SDG 11 constitutes the general reference concerning the targets 11.3 INCLUSIVE AND SUSTAINABLE URBANIZATION and 11.7 PROVIDE ACCESS TO SAFE AND INCLUSIVE GREEN AND PUBLIC SPACES. The universal principle "Leave No One Behind" [https://unsdg.un.org/2030-agenda/universal-values] reminds us that cultural advancement must be pervasive and transversal. The UN-Habitat New Urban Agenda recognized the crucial role of the inclusive project applied to the public city, underlining the need for a shift in design approach: the design for the margins and the fragile/vulnerable people produces multiple benefits for everyone, fostering a public city welcoming and wellbeing for all principles, approach, and goals of the Inclusive Public City process.

Multidimensional approach to the public city
The research-in-action path recognizes the multidimensional complexity of the public city in which the physical-morphological, functional, relational, and cultural dimensions are inextricably linked in constructing landscapes, narratives, and identities. The research recognizes that it is essential to intervene in the physical infrastructure and facilities of the public city to make the built environment welcoming and enabling. In the meantime, it is crucial to increase the accessibility to functions to guarantee that everyone uses urban public services/facilities, becoming active and aware agents of sustainability and urban resilience. Considering the cultural and relational dimension means encouraging social relationships, fostering a strong community, and promoting the diffusion of a cultural shift towards more inclusive and careful individual behavior and practices.
A crucial dimension addressed is the organizational dimension: innovating the process guiding the generation and realization of projects by making the involved actors active agents of the transformative process toward a more inclusive public city.

Creative community Diversity as a resource for inclusive public city (and resilience)
The socio-ecological systems [Gunderson & Holling 2002] must recognize the dynamic conditions and address changes with adaptive responses taken as opportunities for growth and evolution to maintain and increase resilience capacities. Under this frame, creative diversity emerges as propriety fostering alliances and synergies among disciplinary fields and policy sectors. Creative diversity provides the "stock" for activating adaptive responses concerning multiple temporal and spatial dimensions. An ecosystem has three types of diversity: biological, genetic, and functional. Creative diversity [Colucci 2022] applied to the social dimension implies recognizing the value of social diversity as an essential resource for adaptation and evolution.
Everyone's capacities are crucial resources to empower in aiming a cultural transition of our urban complex systems facing the forthcoming challenges and shifting towards more sustainable models. All are resources for our common future: everyone, including the so-labeled fragile and vulnerable population sectors, must be considered agents for envisioning change and actively involved as actors providing knowledge and design intentional abilities.

The generative process as the core of an inclusive public city
Innovating design methods and approaches to achieve tangible advancement toward more inclusive public cities is necessary and urgent. The process becomes the strategic and innovative heart that generates tangible positive impacts, particularly on cultural and relational dimensions. The exploration and design process activated in Lecco is a tool for recolonizing the public city, making visible and proactive agents of signification, and designing all the urban communities.

Methodological challenges: Collective co-production for inclusive public city imagination
The research-in-action addressed two methodological challenges: the innovation of the process and the development of new toolboxes to accompany the co-production and co-design activities.
Aiming the empowerment of different sectors of the urban population (from kindergarten to university students, elder people, people with neurodiversity, and with a various range of disabilities), the method for co-production and co-design implied an interdisciplinary approach involving both urban participative design tools and cognitive/social methodologies to combine more technical tools/supports (such maps) with more embedded methodologies hybridizing different epistemologies (narration, photographs, drawings) to combine the individual knowledge in a collective representation [Marvasti 2015] and envisioning.

Co-production activities of Lecco Inclusive Public City
Several co-production/co-design paths were activated and rooted in the presented principles:
_ light lab activities with schools placed in the pilot area focusing on the inclusive design principles developing inclusive facilities to be placed in common urban/school places;
_ co-production and co-design path involving the users of La Vecchia Quercia Cooperative and the Artimedia services and Politecnico of Milano students;
_ co-production and co-design path involving the children of the Corti pre-school (five-year-old) and the elderly (called the "grandparents") of the Giglio center (service of the municipality of Lecco).
The paper focuses on the co-production/co-design paths developed with La Vecchia Quercia Cooperative.
All the co-production and co-design paths are structured in the first exploration phase and in a second co-design phase (developed from January 2024 to March 2024). The second phase

concerns the development of ideas for the public city, actively engaging all the participants and using the metaphor of "inventions" to make the Lecco public city better and more inclusive.

Exploration phase: Sensobiographic and exploring walks
During the exploratory phase of understanding the public city, collective walks were activated:
_ Eight sensobiographic walks involving/paring users of the services of the La Vecchia Quercia cooperative and Urban Design students (fifth-year students of Politecnico of Milan's Building and Architecture course).
_ One collective walk involving the users and educators of a day center for people with disabilities of Barzanò and a group of urban design students.
_ Two collective walks involving about 30 children and educators of kindergarten Corti (5 years old), ten older people coordinated by the center of Giglio (municipal services for older adults), and the students of the Urban Design course.
The sensobiographic walk method was adopted to generate knowledge where narrative approaches have been recently constructed as embodied and embedded transformative activities [Järviluoma & Murray 2023]. The sensobiographic walks pair two persons with distant life histories walking in the public city, activating a constant dialogue and exchange about the feeling in the space/landscape. The walks provide multiple understandings of urban phenomena in a collective investigation. In this participatory research, people use all their sensibilities and knowledge to explore and represent (with narration) the public city, sharing the complex embodied nature of experience and knowledge. The paper presents emerging convergences and divergences from the eight walks conducted.
In sensobiographic walks, physical exploration is an essential aspect of the methodology: experiencing walking and being "contaminated" in and by the public city physically and emotionally with all the senses (in telling memories, meeting friends or new people) is a crucial aspect of the methodology. Researchers are part of the walk and the collective knowledge-building process. Experiencing walking and being contaminated in the public city is an experience of learning, knowledge building, and human life. The sensobiographic walk, thanks to its material, relational, and symbolic features, entails walking with, sensing, remembering, and talking in a human and non-human landscape, constituting a complex, dynamic, and systemic context for the participants.
Experienced aspects of phenomena become, first of all, the narration of the couple. In the following step, during the collective post-walk dialogue, the researcher (and sometimes also the walkers) retrace the walk dialogues and, as a sort of "wool carding and spinning," connect identities, traces common meanings providing a kaleidoscopic, multilayered, and dense collective narrative of the public city explored (and their phenomena).

Unpacking/un-clustering the "disability" cluster
The walks tangibly allowed us to enter and fully understand the complexity and diversity often clustered under the "vulnerability" or "disability" categories. Allowing the path/process to be re-centered on the person: everyone has an experience, personal history, and abilities that define the "individual" landscape of the city based on interests and ability to relate to others or with the urban spaces. The sensobiographic walk emphasizes the potential of everyone in building a representation of the public city. The paper will focus on presenting positive and critical convergences, underlining recurring phenomena, unexpected public life "images," and stories of relationships with cultural and facilities places.

Next steps and emerging notes connecting the Vulnerable topics with transversal perspectives.

Vulnerable / Design
The research-in-action following steps will focus on co-designing with two paths dedicated to the users of La Vecchia Quercia and the children. The research challenge concerns the integration of epistemologies to enable all the participants, according to their abilities, to be part of the creative and design process. From one side, the deconstruction of the rigid technical approach is needed to foster collective dialogue arenas (and mutual enrichment), introducing arts and narrative methods to elaborate ideas/inventions for the public inclusive city. The invention is the method selected to suggest and invite all participants to propose solutions and ideas for more inclusive spaces and functions for everyone. The first step dedicated to explorative walks shows that the involved actors can propose generative/innovative thinking approaches and considerations.

Vulnerable /Research
Concerning the technical-scientific and academic aspects, the public inclusive city research-in-action aims to develop and test co-design methods for an inclusive public city. The disciplinary advancement focuses on process innovation and the multidisciplinary methods developed for inclusive design rooted in the dialogue between technical, social, and cognitive disciplines. The long-term aim is to develop innovative solutions for the inclusive public city to be transferred to the Municipality and citizens of Lecco, including the methodological and organizational guidelines.

Vulnerable / Education
Innovating the process and method, the inclusive public city research-in-action aims for tangible cultural advancement by giving visibility and application to the principles of inclusive design. Events, debates, and walks promoted in the city during the inclusive city project involve citizens stimulating cultural change and advancement for the inclusive public city.
Relevant advances reached on educational/learning: successful experiments of innovative active learning formulas with Politecnico students, innovation of educational and social planning practices for Third Sector professionals towards the empowerment of the people supported by the services (from users to citizens) and contexts (generative welfare), the advancement of the paths and individual training of all participants towards autonomy.

Diversity as a resources for imagining common public city futures
The public inclusive city activities already modified the public city through the explorative walks: people walking and colonizing the public space and life demonstrated the generative potential of the research-in-action conducted activating transformative practices, complex and layered narratives/identities, and imaginations for inclusive public city.

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FIGURES

Fig. 1 - Angela Colucci, Representation of the Exploratory Walks in the Lecco public city context, 2024, Graphic, original image by Author.

Sara Riccardi
University of Naples "Federico II", DiARC - Department of Architecture
sara.riccardi@unina.it

The invisible ones: Bodies and spaces of the Italian prison in the 21st century

Key Words
Prison, Architecture, Gender, Well-being, Rights

Italian prisons, since their targeted conception for the containment of individuals, have considered only one type of "guest," more or less fitting this description: a dangerous, cisgender man, generally in good health, and the perpetrator of heinous crimes usually related to organized crime activities, to be kept as far away from civil society as possible. This description continues to outline the characteristics of a portion of the occupants of the Italian prison system, which, however, finds itself dealing with many other categories of individuals, many of whom are more vulnerable. As Francesca Vianello explains: "[...] the main evidence consists of drug addiction and immigration, while the prison population of Italian citizenship appears mostly composed of uneducated people, of low social status" [Vianello 2021a, p. 78].
Prisons designed for high security find themselves having to accommodate inmates from different regimes, whether it be medium security, *ICATT or ICAM* [1] designed for those with dependencies, or incarcerated mothers with small children, up to those who could potentially benefit from alternative measures to incarceration due to the minor nature of the crimes committed. Therefore, in the large prison barracks designed over the last two decades of the twentieth century, distributed throughout Italy and in different landscapes, men - women - children, transgender individuals, healthy people, and others with physical and mental problems, Italians and foreigners, rich and poor are confined. One thing is certain: in prison, people are not all the same, and depending on the characteristics and situations that belong to the personal history of individual inmates, this can be either salvation or condemnation. The institution merely adds gates that separate the prison into sections to prevent encounters between inmates belonging to different categories. Aside from this, nothing changes. Within these sections, the spaces remain standardized, accommodating diverse activities and people with different needs. Identical rectangular rooms that vary only in size indiscriminately host the activities carried out within the prison and categories of people who would have different needs.

The only imperative respected remains that of security, and space becomes an instrument of exercising power over bodies [Foucault 1971, p. 68].
If prisons reflect our society, what is deduced is its lack of inclusivity and the prioritization of security at the expense of the well-being of its occupants, becoming a tool whose purpose is to inflict pain, affliction, suffering, but at the same time, it claims to rehabilitate those who are incarcerated [Capriccioli 2022, p.168]. Thus, the prison, already an invisible apparatus within the city, transforms its inhabitants into ghosts, increasingly invisible where vulnerability is strongest.
In these expanses of concrete, the only spatial distinction admitted by the Italian prison system is between men and women. However, this proportion is not balanced; in Italy, there are only five women's prisons (Rome Rebibbia, Trani, Pozzuoli, Empoli, Venice Giudecca), and the rest are sections within male prisons. This contributes to further isolating women's prisons, as they cannot participate in activities reserved for the majority of the opposite sex and, consequently, in the spaces designated for them. In the gender-fluid era, a distinction should probably be made according to other parameters, but the institution has based the entire regulatory apparatus that regulates the life and spaces of detainees on the binary gender, adding to those previously mentioned anonymous spaces, a bidet or a mirror, as if only women were entitled to a bit of vanity or well-established cultural practice. If architecture has no gender or rather does not fit into the canonical binary division of male-female, one wonders whether neutrality, not intended as generality and uniformity but as equality that safeguards diversity, can truly be achieved especially in spaces where people are compelled to stay against their will, becoming "a profoundly unjust place that strips the individual of their identity" [Buccoliero 2022, p.18]. The standardization used undoubtedly simplifies processes that would be long and complex, but it sacrifices the versatility of spaces, essential for the psychophysical well-being of people deprived of personal freedom. The psychophysical well-being of individuals necessarily passes through the inhabited space and cannot be reduced to a mere calculation of square meters. In 2013, Italy, after being condemned for inhuman and degrading treatment due to the living conditions of some prisoners with the Torreggiani ruling [2], set a purely quantitative parameter to define a dignified space: "We are 'beyond good and evil.' We are on the plane of the human and the non-human" [Cantone, Ferraro 2022, p.55]. However, the latter fails to capture the complexity of human life. Despite this, even the quantitative parameter often fails to be respected, so compensatory actions are considered: in fact, another characteristic of the total prison institution is the particular degree of ambivalence between its rigid, hierarchical, normative representation and its flexible, adaptable, discretionary, and arbitrary nature [Vianello, 2021b p. 58]. An example of this is the open-cell regime adopted in Italy in 2015, which has transformed the corridors of the detention sections into a space to accommodate the prison community for the entire day or at least eight hours. However, currently, they remain empty spaces, born with a different function and requiring an architectural project to be transformed into usable places that contribute to the well-being needed by the prison's inhabitants, as part of the penitentiary treatment to which they are subjected [3].

> "Already towards the end of the nineties, faced with the continuous expansion of imprisonments, a new indicator of overcrowding appeared in Italy, which states, for each penitentiary, the possibility of defining a 'tolerable capacity,' or a maximum number of occupants within which the situation should be able to continue to be considered dignified and respectful of human rights. The criteria based on which the capacity of a prison can be declared 'tolerable' are never explicitly defined" [Vianello 2021c, p. 79].

And this is how vulnerable bodies find themselves living in equally vulnerable spaces: a space no longer suitable to host a modern concept of punishment. The configuration of spaces within the carceral environment continues to adhere to the logic of compartmentalization; however, it would be advisable to consider the relationship between these spaces as a starting point. Rethinking these locations from the perspective of the users who inhabit them, considering their daily routines, entails envisioning a margin of flexibility currently acknowledged on a normative level but unattainable in practice. This is because the space, as it stands, represents a constraint rather than an opportunity.
The speech intends to present an ongoing reflection on how the architectural project can contribute to the well-being of prison users, especially the most vulnerable, in this case, represented by the female and/or transgender population, and attempt to answer the question: "Does the prison have a gender?" taking into consideration theories according to which men and women organize and experience space differently, adhering each time to "a more contingent, more contextual, more individualized and more concrete behavior for women; a more abstract, more formalized, more theological behavior for men". The theme is developed

within the interdisciplinary research *RiSP - Right to space, space of right. Design actions to rethink prisons* were carried out by professor Marella Santangelo and from the InsideOutside Design Studio applied research laboratory on penalty spaces. The critique of binary division and the focus on female detention represents a starting point for a project that can take into consideration the diversities and minorities that make up the human gender, extending also to male incarceration.

ENDNOTES

[1] ICATT: institute for Attenuated Custody for the Treatment of Dependencies. ICAM: institute with Attenuated Custody for Incarcerated Mothers"
[2] The judgment of the European Court of Human Rights on January 8, 2013, concerning appeals numbers 43517/09, 46882/09, 55400/09, 57875/09, 61535/09, 35315/10, and 37818/10, relates to the case of 'Torreggiani and others v. Italy.
[3] The Livorno wing of the Poggioreale Prison (NA) represents an exception: from a workshop experience between 2015 and 2016 with the Department of Architecture at the University of Naples "Federico II," several projects were conceived to equip the very wide and unused corridors. Subsequent internships within the facility were dedicated to the detailed design. The project was then constructed in 2018.

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Claudia Pintor [1], Andrea Manca [2], Francesca Musanti [3]
[1,2,3] Università degli Studi di Cagliari, DICAAR
[1] claudia.pintor@unica.it [2] amanca@unica.it [3] francesca.musanti@unica.it

As many people, in as many places, as possible.
A hypothesis of phenomenological approach to accessible project

Key Words
Phenomenology, Accessibility, Design

Introduction
The issue of accessibility reveals a persistent vulnerability of the contemporary project, based on the unresolved link between bodies and places; between them there is often a mutual inadequacy that the project act almost never resolves organically.
The exclusion of subjects from space is now an intolerable fact, in conflict with the universal right to a full life. For this reason, the requirement of accessibility in architecture can no longer be waived and should now be intrinsic to operational solutions [Carbonara cited in Agostiano 2009, p. 22], instead of being rejected as a limit in conflict with the reasons of form, fulfilled with standardised solutions applied a posteriori to finished interventions.
Historically, and for a long time, the concept of accessibility has been linked exclusively to that of disability; this has changed since the 1980s, showing the profound reformulations that the second concept has undergone. Disability is no longer the prerogative of a minority, but a potentially universal condition [Mace 1985]; it is no longer a circumstance inherent to the subject, but "the result of a discrepancy between the demands of the environment and the individual's performance" [WHO 2001].
By shifting the responsibility for inaccessibility from people to places, this development also highlights that the experience of accessibility is too nuanced and variable to be pigeonholed into the radical opposition of ability/disability, because any individual can be temporarily or permanently excluded from the space they inhabit, due to a variety of physical, cognitive and cultural specificities, i.e. the very circumstances in which each body manifests its uniqueness. But if each individual has unique characteristics in the face of which any environment can potentially prove inhospitable, then it is impossible for all people to have full and simultaneous access to a given place.
Perfect accessibility is therefore a utopia and can be understood rather as a condition to

be striven for, by means of numerous experiential options, useful to intercept the different combinations of as many bodies as possible.

Research question and hypothesis

The concept of accessibility has undergone a semantic 'expansion' over time, recognising not only its physical and cognitive meaning, but also its cultural and appropriational one. The latter is linked to the sense of enrichment we derive when we make full use of a place [Deffner 2015], because the material and immaterial values that architecture carries allow us to reinforce our sense of being in the world. This encounter is simply the act of inhabiting, because "when we enter a space, the space penetrate us, and experience is essentially an exchange and fusion of subject and object" [Heidegger 1976, p.104]; an existential moment fulfilled by the contact between bodies, human and world, distinct yet "of the same flesh" [Merleau-Ponty 2014, p.260]. Although not explicitly applied to the theme of accessibility, the rediscovery of corporeality in architecture and the potential it unleashes are themes that, especially in the twentieth century, traverse the theory and practice of design through the contribution of various personalities, among whom the figures of Juhani Pallasmaa, Peter Zumthor and Steven Holl stand out. Their voices, outside a formalised architectural current, are nevertheless united in the same spirit, defined here as the phenomenological approach, in terms of the philosophical orientations on which they largely draw.

In this perspective, architecture is not only revealed in the visible and abstract dimension, but involves all the senses, stimulating perceptions, emotions and memories that, also through synaesthetic mechanisms, seem to contribute to an enhanced, stratified and acute experience of space, recalling the "multifaceted expansion of fruition" that is precisely the condition that accessibility should aim at [Germanà 2021, p. 21].

If the experience of architecture is considered as a plurality of sensations that allow a deep and intense access to both the material and immaterial dimensions of places, a question arises that coincides with the research question investigated here: is it possible that the phenomenological approach, which is already exploring this direction with seemingly independent aims, can instead provide tools for knowledge, interpretation and design that are also useful for improving accessibility?

The hypothesis is that this approach can offer advances in relation to the different moments of knowledge, interpretation and design of an architecture, in relation to the overall theme: in the knowledge phase, this paradigm can perhaps modify the attitude with which we relate to the place, because the attention to all the multisensory experiences, from the first contact, constitutes the obvious condition for them to be taken into account and incorporated in the interpretative readings, and subsequently to feed into design actions.

Methodology and structure

The study adopts a hypothetical-deductive inference: assuming that the phenomenological approach is productive for the accessible project, the investigation verifies its validity by looking for evidence in the theoretical and operational sources that can build critical knowledge on the identified topic.

For this purpose, the study is divided into two phases, consequential and dialectical. In the first, the general theme and the potential approach to solving it are explored at a speculative level, with theoretical sources being studied to identify possible links. In particular, concepts of particular relevance to the research framework will be identified and explored, such as the appropriational moment, within Deffner's theory [2015]; the critique of Pallasmaa's oculocentric approach, initiated in the Renaissance with the invention of perspective and reinforced in recent times with the siege of images dictated by the new media [2007]; the rediscovery of multisensoriality and synaesthesia, both in the phenomenological approach and in neuroaesthetics applied to architecture [Mallgrave 2015]; from Zumthor, the 'magic of the real' and atmosphere [2007], the latter also referring to homologous theorisations [Norberg-Schulz 1981, Griffero 2010]; again, the relationship between architecture and movement, through Holl's parallax [2004] and assertive space, from affordances [Gibson 1999] to embodied simulation [Gallese, Guerra 2015].

These constructs are also evaluated in order to understand the processes of emotion, imagination, communication and memory that architecture is able to activate, through a transdisciplinary perspective that is in dialogue with the neurosciences, the humanities and the social sciences.

In the second phase of the study, the concepts highlighted in the theoretical sources are then explored in a selection of design practices that are actually inscribed in the phenomenological approach, in order to verify whether the solutions adopted can respond to the problems of accessibility.

Finally, the results are reasoned and organised in the final reflections, which are reserved for commenting on the results, limitations and possible lines of development of the research.

Conclusions

The paths outlined by the phenomenological approach seem to suggest two main contributions to the theme of accessibility. The first is to rediscover the perceptual richness of architectural experience, which, on the one hand, draws the attention of the project back to features and elements long neglected in favour of an approach based on the eye, and, on the other hand, accompanies this rediscovery of human corporeality with the recognition of the corporeality of architecture, understood as a set of its physical and metaphysical qualities.

The second potentially productive aspect is that these theoretical assumptions are translated into an operative poetics, not only in the design production of the protagonists who define its conceptual extremes, but also in numerous lesser-known episodes that, although not overtly oriented towards accessibility, can nevertheless contribute to its pursuit.

This approach not only affects the possibility of experiencing a space in different ways, making it accessible to subjects with different characteristics, but above all, by acting on profound devices related to the ways of knowing reality and the meaning of our existence, it allows us to activate a process of imaginative synthesis, useful for learning and creativity, which, also in interaction with memory, articulates and strengthens our sense of appropriation of places.

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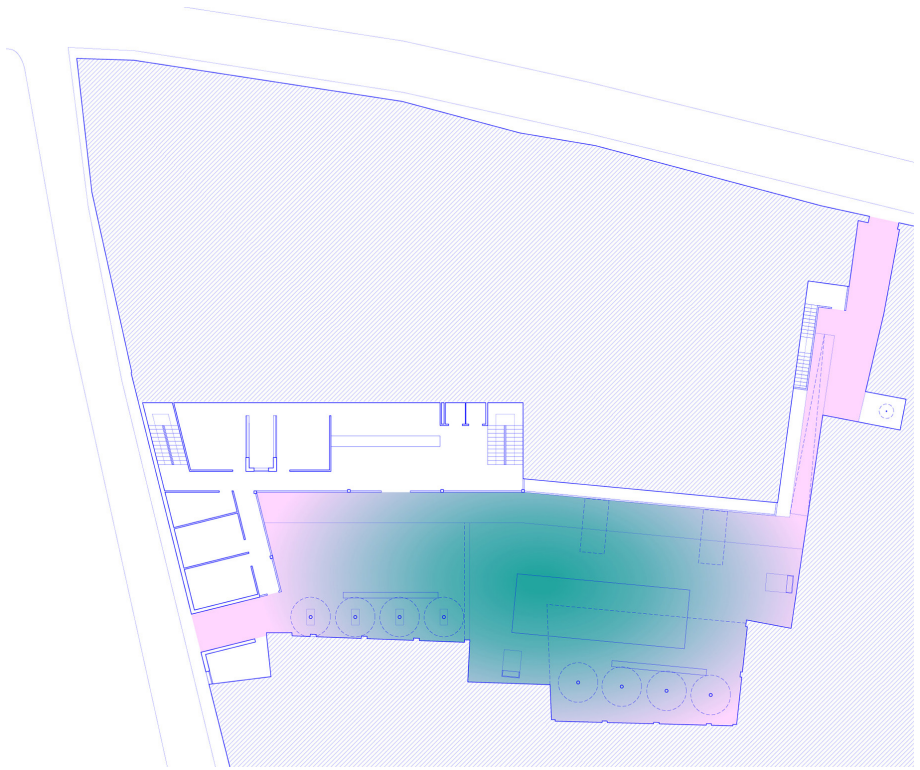

Francesca Ripamonti
Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
francesca.ripamonti@polimi.it

Shaping new and diverse gestures. A qualitative approach to the design of Healthcare Centers

Key Words
Healthcare, Urban centrality, Qualitative approach, Spatial experience, Gestures

The contribution aims to explore the possibility of integrating the conventional functional and parametric approach in the design of primary health care buildings (Healthcare Centers) with a qualitative approach, focusing on the relationship between spaces and the actions of the individuals who use them. This discussion is part of a broader research (the author's doctoral thesis [1], in-depth to the project Polisocial Coltivare_Salute.com [2]) on the design of Healthcare Centers, starting from a rediscovery of the importance of the role of Primary Health Care in addressing a stratification of vulnerabilities (especially health and social) in contemporary society. This text presents some results from the analysis of international case studies of Healthcare Centers approached with a perspective from within, carefully identifying spatial aspects that best respond to the diverse spatial appropriation actions by users of these buildings, who bring layered instances of vulnerability.
The research is situated in a post-pandemic context, emphasizing a renewal in the importance of primary health and the central role of the structures that house it – Healthcare Centers – in shaping urban centralities around health. These facilities, known by various names (such as *Casa della Comunità* in Italy, *Maison de Santé* in France, *Centro de Salud* or *Centro d'Atenció Primaria* in Spain, *Health Centre* in the UK), are here collectively referred to as *Healthcare Centers*. Comparable for their scale to outpatient clinics, they serve as neighborhood-based public primary health care facilities, offering multidisciplinary therapeutic and care pathways, along with access to a range of health, social, and socio-health services. Originating after the emergence of the theme of Primary Health Care in the 1980s in the UK and the US, these centers, known as *Case della Salute* in Italy since 2006, have exposed vulnerabilities in the national scenario in the uneven and deficient distribution of healthcare networks. The COVID-19 pandemic has exacerbated these weaknesses while presenting opportunities for change. The National Recovery and Resilience Plan (PNNR) emphasized a paradigm shift,

transitioning from *Case della Salute* to *Case della Comunità*, emphasizing the community's role in healthcare and socio-health services and promoting a greater focus on health as overall psychophysical well-being [WHO 2020].
However, this necessitates not only urban, but also architectural and spatial considerations, for several reasons: firstly, the paradigm shift that transforms primary health care facilities from simple service providers into true urban landmarks for a culture and promotion of health requires consideration of how this should impact architectural design. Moreover, this consideration aligns with a broader theme related to the need to think about the added value spaces should acquire through physical presence, especially in the medical field, primarily in primary healthcare, where there is a trend toward the virtualization of consultation and visits (telemedicine).
Parameters, dimensions, standards, central to international guidelines for designing such structures, remain indispensable categories for creating a space primarily dedicated to healthcare. However, it is believed that these should be integrated with a strictly architectural rationale. Gio Ponti writes that architects want, by designing and furnishing, to create a stage, the best possible one, for actions, i.e., for the presence of the inhabitants [Ponti 1941, pp. 39-41].
It is essential to reclaim a dimension that places the user's spatial experience at the core, questioning the prerogatives and needs of a new user category—or rather, a new set of categories. On one hand, there is the patient accessing the center for consultations and visits with their primary care physician or another healthcare specialist. On the other hand, there is the community accessing the center to participate in health promotion activities, such as courses, community meetings, and educational events. The project's objective should be to shape a space that is simultaneously mindful of privacy and vulnerabilities while being open to embracing a community with diverse needs. A space that is both a sanctuary and a plaza.
Within an extensive selection of international and national case studies, an in-depth analysis of best practices has been conducted to explore which architectural archetypes and spatial practices have been able to introduce new perspectives into the discourse on community health space design. These perspectives aim towards greater community engagement, user reception, and attention to their needs, while re-establishing a relationship between the body and the space.
This involves adopting an *archetypal itinerary* borrowed from Adriano Cornoldi's method for analyzing the element of comfort in domestic spaces, where actions serve as the *fourth dimension* to characterize the qualities of places: the analytical tool to be employed is, therefore, that of spatial typology, i.e., formal typology in its comprehensive sense, including the dynamic three-dimensionality (where relationships, i.e., movement, come into play as the "fourth dimension" [Cornoldi 1994, p. 18].
The discussion has expanded beyond the domestic sphere, consistently focusing on the actions of Healthcare Centers visitors. Starting with fundamental actions like entering and moving, it integrates them with more specific actions related to the type of building under consideration, such as waiting, visiting, and participating. It became apparent that, by interpreting the spaces where these actions take place, they could acquire new and extended meanings. The following are some examples.
The project of *Centro de Salud Lucano* (Estudio de Arquitectura Javier Terrados), situated in the historic center of Cordoba, contemplates the theme of entering by introducing the dimension of crossing. The project stemmed from transforming the ground floor into an urban passage, interpreting one of Cordoba's urban morphology themes characterized by large, dense blocks intersected by courtyards. The passage engages the passerby by puncturing the continuous building facade at the ground level, welcoming them through a series of portals, arcades, patios, essentially open-air rooms. It offers the option to enter the building or continue their path and re-emerge onto a perpendicular street. An architectural gesture that encourages the act of passing through, opening the space of health to the city, inviting it to enter while keeping its frantic rhythms at a measured distance, akin to a sanctuary [Terrados 2012].
The articulation of privacy thresholds is how the design of the *Waldron Health Centre* in London considers the dimension of entering and moving within the space. Aimed at creating a civic building (like a library or a town hall), but with the humanity and intimacy for clinical consultation, as stated by the architects, the spaces of the center were conceived in relation

to each other, defining a path for the user (primarily, the patient) among significant places: the square, the foyer, the cloister, the waiting room, the consultation room. Each interprets different actions of the user, activating the space in relation to volume and light, a central design element.
Finally, an example of attention to the possibility of accommodating new and diverse gestures is the design of the *Kentish Town Health Centre* in London (by Allford Hall Monaghan Morris). The project's accompanying sketches depict a series of envisioned gestures that could take place within the building, interpreting a holistic approach to community health reflected in the spatial design.
In primary healthcare facilities, as in all urban spaces and public buildings, actions are influenced by diverse perspectives: accessing is not the same for everyone, and moving does not occur uniformly. Different individuals, each with unique needs, enter Healthcare Center spaces, engaging in varied actions and gestures. Patients await answers, individuals seek information and participate, healthcare and social workers visit, educate, comfort, take breaks, and communicate. Additionally, educators, artists, poets may animate public events related to individual well-being. Anticipating and embracing the possibility of new and diverse gestures [De Carli 1982] in a health-oriented space means structuring a welcoming place, recognizable to all its users, with their varying vulnerabilities: all human actions must necessarily find the appropriate place to happen. The place is thus an integral part of the actions. When a person identifies with the place, we say that he inhabits [Norberg-Schulz 1979].

ENDNOTES

[1] Politecnico di Milano, DAStU, AUID PhD School, 37th cycle
[2] Politecnico di Milano, Polisocial Award 2020, Coltivare_Salute.Com Città e Case della Salute per Comunità resilienti. Le Case della Salute quali costruttori di urbanità e socialità diffusa nell'era post COVID-19: nuove centralità periferiche in città salubri e integrate [ColtivareSalute.Com. Cities and Healthcare Centers for Resilient Communities. The Healthcare Centers as builders of urbanity and widespread sociality in the post- COVID-19 era: new peripheral centralities in healthy and integrated cities] Scientific Coordinator Michele Ugolini (DAStU), Project Manager Maddalena Buffoli (DABC)

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FIGURES

Fig. 1 - Francesca Ripamonti, Entrare attraversare. Centro de Salud Lucano a Cordoba (Javier Terrados), 2023, Redrawing: AutoCAD and Adobe Illustrator.


Carvalhido
neighbourhood
São Roque
da Lameira
neighbourhood
Cerco do Porto
neighbourhood
Rainha Dona Leonor
neighbourhood,
2nd phase
Location
Intervention
1000 m

Inês Andrade [1], Gisela Lameira [2], Luciana Rocha [3]
[1,2,3] Faculty of Architecture of the University of Porto
[1] ines.sequeira.andrade@gmail.com

Architecture in Conflict.
Dichotomies on current challenges in state-subsidized neighbourhoods in Oporto, Portugal

Key Words
Architecture, Housing, Conflict, Vulnerability, Portugal

Research framework
The proposed article focuses on and elaborates upon the perspective of the curators of the Portuguese representation at the 2021 Venice Architecture Biennale, DepA Architects, in response to the question *How will we live together?* – In Conflict [Fonseca 2021, pp. 20-21].
Conflict situations are inherent in the processes of architectural creation and appear in the complex equation involving a diverse array of actors. Although this management extends beyond the scope of architecture, this discipline can function as a tool to mediate, accentuate, or resolve such conflicts.
By adopting a retrospective approach, this research explores how vulnerability situations emerge from a troubled history of housing policies in Portugal – particularly in Oporto. Currently, the lack of housing solutions and the overall housing crisis in Portugal affects not only the poorest populations, but also the middle class [Xerez et al. 2018, p. 504], which is particularly problematic considering that people's health and well-being are influenced by the environment to which they are exposed [Shaw 2004, p. 398].
Hence, through an examination of two selected dichotomies on contemporary challenges facing multi-family housing, this article proposes a reflection on responses to location, between the city and the peripheries; and intervention, between demolition and rehabilitation. These specific points of view were chosen among many others due to the current lack of social and territorial integration in some state-subsidized neighbourhoods built in the mid-20th century in Oporto, Portugal, as well as the need to adapt these neighbourhoods to the current ways of living. Specific case studies were chosen to illustrate the referred dichotomies.
The methodological framework involves a different analysis for each pointed conflict, according to specific topics. This approach incorporates interpretative and comparative analysis of data

collected from archival materials, exhibitions, architectural offices, and on-site visits to the designated case studies.
The goal of this research is to clarify how these kinds of dichotomies influence the transformation processes and the current qualification of state-subsidised multi-family housing. Moreover, this study seeks to contextualize and elucidate decisions played by diverse actors and question the architect's function in the "resolution or accentuation" of these conflicts, as Francisco Crisóstomo proposed [In Conflict 2021].

Conflicting architectural processes
The chosen conflicts focus on two challenges facing state-subsidized housing in Oporto currently.Despite the ideological differences of the various governments over time, the history of housing policies in Oporto was, and still is, marked by narratives of violence, revealing that "the residential is political" [Madden & Marcuse 2016], and that architecture and urbanism have the power, along with other disciplines, to generate "space and time, to (re)compose, order, distribute individuals, places and things." [Bismarck 2018, p. 9]
Conflict #1: Location. Thus, the first conflict under examination deals with the influence of the neighbourhoods' location in the inhabitants' quality of life and its role in the urban structure.
Hence, there was an in-depth analysis of two case studies (São Roque da Lameira neighbourhood and Carvalhido neighbourhood) located in opposite places of the city and built under the Improvement Plan for the City of Porto (1956), one of the rehousing programmes that allowed the most houses to be built in a national context [Ramos et al. 2020, p. 283]. Vulnerable populations living in unhealthy houses in the centre of Oporto were relocated to multi-family neighbourhoods mostly located in expansion zones of the city [Direcção dos Serviços do Plano de Melhoramentos 1966, p. 9]. However, the Improvement Plan of Porto brought enduring consequences, such as weaknesses in linking certain housing complexes with the existing urban fabric [Lameira & Rocha 2019, p. 79], which resulted in the social segregation of displaced people.
Thus, this research seeks to elucidate the conditions that may impact neighbourhood quality of life nowadays. In characterizing the city/periphery dichotomy, the following factors were investigated: the housing complex morphology, the presence of facilities, the quality of public spaces, and the mobility infrastructure conditions. An in-depth analysis of the Municipal plans was conducted aiming to clarify the public strategics regarding these areas.
Conflict #2: Intervention. Currently, the state and age of a large percentage of state-subsidized housing complexes in Oporto [Simões et al. 2015, p. 46] affects the quality of their inhabitants' life, posing another significant challenge. This housing stock needs to be adapted to the demands of today's ways of living [Lameira et al. 2022, pp. 234-236] regarding comfort, security, and accessibility for people with reduced mobility. There is also a need to improve energy efficiency, get closer to European standard requirements, and solve pathologies. Thus, the second conflict approaches these issues and examines the motivations and impact of diverse implemented interventions.
In this sense, there was a comprehensive analysis of two case studies built under rehousing programmes among the decades of 1950 and 1960 (Rainha Dona Leonor neighbourhood, 2nd phase, and Cerco do Porto neighbourhood), which were subject to distinct interventions – rehabilitation and demolition. "The common use of a typified project, the definition of a rational structure and the configuration and functional organisation of the buildings" [Rocha 2019, p. 194] make these housing complexes adaptable and flexible to transformation.
This analysis aims to question prevailing intervention models of state-subsidized housing in Oporto and elucidate the underlying decision-making patterns in this domain. The goal is to clarify the reasons guiding the rehabilitation/demolition dichotomy, while assessing the impact on heritage preservation and the residents' quality of life.

Final notes. The "resolution or accentuation" of dichotomies
The analysis of each conflict and the underlying dichotomies of the case studies revealed the need for operative solutions for the addressed contemporary challenges.
Concerning the conflict over location, the analysis indicates that the neighbourhood location alone does not constitute the sole determinant of the integration into the city urban structure. The level of integration is intricately linked to a multifaceted network encompassing infrastructure, energy, water, and other factors, including mobility, accessibility, and attractiveness.
Regarding the conflict over intervention, the analysis underscores the convergence of multiple factors, such as market interests, legislation, available funds contingent on financial instruments, incurred costs, and political strategies. These factors, driven by actors with most decision-making power, often operate externally of the most vulnerable populations.
It was acknowledged that the role of architects in these conflicting processes appears to be

reduced and dependent on a vast network of actors – such as institutions, promoters, and inhabitants. Nonetheless, the architect's role may extend beyond design to encompass close collaboration with the public and academic institutions, or may entail the participation in exhibitions, conferences, and similar forums. Moreover, the architect can engage with local communities to compare the technical solutions with the genuine needs of the inhabitants.
The analysis of conflicts led in this research offered insights into the contemporary state of the housing issue in Portugal and clarified some of the contemporary challenges inherent in architectural practice. Furthermore, the research aspires to contribute to ongoing and future discussions about the transformative processes of multi-family housing, particularly in the context of state-subsidized housing, through insights on the legacy of a recent past.

ACKNOWLEDGMENTS
This study was developed within the funded research project CAOP – Climate adaptation for older people living in vulnerable urban areas. Designing a climate-responsive and community-based methodology (PTDC/GES-URB/2038/2021). This research project involves the Faculty of Engineering of the University of Porto as the proposing organisation, as well as the Faculties of Architecture and Pharmacy of the University of Porto and the University of Coimbra as partner organisations.

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FIGURES

Fig.1 - © Author, Map of Oporto city, Portugal, with the selected case studies for the location and intervention conflicts, 2024, 15.5cm × 9.8cm.

Mario Galterisi
Università degli Studi di Napoli Federico II, DiARC - Dipartimento di Architettura
galterisimario@gmail.com

Built spaces, vulnerable bodies. A study on the influence of stigma in architecture

Key Words
Stigmatization, Urban space design, Inclusivity, Social dynamics, Spatial stigma

In the contemporary urban context there is a growing housing and community crisis. The focus is on the dynamics that intimately connect individual perception to space configuration, highlighting the presence of stigma [1] in architecture. This underlying theme becomes essential to explore as the morphology of inhabited spaces can play a crucial role in perpetuating or mitigating the stigma associated with certain vulnerable groups or individuals. This dimension gains particular relevance in the intricate context of interactions between physical vulnerability and the design of vulnerable spaces. Vulnerability becomes an interdisciplinary field of study within the architectural realm, providing a rich context to explore how architecture interacts with vulnerable bodies and how such interaction contributes to the formation of stigmatizing spatial patterns. In this context, it is crucial to understand clearly how stigma, understood as internalized social judgment manifested in inhabited spaces, influences individual perception and, consequently, shapes the daily lives of vulnerable bodies in contemporary cities. Stigma can be considered a common thread, as the morphology of inhabited spaces, permeated by social judgments, becomes a lens through which vulnerable bodies live and interact with the world, influencing their distribution in cities and shaping their daily lives. The concept of synecism, understood as the aggregation of individuals leading to the formation of communities and, subsequently, cities, constitutes a fundamental premise for understanding the evolution and structure of human settlements throughout history. Its essence lies in the innate human propensity to seek social connections and form urban aggregates to meet the various needs of collective life. However, the distribution of individuals within these cities reveals a complex dynamic that goes beyond mere cohabitation. Architecture, in its role as a builder of spaces, plays a crucial role in shaping such settlements and, consequently, can significantly influence the inhabitants' experience. It is important to note that architecture, instead of being merely a physical structure, is an active agent in determining

the quality of life within a community. The arrangement of buildings, the design of public spaces, and the distribution of resources can influence people's daily lives, shaping their identity through social and cultural dynamics. In this context, the issue of vulnerable bodies emerges, as an essential component of the community, revealing heightened sensitivity to the surrounding environment, whose arrangement can significantly influence their daily experience. Care understood as a design act [Heidegger 1928], leads to a reflection on the architect's responsibility in shaping space. Architectural design, undertaken with an awareness of human vulnerability, transcends the mere creation of physical structures, taking on the character of a process aimed at improving the quality of life, especially for those who may find themselves in fragile situations. In design practice, this involves targeted attention to space inclusivity, ensuring not only physical accessibility but also a welcoming environment tailored to diverse needs, regardless of physical or cognitive abilities. Facilitating access, therefore, becomes a crucial element, extending not only to the physical structure but also to paths and overall design, to respect human diversity. Such an architectural approach materializes in environments that not only meet functional needs but also promote the dignity of every individual, mitigating the risk of discrimination and marginalization. The concept of stigma becomes indispensable in this scenario, as a design lacking attention to the needs of vulnerable bodies can contribute to the perpetuation or exacerbation of existing prejudices and stereotypes. The influence of spatial form on the stigmatization process can also cause significant harm to the self-esteem, perception, and social integration of vulnerable individuals. These disparities translate into segregating urban spaces [Wacquant 2016], where marginalized groups find it difficult or even impossible to fully participate in public life [Goffman 1969]. Stigma encourages inequalities, contributing to perpetuating a cycle of marginalization and isolation [Goffman 1963], becoming a complex fabric of symbols, perceptions, and representations shaping the experience of built spaces. This contribution aims to broaden the understanding of the intricate dynamics characterizing the interaction between spatial, physical, and social dimensions. In contemporary cities, inequalities manifest in multiple forms, impacting individuals and communities through entrenched biases and systematic discrimination often reflected in diverse spatial configurations of urban places. In addressing the concept of stigma in architecture, we face a crucial challenge: to overturn the preconception of "normality" that has historically permeated the world of urban space design. The assumption that "the interweaving of vulnerable bodies and vulnerable places challenges the preconception of 'normality'" emphasizes the need for a radical revision in the design of environments we frequent daily. Stigma in architecture can manifest through the creation of spaces that unintentionally exclude or discriminate based on characteristics such as gender, ethnicity, class, religion, age, or disabilities. These stigmas are often embedded in design, contributing to consolidating limited views and social prejudices. Architectural spaces can become inadvertent vehicles of exclusion, instead of being places of inclusion and reflection of human diversity. Architectural design, which should be at the forefront of care, inclusion, safety, and accessibility, addresses multiple forms of vulnerability. Architects must take on the responsibility of deconstructing fixed interpretations and social stereotypes educating for diversity, choosing to involve the community in the initial stages of the project, giving voice to a plurality of perspectives and influences. This inclusive approach can help dismantle existing stereotypes and create a space that reflects the richness of diversity. The diversity of bodies should be celebrated through the creation of environments that respect and reflect the plurality of human experiences. Addressing stigma in architecture requires a paradigm shift, transforming spaces into places that actively promote inclusion and challenge limited perceptions, becoming a means through which society embraces diversity rather than excluding it. Stigma intersects a complex network of social, cultural, and economic variables, manifesting tangibly and intangibly through dynamics of ethnicity, gender, financial status, politics, and social factors. The analysis of urban inequalities reveals that the public space experience of marginalized communities is shaped by entrenched stereotypes and systematic prejudices that influence their participation and inclusion in city life [Sassen 1991]. Architecture can be used to address urgent issues such as poverty, accessibility, and equality [Cary 2017]. This holistic approach allows for the exploration of multiple dimensions of stigma, highlighting how they are intertwined in urban life and influence the quality of the experience of those inhabiting the city. At the same time, it is necessary to descend to the human and built scale, emphasizing its importance as a social catalyst [Gehl 1987]. Buildings and their spaces must be considered parts of a dynamic context whose complexity cannot be fully addressed with conventional methodologies of mere aesthetics and technology. The shaping of built environments can promote inclusion or, conversely, perpetuate forms of marginalization. It is crucial to recognize the intrinsic power of space in defining human interactions and, consequently, in shaping social cohesion [Lacaton, Vassal 2007]. Architecture can be a powerful tool for positive change and can have a significant impact on the people and communities that

inhabit it. The analysis of urban inequalities, focusing on differentiated access to resources, places architectural design at the center of mitigation strategies. The creation of inclusive public spaces and accessible housing solutions reduces socioeconomic disparities. The goal is to create an urban fabric that reflects the various needs of the community, promoting equal opportunities.

ENDNOTES

[1] "An undesirable attribute and, at the very least, such as to make a person absolutely evil or dangerous or weak. In our minds, it is thus degraded from a person of integrity and regularity to a corrupt, discredited person. The term stigma, therefore, will be used to refer to an attribute that is deeply discrediting". [Goffman 1963, p. 29]

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FIGURES

Fig. 1 - Built space stigmatises the vulnerable body. Source is: copilot Ai.

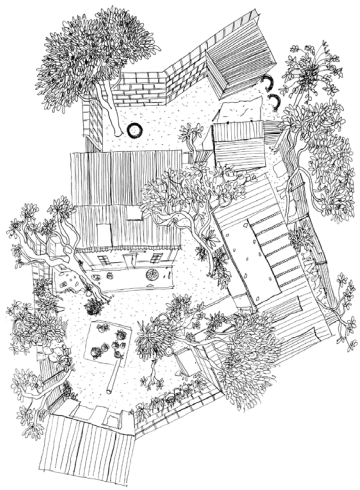
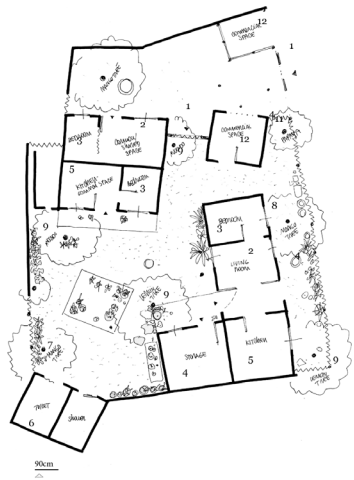


Image 72: central perspective from the top- page to the right sketch of the distribution
Author's drawing



1 Entrance-2 Living room-3 Bedroom-4 Storage-5 Kitchen-6 Toilet-7 Vegetablegarden-8 Mango tree-9 Lemon tree-10 Avocado tree-11 Papaya tree-12 Commercial space

Michela Vanda Caserini
Politecnico di Milano, Department of Architecture and Urban Studies
michela.caserini@polimi.it

Beyond the ring-road: Ethnographical reading and participatory design of a spontaneous settlement in Maputo

Key Words
Participatory design, Fieldwork, Ethnography, Drawings, Subaltern architecture

> "The 'know-it-alls' (architects/urban planners), when they arrived by plane, looked down from above and saw many small people in tin shacks around the city. Concerned about this, among other concerns, they quickly hired architects to dream their dream, which was that, with many houses, everything would be just fine. The architects didn't think or talk - they drew and had some houses built - far away, expensive, and bad." [Guedes 1963]

In "Várias receitas para curar o mal do Caniço e o Manual do Vogal Sem Mestre," Pancho Gueddes discusses the need to observe and improve the living conditions in the peripheral areas of Maputo, the capital of Mozambique. Located beyond the ring road, the suburbs were where many Mozambicans were compelled to live. Mozambique is nowadays experiencing the consequences of heavy rainfalls causing severe flooding of the informal settlements, which lack proper drainage infrastructure.

This abstract comes from the work in progress of a PhD research project that I'm conducting in Maputo. The project originated from a collaboration between Politecnico of Milan and Ars Progetti S.P.A., a consulting firm that secured the REGENERA project in 2022. Funded by the Italian cooperation (AICS), the project aims to develop urban and architectural improvements for the unplanned Chamanculo C district in Maputo. Located in a vulnerable area of the capital and frequently affected by flooding, Chamanculo C necessitates a slum-upgrading intervention based on the urban reassessment of road infrastructure and its drainage system. The intervention, identified and designed by the REGENERA Project, involves the demolition of several houses along the main road of the neighborhood. This will demand the construction of new houses embracing in-situ relocation and the engagement of the community through a participatory design approach. In REGENERA, several actors perform; aside from the Italian

consulting firm in which I'm doing my internship, we are working with a local partner for the drainage system, called SALOMON, which also takes care of the sociological impact on the affected families. The delicate issues of demolition and reconstruction give rise to questions such as: how can we, as architects, intervene in vulnerable pieces of the cities? How can we establish a deep connection with the inhabitants in order to experiment with participatory design? And how can we represent it? Here follows a brief description of the activities that my team and I are conducting in the field and in the office, and the methodology that I'm following to coordinate my PhD research and the work in the consulting firm.

We try to assume that through an extensive analysis based on ethnographical readings of the site using fieldwork as the main tool to have direct experience in the place, and thus to immerse our own body inside and with the body of the inhabitants we could have a positive impact during the participatory design of the neighborhood that will take place during the month of March 2024. Fieldwork activities have been conducted by me and a local resident of Chamanculo C, who facilitated the dialogue with the place and the residents. The hidden order that constitutes the informal district of Chamanculo demands the need for a local guide, who literally speaks the same language, in order to understand these series of unwritten and fundamental rules that build the fabric and the dynamics of the place. This means learning how to move inside narrow and isolated alleys full of stagnant water, asking permission from every representative member of the neighborhood to conduct surveys, take pictures, and make drawings, talking with the residents, having conversations in Shanghana (the local language, not Portuguese), learning where the water comes from, and meeting the influential persons of the district in order to be welcomed. Aside from discovering the unwritten rules, walking accompanied by an inhabitant of the place also helped me to be safe. Chamanculo C is well known for its high criminality rate, and being evidently different in such a context also exposes one to a certain level of risk, which luckily we haven't encountered so far.

The first part of the fieldwork, which is still ongoing, has been related to the mapping of the uses of the open spaces and the commercial activities among the main roads, which will be subject to design projects. We mapped all the commercial activities, distinguishing them among different degrees of permanence using drawings and georeferenced pictures. We collected all the data on maps and used them in QGIS. Later, we used Kobo, a data collection tool, to create specific questionnaires for the open spaces, which will be subject to implementation. The results of the first month of fieldwork have been used to support the activities of the first workshop that took place in March. A map with the results of the surveys and a model were the tools that we used to guide the design, with suggestions and inputs given by the residents and influential members of the community. My team and I are now working on the design phase of the open spaces and the street drawing, supported by a local engineering company that is managing the design of the drainage. The second phase will be related to the design of the houses that will be demolished to enlarge the section of the main road. For this phase, which we expect to start by the beginning of April, we will use the topographic survey to select the affected houses and conduct detailed surveys of them, with hand drawings, pictures, and extensive conversations with the inhabitants, to later prepare the second workshop with the community.

Drawing inspiration from the book "Architecture and Field/Work" by Suzanne Ewing, Jérémie Michael McGowan, Chris Speed, and Victoria Clare Bernie, fieldwork is deemed essential for architects and researchers to establish a profound connection and understanding of a place, particularly in vulnerable areas. Consequently, one of the primary objectives of this work is to utilize fieldwork for an ethnographic and sensitive exploration of Chamanculo C, enriching the design phase in which I am actively involved. Moreover, the design approach that we decided to follow envisions a participatory method conducted within the Chamanculo C community. The story of this neighborhood unfolds over years of segregation, where people were constrained to specific areas and compelled to construct dwellings using precarious materials, leading to conditions of subalternity.
The spatial development resulted from top-down decisions that neglected the well-being of the inhabitants. Only in recent years have NGOs and organizations begun working within the community, supporting efforts to enhance local conditions through on-site, direct engagement. Thanks to the work of other NGOs that have been active in recent years, such as Architects Without Borders Spain and the AVSI Foundation, the community trusts in regeneration projects and is willing to participate in participatory design.

Being a researcher and an architect situated between the university, the consulting firm, and the community of Chamanculo C, the overall purpose of this work is to positively and effectively

contribute to the redesign phase. The entire process will be informed by deep and meticulous ethnographical analysis aiming at both understanding how people live and supporting participatory design through extensive involvement of the local residents. Expected outcomes include a detailed record of the houses to support the participatory design phase. Since the submission of the architectural project is set for August, the phd thesis will report the entire process of analysis and project design, while the construction work that will start next year won't be documented and might be reported in further research.

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FIGURES

Fig. 1 - Image 72: central perspective from the top- page to the right sketch of the distribution Author's drawing.

Dr Fidel Meraz [1], Dr Eleonora Nicoletti [2], Dr Merate Barakat [3]
[1,2] UWE Bristol, School of Architecture and Environment
[3] Iowa State University, Department of Architecture
[1] fidel.meraz@uwe.ac.uk

Architectural inclusivity:
Adaptive spaces for aural wellbeing of individuals with dissimilar sensorium

Key Words
Sensorial inclusivity, Spatial phenomenology, Computational architecture, Sensorial technology

Introduction
This paper presents research-in-progress on the potential technological enhancements for enriching aural dimensions of spatial vulnerability experiences. Through computational architecture, we seek synergies between phenomenology, mathematical models, biological systems, and design processes. Our multiple approach involves aesthetic-phenomenological and neuroscience methodologies, emphasising spatial and temporal considerations in bodily perception. We investigate technology's role in shaping positive sensory experiences, mitigating potential vulnerability in visually engaging spatial configurations.
Our findings will suggest actionable design strategies to bridge the gap between sensory diversity and spatial inclusivity. We aim to theorise relationships between non-normalised bodies, spatial design, and diverse sensory experiences, contributing to holistic environments for a broader user range.

Pilot installations and aims
A first aim of the paper is to contextualise two pilot experiential installations as platforms pursuing the field of aural adaptive spaces that we have made in Bristol: *Space, Sound, Sensation, and Facilitating ambient intelligence of acoustic atmospheres* [Meraz 2019, Barakat 2022]. They highlighted spatial features that can promote aural wellbeing experiences by exploring them with phenomenological methodologies. Our first installation was done with a performative, philosophical and artistic orientation. A second one added a pedagogical approach incorporating digital fabrication methods and testing the grounds for future systematic installations for experiential enjoyment, exploring and learning.
The second aim is to suggest the potential of technological enhancements and design strategies to make space inclusive of sensory-diverse users. On the one hand, phenomenological

methodologies are outlined to explore salient dimensions offering theoretical frameworks. On the other hand, computational architecture and digital fabrication methods offer integrative synergies between mathematics, biological systems, and design processes to enhance sensory stimuli for a broader range of people.

Aural spatial phenomenology

Phenomenologically, our experience of the world emerges not simply as a matter of objective properties but as constituted by the way we perceive and interpret those properties in consciousness [Kwon 2022]. When it comes to the aural experience of a space, before even having an interpretation of such an experience, several spatial features can nurture wellbeing.

- Reverberation refers to how sound reflects and resonates within a space.
- Sound absorption is the degree to which a space absorbs sound.
- Spatial acoustics refers to how sound travels through space and interacts with the environment.
- Soundscapes refer to the collection of sounds within a particular environment which can significantly impact our experience of sound.
- Silence can be a powerful feature in a space creating a sense of contemplation, reflection, and relaxation.

From a phenomenological perspective, these features contribute to a space that supports our subjective experience of sound and creates a sense of engagement, relaxation, and contemplation. So, how can we instrumentalise these material qualities in the design and production of space? We consider three methodologies.

An intentional analysis first describes and analyse subjective experiences of phenomena focusing on what consciousness is addressed to identify its noesis and noema. Aural noema and noesis will emerge as particular kinds of entities. In regards to aural perceptions, intentional analysis can be used to explore how individuals perceive and interpret sounds within a given space and over time. It explores what is approached in consciousness and the profiling of the intentional objects concretised by identifying what sound-phenomenon (noema) produces what sound-image (noesis).

The phenomenological hermeneutic approach follows the initial intentional analysis with various interpretation modes to understand how individuals make sense of their experiences [Eberle 2015, Schütz 1972]. It explores how individuals give meaning to sounds in different spaces and times.

Finally, ethnographic fieldwork will involve observing and interacting with people within their ordinary environments to understand their experiences and perspectives [Kwame 2018]. The ethnographic approach will be used to explore how sound is experienced and interpreted by different people in diverse anthropological, cultural and social contexts of aural experiences.

To nuance how experiences and moods can attune the perceptions of wellbeing, we distinguish between experience as a space/time-bounded phenomenon and mood as a process in which time, presentify itself, and lingers within our consciousness. So, phenomenologically, wellbeing as experience and mood are two distinct but related phenomena. Wellbeing experiences are specific and intentional acts of consciousness directed towards particular objects or phenomena that trigger that particular state. At the same time, moods are more general and pervasive affective backgrounds that attune our experience of the world as a whole as a lingering state of wellbeing in consciousness [Kiverstein 2020].

Technological enhancements

Using a neurodiversity approach, we can embrace the diversity of ways individuals experience and perceive sound. One application development of this approach would be in developing assistive technologies for individuals with hearing impairments [Kirjava 2022]. In our case this involves using computational models designed to simulate and augment how individuals with impairments hear, taking into account the specific nature of their impairment.

This neurodiversity-inclusive approach would aim to care for the existential authenticity of the subjective and intentional nature of aural experiences, even in the context of technological enhancements. This approach focuses on the individual's subjectivity and the contexts in which aural experiences occur acknowledging their diversity to experience the world [Black 2022].

Another outcome of this research will be the development of immersive sound environments, such as virtual or augmented reality systems. This perspective would merge "authenticity and creativity" within the subjective and intentional nature of aural experiences, in a highly immersive environment.

So, phenomenologically exploring aural experiences with technological enhancements involves acknowledging and embracing the diversity of ways individuals live the world of sound. With a phenomenological perspective, our approach aims to care for the authenticity of the subjective

and intentional nature of aural experiences without hindering the creativity and participation of the listener, even in contexts of sophisticated technological enhancements.

Moving forward inclusivity and mental health

As we anticipate moving forward, we suggest two design strategies to make space inclusive of sensory-diverse users in the design processes to assist in enhancing positive sensory stimuli, such as perceptions of wellbeing, for a broader range of people. Here we outline just two among other design strategies that can be employed to create sensorial inclusive spaces:

• multisensory design involves creating spaces that stimulate and engage multiple senses. This design approach can benefit individuals with sensory impairments, such as those with hearing or vision loss and those on the autism spectrum, who may experience sensory overload in specific environments.

• user-centered design involves placing users' needs at the forefront of the design process. User-centered design involves engaging with sensory-diverse individuals throughout the design process, from planning to final implementation.

Designing inclusive spaces that serve the needs of sensory-diverse users involves employing design strategies that do not ignore neurodiversity, either from the side of the material conditions of the spaces or from the views of as many consulted individuals as possible. By enhancing the perceptions of wellbeing for all users, phenomenological inclusive design can create more accessible, enjoyable, and engaging spaces for everyone. (Black 2022). Among the phenomenological themes we are interested in keeping moving forward are relationships between hearing and being, neurodiverse existential phenomenology, anthropological exploration of sensorial architectural experiences, as well as the inclusion of soundscape heritage, the sound diorama as experiential space, aural preservation, soundscape narratives, and sound activism for emancipation. We are open to collaborating with partners from diverse disciplines, from the arts and humanities, social and hard sciences, and technology, to enrich future iterations of this research path.

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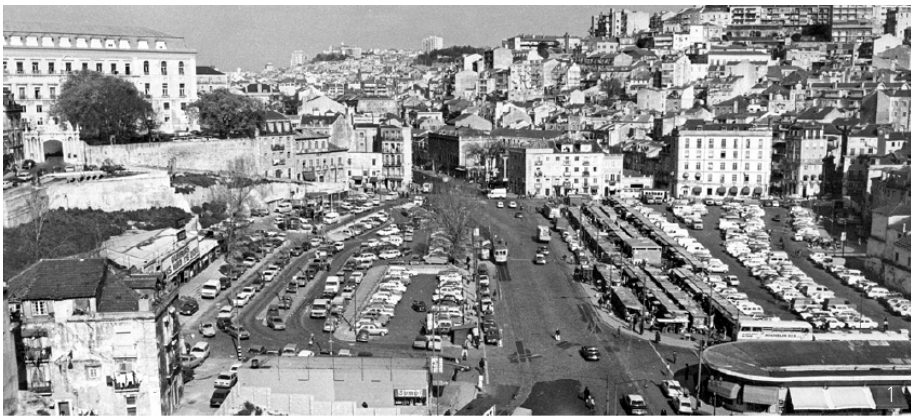
FIGURES

Fig. 1 - Meraz, Space, Sound, Sensation installation, 2019, Digital photograph, 16cm x 24cm, Saint Paul's Crypt, Bristol, England. UWE Bristol Research Repository. Retrieved January, 15, 2024 from https://uwe-repository.worktribe.com/output/847994/space-sound-sensation



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Margarida Pinhal [1], Filipa de Castro Guerreiro [2], Carla Garrido de Oliveira [3]
[1,2,3] University of Porto, Faculty of Architecture, Portugal
[1] up201807969@arq.up.pt, [2] guerreiro@arq.up.pt, [3] coliveira@arq.up.pt

The palimpsest, strategies to drawing multiples spaces to multiples communities.
Martim Moniz, Lisbon

Key Words
Interculturality, Integration, Needs, Vulnerabilities, Ecumenical

Synopsis
These keywords are interconnected in the context of Martim Moniz square in Lisbon, where interculturality and integration, specific needs of different communities, perceived vulnerabilities and the quest for an ecumenical environment are central elements. Its urgent understanding and addressing these needs as crucial for fostering a more inclusive and harmonious urban environment.

Context
Portugal is heavily influenced by its proximity to the African continent and the Mediterranean Sea serving as a gateway for Arab and Asian communities. Located at a strategically accessible point and being a place of opportunities, Lisbon attracts large masses of migrants seeking better living conditions. With them, different cultures and experiences arrive, like the common issue observed in other European cities.
However, Lisbon already has a multiethnic history due to its legacy of colonization and slavery since the 16th century, resulting in the formation of generations stemming from these historical processes. Consequently, African communities have long existed and remained integrated into Luso culture, stabilizing with jobs and families. In this way, it is crucial to instigate effective integration to prevent the repetition of forced processes from the past. Subsequently, with migratory flows to European countries, there is a growing influx of communities from Eastern Europe, the Arabian region, and Asia, primarily. Thus, the city witnesses a multicultural phenomenon, emphasizing the urgent need for a redefinition of urban concepts that, in their design and use, must reflect and promote its ecumenical nature.

Multiculturalism

In this Western and Mediterranean space, different social groups or classes "confront each other, follow completely different patterns, and are driven by different motivations," (Filgueiras 1985, p. 21) making their integration into the urban environment of Lisbon challenging.

These ethnic spheres, by problematizing their differences and characteristics, suggest paying attention to the uncertainties and insecurities related to the thought and design of space when addressing multiculturalism. The aim is to broaden the concepts and their meanings, such as outdoor dining, conversations, or moments of rest, and, crucially, to demystify prejudices.

Prejudices automatically create a barrier, even if it is culturally unintentional, or when architects unconsciously make decisions in their designs, it affects the primary intention that one wants to discuss in this approach to urban space.

Having a conscious design of the vulnerabilities of space based on demographic and spatial analysis, along with the potential for extreme complexity and the existence of many particularities, highlights the extensive material that design should leverage to evoke the feeling of and in a place. Through cultural, sports, or social events, the intention to promote social interaction becomes visible, so providing a unique vitality to the space and thus becoming a more effective process of integration into urban life in the city. (Cohen 1974, p. ix-x)

Case study

Martim Moniz square is located in the center of Lisbon and is the second-largest square in the historic city. It is recognized for undergoing constant transformations, characterizing itself as a palimpsest (Fernandes 2023, p.7). The square is associated with different cultures, raising questions about its identity and integration into the city of Lisbon. These cultural variations give rise to uncontrolled prejudices, leading to the stigmatization of this square. The differences, marked by the strong presence of numerous minorities condensed in one space, emphasize the spatial and social distance (Gmelch, Zenner 1996, p. 495) from the other squares in the Lisbon metropolitan area.

The urban fabric of Martim Moniz is inhabited by several generations of international communities, mainly from India, Nepal, China, and Bangladesh. According to the Diagnostic of the Parish Council of Santa Maria Maior, 15% of residents are foreigners, with approximately 23% in Mouraria alone, almost a quarter of the total resident population, considering a density of 11,350 inhabitants/km². [1]

Currently, the square is an attractive and culturally rich point in Lisbon due to its multicultural offerings in gastronomy and shoppings. However, it is in a state of fragility due to disbelief, lack of maintenance, homelessness, and depopulation, which encourage crime and minor offenses such as drug trafficking or smuggling. This degraded state is reflected in insecurity and inaccessibility. Thus, a public competition was launched by the Lisbon City Council in 2023 for the redevelopment of the square and its surroundings to address the needs felt by the people who use the space today and eliminate the previously mentioned situations.

In preparation for the competition, the participatory process involved a set of public participation methods for users, residents, and workers in the surrounding area of Martim Moniz, with the aim of understanding the relationship of Lisbon's residents with the square and gathering as many ideas as possible for its redevelopment. This process was organized in a divergent manner, involving associations, organizations, and entities that had interactions with the square, aiming to interpret the needs felt by closer sources, the main users. All the information collected is relevant to understand, from a sensitive perspective, the best possible solutions for each cultural sphere specifically and, thus, contributes to a more solid and intuitively accepted design by the population.

Concepts discussion and (their) challenges

The discussion revolves around questioning the deconstruction or reformulation (Riaz 2013, p. 310) of the concept aimed at representing the redesign of public space, with the primary rule being ecumenicity. It explores methodologies that may be more suitable for a better approach to communities, seeking to understand which tools should be chosen based on a particular culture. The association of a design that represents the primal needs of each ethno-cultural group also raises the question of "how?" Thus, the discussion suggests considering whether the design can find similar hypotheses through parts or common activities, leading to a proposed intervention that addresses the needs of each group and, fundamentally, ensures that none is segregated due to incompatibility.

It is also important to emphasize the purpose of making visible their humans rights, especially if a large part of immigrants is illegal. These individuals or communities effectively occupy urban daily life in various ways, impacting the quality of services, commerce, and dining. These positive aspects are strongly evident and prompt reconsideration of areas for improvement.

Observing the diversity of cultures and the qualities each ethnicity brings contributes to the sustainable and progressive development of the city. It serves as an incentive and fosters a clearer and more visible understanding, showcasing a different way of living and current exterior activities. It is simply a valid and valuable perspective.
This study theorizes about the definition of the ecumenical space, building on the needs of these communities and the sense of living in the outdoor spaces of their home countries. The aim is to approach a design that is ecumenical and feasible. The theme of multiculturalism awakens a special social dimension that should not be a force of resistance but rather a driver of development and productive transformation at both the local and urban scales, as well as internationally. This diversity presupposes the existence of sensitive and available spaces for very distinct social appropriations.
All this material and immaterial wealth implies extreme complexity and many particularities in the way of inhabiting, which, in turn, relate dichotomically to the sharing of the same space, resulting in daily challenges. Depending on the variability of tolerance within each culture, space is always conditioned. Given this, this place, the subject of conflict and deep divergence, is waiting for answers, which can be ambiguous, as a space intended for everyone may become a space for no one.
The goal is to understand how public space intrinsically relates to the various modes of occupation, despite preventing areas of social conflict and resistance. Therefore, the aim is to reaffirm a public space that brings the city and residents, as well as future generations, closer together. In this way, this abstract suggests several strategies can be taken for a more effective intervention, through a more realistic and reliable perspective, with the possibility of finding at least a utopian solution, heterotopic places.

ENDNOTES

[1] Socio-demographic data related to the selected area for the contest proposals, in Terms of Reference: Annex I.II – Characterization.

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FIGURES

Fig. 1 - Author 1, Martim Moniz in 1908, 2022 and 2023, collage, 14,82 cm x 20,99 cm, Martim Moniz Square, Lisbon
Fig. 2 - Aerial photograph of Martim Moniz Square in 1908. Retrieved January, 15, 2024 from https://arquivomunicipal3.cm-lisboa.pt/xarqdigitalizacaocontent/PaginaDocumento.aspx?DocumentoID=338052&AplicacaoID=1&Pagina=1&Linha=1&Coluna=1
Panoramic view of the square and the city of Lisbon; Retrieved May, 8, 2023 in Annex VIII: Photographic survey for the public tender for the redevelopment of the square from https://encomenda.oasrs.org/concursos/detalhe/oBVUE1/requalificacao-da-praca-do-martim-moniz-lisboa
Fig. 3 - Photograph of a religious celebration in the square, author unknown. Retrieved January, 10, 2024 from https://bloguedominho.blogs.sapo.pt/muculmanos-em-portugal-celebram-a-festa-6290801

Arianna Scaioli
Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
ariannaluisa.scaioli@polimi.it

Empowered Bodies.
The legacy of Tschumi's work as a driver for social and spatial transformation

Key Words
Space-Time-Body, Gender-Space-Architecture, Built Environment

> "We must therefore avoid saying that our body is in space, or in time. It inhabits space and time" [Merleau-Ponty 2002, p. 161].

Exploring the concepts of space and time and their relationship in the built environment correlates with an understanding and reflection on how bodies perceive, move, inhabit and modify space through time, where practices of use of space, performance and experience question and reformulate the idea of materiality of architecture and what generates it.
Within the current social, environmental and economic uncertainty scenario, there is an urgent need to transform and adapt our built environment to cope with this rapid and continuous instability, where similar to an ecological crisis, we are undergoing a "crisis of care" [Fraser & Jaeggie 2018]. This condition implies shared answers that can bridge the gap towards a just and equitable environment, where the effort is directed towards constructing a culture of prevention engrained in space. Therefore, recasting the architectural projects to cope with these renewed scenarios means reflecting on the tools, methods and processes through which they interact and transform the materiality of space.
In this scenario, design cultures are facing a crucial challenge:

> "How do we design spaces and architectures that reflect and respect the diversity of voices, bodies, and identities present in our society? Moreover, how can we promote the long-term empowerment of vulnerable, marginalized bodies and unheard voices through design?"

This question, which goes to the heart of the gender discourse, requires a profound reflection on how issues, which find their origins in reflections with a solid political, ethical and social charge, can directly influence architectural and spatial disciplines, introducing gender equality

as a matter of design. Following the pandemic, there has been a strong call for a reflection on themes that have been central for feminist critique: Living Bodies in Space and the forms of coexistence, a renewed attention to forms of inhabiting space, rethinking the relations between house, work, public space and belonging, breaking down a preconceived patriarchal model for inhabiting and being a citizen.

Drawing from the seminal work developed by Tschumi, the article frames the necessity to reconsider bodies in spatial transformations actively, rethinking the relationship with spaces and, therefore, the design process, suggesting a shift in terms of critical thinking. In the 1970s and early 80s, Tschumi developed a theoretical and applied framework around the relationship – and their continuous inter-exchange – among space/architecture, motion, event and social interactions. This approach, instead, sets the premises of an architecture that ceases to act as a background of everyday life and becomes action. This conception shows the entanglement between space, body and event, stating that "architecture is the discourse of events, as much as the discourse of spaces" [Tschumi 1996, p. 22]. How we perceive, move, inhabit and modify space through time and represent it is affected by how we understand the notions of space and time. These two categories are not absolute nor neutral; on the contrary, they are conceived and conceptualized as shifting according to our identities and activities. Feminist literature in architecture has referred to the physical presence of living bodies in space, defining both a political action of resistance and of appropriation, where the awareness of one's own body coincides with knowledge of being in a place [Bianchetti 2020, p. 8] and by extension its capacity to recognize itself in it.

This conceptualization was influenced by the radical movements and the socio-cultural and artistic panorama evolving in Paris and London from the 1960s, seeking to reject the Modernist dogmas and recasting the discipline of architecture. The turn from structuralist to post-structuralist theory, with an intellectual mutation from 'totality' to 'multiplicity', strongly influenced the theoretical reflection at the time. As a result of this epistemic change, there was a shift in how design was conceived. Tschumi's interest in the dialectic between social praxis and spatial forms was moulded in the correlated disjunction between predetermined uses and those performed by the actual users, which must be preferred [Charitonidou 2020]. The Manhattan Transcripts and Space and Events make explicit this conception of urban experience as simultaneously space and event, unveiling "the complex relationship between spaces and their use; between the set and the script; between 'type' and 'program'; between objects and events" [Tschumi 2012, p. 80]. The contribution considers space and time as culturally perceived categories, where the relation of bodies to space and architecture shifts according to time and its identity. In this sense, how can we design spaces that encapsulate and translate the notion of embodiment and diversity within them? This framework becomes relevant in the debate around social and gender inequalities in the built environment, where Tschumi's theoretical and design legacy, informed by a cross-contamination of architecture, arts, literature and forms of representations, could give valuable insights to frame a contemporary reflection on the necessity to recast the discipline of architecture by its encounter with the everyday experience of space encompassed in feminist critique. By assuming the ephemeral, the performative, the occupation and appropriation, the experience of space in all its multiple declinations – for they reflect the dynamic transformations our societies and cultures are undergoing – architecture is called upon to rethink the intersections between sociality, spatiality and temporality, holistically.

The article frames the necessity to reconsider bodies in spatial transformations actively, rethinking the relationship with spaces and, therefore, the design process, suggesting a shift in terms of critical thinking. Highlighting the intersection of space, time, body and gesture, which finds a synthesis in the construction of the built environment, allows the unveiling of the networks of power and how people carve out space during a different period, encompassing the transformative power of temporality understood as part of the design process. The current debate informing architectural activities has been characterized by questioning how we will live together, focusing on the coexistence of bodies and objects within the urban milieu. It seems, therefore, relevant to draw renewed attention to Tschumi's interrogations between space, events and the role of physical experience, for they can give a fruitful perspective to this discussion. In The Pleasure of Architecture, he argued that architecture could act as "an instrument of socio-cultural change", where the cohabitation of people in space could facilitate urban success [Tschumi 1977]. The paper wants to draw a reflection on the possibilities that the encounter between this conception of urban experience as simultaneously space and event – where the cohabitation of people can facilitate urban success – and feminist critique – which questions whose voice is represented, how bodies are "physically, socially, sexually, and discursively produced" [Grosz 1995] and how this attitude can inform a different kind of engagement with people and the environment – can open up. Feminist methodologies

have brought attention back to living bodies in space, with their own gendered identities and characteristics, going beyond the abstract category of "usagers" [Lefebvre 1974] devoid of phenomenal identity, incapable of recognizing themselves in space. Furthermore, what emerges from this kind of approach is the notion of different temporalities that coexist and structure the process. Tschumi's investigation could be considered, in this sense, an essential reference in exploring the intersections of time, space, movement and body and how they can shape space, unveiling the power relations that structured space through time, causing the "expulsion" and the lack of recognition of vulnerable and marginalized bodies in space.
However, this relationship between space and body understood dynamically, has often given rise to performative experiences linked to the spatial and temporal dimension of the event, which takes on the ephemeral as its main characteristic. Looking primarily at those practices of urban commons and the re-appropriation of spaces in vulnerable contexts by marginalized communities, often referred to as "altering practices" [Petrescu 2007], the contribution questions this approach and its capability of interacting with the 'hardware' of the city. Therefore, the aim, through the discussion of contemporary design experiences, by muf architecture/art, Equal Saree and Atelier d'Architecture Autogérée, is to investigate the role of the event – as a first formalized moment – in conveying strategic design actions and how these can trigger long-term transformations of the built environment, setting up a more inclusive, equitable and democratic change in architectural design and processes, starting back from the role of living bodies in conveying a transformation. Specifically, the aim is to reflect on how Tschumi's contribution can generate contemporary design to methodologies and how, from the event, it is possible to generate long-term transformations of the built space by reconstructing a unity between object and event, between space, time and sociality, between bodies and places.
In conclusion, the contribution aimed to open up the discussion about designing spaces and architectures that translate and encapsulate the diversity of voices, bodies, and identities, promoting long-term empowerment of vulnerable and marginalized bodies and amplifying unheard voices through design. Therefore, the contribution explores the possibilities of considering bodies, events, movement and synchronic temporalities in discussing spatial transformation, considering the intersection between this framework and feminist critique. This reasoning involves the meaning of design – where, through the event, it is possible to trigger not only a spatial transformation but also a cultural one, modifying the meaning of space and, therefore, the space itself.

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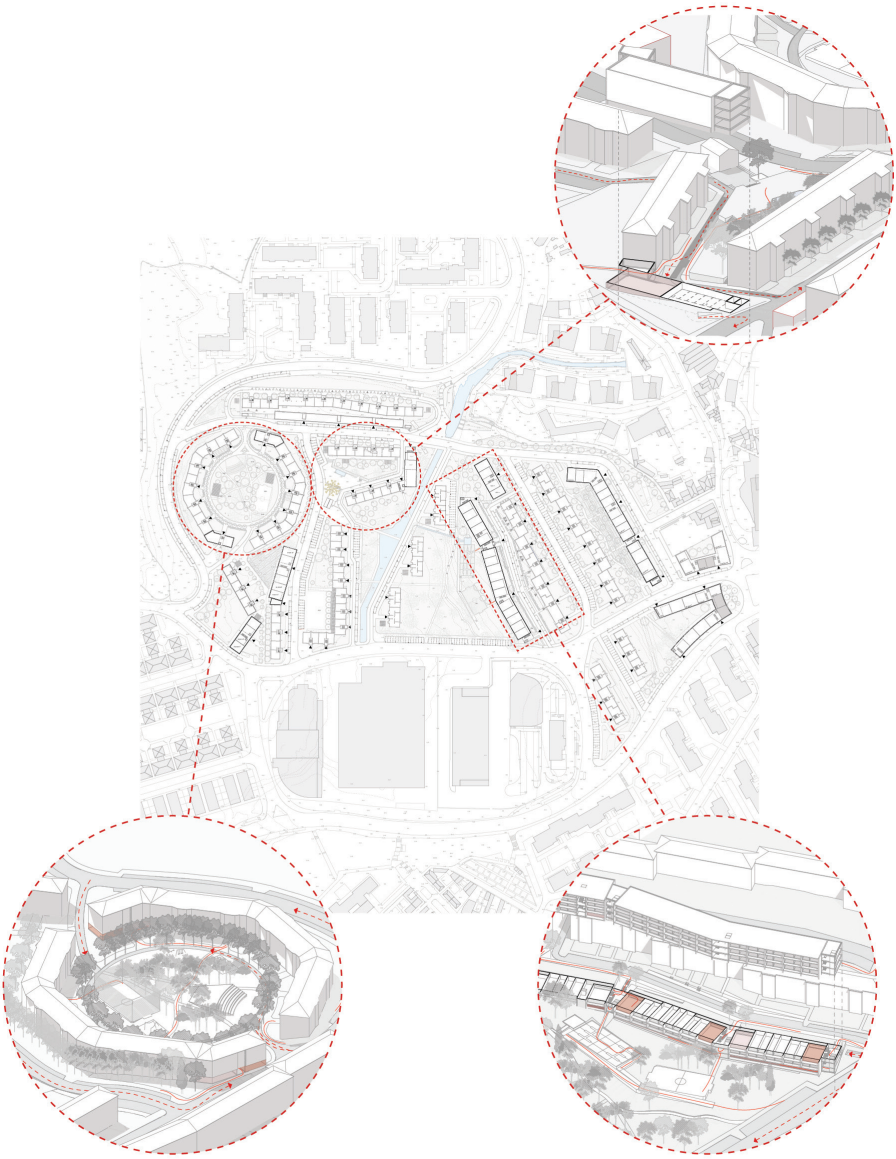

Mariana Aguiar Antunes [1], Carla Garrido de Oliveira [2], Filipa de Castro Guerreiro [3]

[1] Faculdade de Arquitectura da Universidade do Porto [FAUP]

[2,3] Centro de Estudos de Arquitectura e Urbanismo – Faculdade de Arquitectura da Universidade do Porto [CEAU-FAUP]

[1] mariana.saaa@outlook.com, [2] coliveira@arq.up.pt, [3] guerreiro@arq.up.pt

Res-publica:
The social role of architecture and urban design in the production of public housing in Porto

Key Words
Housing, Densification, Addition, Neighbourhood

Architecture at the core of public housing

The design competition for affordable housing and urban regeneration in Lordelo do Ouro (Porto, Portugal) [1], sets the ground for reflection over the issues concerning public-commissioned housing settlements as articulators of urban and social (dis)continuities, centering the discourse in the relationships between vulnerable bodies and vulnerable places, and the social responsibility of designers at the forefront of care.

The ongoing discussion concerning public housing deals with calls for regeneration and further densification as key-interventions to consolidate and 'stitch' together the vast and detached settlements with the surrounding urban tissue. Our research features the city of Porto, in which a considerable amount of the large public housing settlements have partially preserved their peripheral condition, while being assimilated by the surrounding urban tissue despite never experiencing effective integration within their social and physical context.

The call for proposals is carried out in the area encompassing the already inhabited Pinheiro Torres and Lordelo public housing settlements. The Competition's Preliminary Program – in written terms - and Reference Solution – a guiding masterplan – ascertain the construction of ca. three hundred new housing units within five new housing blocks – including two high-rise and three high-density horizontal blocks - framed by the city's Director Plan, defining the area as one of "detached buildings, where collective housing prevails" [CMP 2020, p. 7]. Furthermore, the plan defines the restructuring of roads, the unearthing of Ribeira da Granja water canal, and including a call for landscape and urban design projects for the public areas among new and existing blocks.

Contextualizing vulnerability

After contextualizing and carefully analyzing the competition's terms, we question, however,

wether these generic recommendations suffice to ascertain the interventions would be provided with the desirable quality of a prosperous neighbourhood.
Furthermore, we question the adequacy of both terms and reference solution while intervening in apparently detached territories, without further enhancing urban discrepancies and vulnerabilities, and leading a comprehensive approach towards successful urban re-integration.
We pose these interrogations while simultaneously observing the site encompassing Pinheiro Torres and Lordelo public housing blocks, appearing as testimony of the Municipality's inability to successfully manage and care for public space and built environment, effectively extending to the bodies inhabiting the space – despite the place's inextricable qualities, its peripheral condition, difficult spatial integration and the stigma associated with public housing have become key-factors to perpetuate several forms of vulnerabilities.
We proceed to re-define the approach to a design competition for public housing: our aim is not to produce any solutions to the rather contentious guiding terms adopted by the Municipality of Porto, but alternatively propose a solid base to ground possible interventions – addressing desirable qualities of spaces for living, overcoming the generic and neutral user and, finally, overcoming the difficult integration and social-urban stigmatization associated with public housing in Porto.

Research-by-drawing
Grounded on the affirmation that space is not neutral, we start by addressing the inhabited neighbourhoods of Lordelo and Pinheiro Torres within their wider urban context and then at the intermediate scale, while undertaking an exercise of ideographic description [Viganò 2010], confronting the lines of (architectural) design with the lines of (human) desire. The research-by-drawing modus operandi [2] produces a base for prospective futures, gradually revealing the place's potential and frailties, its pre-existing urban structure, drawing our interest for "everything that, until then, has provided a place for shelter and reunion, and has been able to seduce" its inhabitants [Lacaton, Vassal, Druot 2016, p.100].
On a wider scale, we realize that in a short period of 70 years, this previously industrial and agricultural periphery has experienced swift densification, particularly intensified by large public housing settlements spreading across Lordelo do Ouro and Foz parishes, and preserving one of the inner city's most important natural structures. However, other important urban and living functions failed to keep up with such rapid growth, relegating the place to a mono-functional, peri-urban and poorly connected *grand-ensemble.* [3]
When we zoom into an intermediate scale and to the space-between-buildings [Gehl 2011], we identify spaces of congregation and places for shelter, namely the chapel or the small groceries shop/caffee at the neighbourhood's core, as well as a series of unbalanced situations – such as the inappropriate use of public space for parking, or the lack of compromise between the built environment, the public space and the way people are using it everyday: there have been transformations and diversity in living habits which both buildings and public space have not been able to respond to.
Additionally, the inevitable association between public housing and social and intersectional vulnerabilities effectively meant the contextualization of vulnerable bodies in Lordelo do Ouro - (perhaps reproducing one another?) - resulting in stigmatization of both inhabitants and neighbourhood.
We argue that the corpus of material information we gathered, both on the place's inextricable potential and vulnerabilities, but also on the ways bodies participate, appropriate and modify the place they inhabit, should ground the terms for a design competition – or, in broader terms, any type of intervention - aiming to act in public space and, particularly, when it comes to (re) designing and (re)defining a housing settlement, minding every aspect such program entails, and re-directing the disciplinary discourse to undertake the responsibility to care for vulnerable people and places.

Project strategy
Therefore, we question the adequacy of a standard Preliminary Program and Reference Solution, exclusively based on generic principles for urban composition and quantitative parameters. Alternatively, we propose a strategy addressing the construction of additional housing units and the effective (re)definition of shared places, allowing space for new communal practices to flourish and reproduce.
Thus, our strategy is based on the idea of balanced densification [4], a proposal for urban addition grounded on the following principles:
Short-term:
• Redefining streets and paths: addressing both vehicles and pedestrian flows, and liberating space from inappropriate use [poor car parking...];

• Clarifying space-between-buildings: effectively shaping and giving defintion to space through new constructions (housing units); avoiding leftover and "multi-purpose" spaces; attributing functions and levels of use to space;
• Reorganizing densification: suggesting the association of smaller neighbouring units within the wider neighbourhood, congregating present and future inhabitants, by creating new spaces for reunion (communal studies, shared laundries, plots for communal gardening and farming) both in new buildings and in recently liberated space-between-buildings;
Long-term:
• Readdressing existing built environment: promoting effective improvement and updated quality living standards for pre-existing buildings;
• Permanent reassessment of public realm: an on-going process of constant adaptation of spaces according to ever-changing paradigms (What to do with leftover parking space in a potentially less car-centered future neighbourhood?)
Nevertheless, we stress the importance that these principles imply a drawn solution, and the articulation of both should allow proposals to overcome quantitative parameters and generic guidelines.

The added value of a body-centered approach
In essence, we believe our proposal to be a body centered approach, where the research-by-drawing method reflecting the blueprint of bodies in space, together with the definition of a process strategy for public housing, should be able to respond and overcome the cycles of reproduction of social-spatial vulnerabilities: we argue that the arrival of new people and the addition of new construction to the existing ecosystem should be regarded as an opportunity to effectively promote places for togetherness. The clear definition of spaces for shared practices, expectant of new meanings, promoting a sense of affection and responsibility towards neighbours and neighborhood, justifies the added value in this approach.

ENDNOTES

[1] Firstly announced in april 2020.
[2] The research-by-drawing modus operandi was grounded on several visits to the place and resulting photographic / drawing reports, cartographic material, blueprints, and photographic reports produced over the years, compiling numerous layers of material information.
[3] Despite the fact this grand-ensemble was slowly absorbed by the continuous mass of urban tissue, it still stands as an island, disconnected from network accesses, excluded from public policies for mobility [Coentrão, 2021] and lacking complementary functions to support life in a prosperous neighbourhood.
[4] "To thoroughly densify, amplifying the existing and not wasting area, implies a strategy of addition and juxtaposition, bringing [people, interventions] closer in a case-by-case approach, to congregate, to enhance, to bring added value." In Lacaton, et Al. 2016, p.102. Author's translation.

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FIGURES

Fig. 1 - Mariana Aguiar Antunes, A strategy for togetherness: neighbouring units as places of common, 2024, plan and axonometric views, 16x24cm

Emilia Corradi [1], **Camillo Frattari** [2]
[1,2] Politecnico di Milano, Dipartimento di Architettura e Studi Urbani
[1] emilia.corradi@polimi.it

Addressing vulnerability through place-based knowledge and co-design practice [1]

Key Words
Vulnerability, Disaster risk reduction, Architectural ethnography, Co-design, Education

Overview
Vulnerability is a characteristic shared by human beings and the space they inhabit: bodies and places are, by their nature, constantly exposed to events that can alter their physical condition and cause biological, social and economic consequences. While there is an analogy between the vulnerability of bodies and places, there is also a clear cause-and-effect relationship whereby the fragility of the territory makes the condition of those who inhabit it vulnerable; similarly, the construction of places by man can also make them exposed to risks of any kind.
The relations between architecture and anthropology [2] take on a clear significance beginning in the 1950s, with the emergence of a critique toward functionalist architecture by architects who were also very different from each other, such as, for example, Aldo van Eyck and Aldo Rossi [Bilò 2019, p. 1]. In this regard, Giancarlo de Carlo claimed that the "purpose of architecture is not to produce objects but to give organization and form to the space in which human events take place" [3]. This makes anthropology, as a discipline that observes, understands, and interprets the physical and social environment of humans, the privileged cognitive tool of the link between space and humans by breaking the fence of disciplinary knowledge and practices of architecture. The use of ethnographic practice serves to question the specialized knowledge of architects to learn from the "bastard conscience" what needs to be translated: the organization of space [Bilò 2019, p. 146].
In recent years, the role of practices that bring architecture and anthropology together has become increasingly relevant in the design of vulnerable places for Disaster Risk Reduction (DRR) and Disaster Risk Management (DRM), involving urban and spatial development policy agencies on the one hand, and the work of architects and organizations engaged in emergency prevention or management projects on the other. On the level of policy initiatives, the Sendai Framework (2015-2030) developed by the United Nations Office for Disaster Risk Reduction

(UNDRR) and adopted by the UN state members, defines four priorities that contain goals and target actions that often need an active role of the population: (1) understanding disaster risk, (2) strengthening disaster risk governance to manage disaster risk, (3) investing in disaster risk reduction for resilience, (4) enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction [UNDRR 2015, p. 14]. In particular, the second priority expresses the need to understand disaster risk in all aspects: vulnerability, capacity, exposure of people and assets, hazard peculiarities, and the environment, including promoting communication and education activities. The fourth priority suggests actions for community involvement in preparedness with a focus on empowering women and persons with disabilities to avoid gender inequalities and promote universally accessible responses, as well as the desirability of measures to "Build Back Better" and community involvement in participatory decision-making processes.

One of several manuals and toolkits inspired by the Sendai framework is the "City Resilience: Action Planning Tool" [UN-Habitat 2015], which aims to make it possible for neighborhoods or districts of larger cities or metropolitan areas, as well as local governments of small to medium-sized cities, to organize and carry out effective measures to increase the resilience of their cities. The CityRAP tool offers a method to coordinate municipal authorities, communities, and local stakeholders in a step-by-step participatory planning that includes a set of training exercises and activities with the aim of enhancing urban resiliency. The development of the participatory process implemented by the tool takes about two to three months and is divided into four stages: (1) understanding Urban Resilience, (2) data collection and organization, (3) data analysis and prioritization, (4) development of the City Resilience Framework for Action (RFA). The tool is based on the principle of bottom-up planning, which includes engaging stakeholders, communities, and citizens from the beginning through participatory risk mapping activities, focus group discussions, and cross-sectoral action planning.

A perspective on architectural design

From the perspective of design practices, the relationships between anthropology and architecture as a tool of DRR and DRM are visible in the work of architects such as Atelier Bow Wow and Yasmeen Lari. From the second half of '900, Tokyo started a process of radical urban transformations, reflecting a mix of Japanese and Western culture. In this context, the atelier bow wow, established by Yoshiharu Tsukamoto and Momoyo Kaijima, begins to observe buildings that are defined by accidental conditions or needs of their occupants. The survey was published as a guidebook titled Made in Tokyo [Kaijima et al. 2001]; it illustrates by drawings the peculiarity of those living spaces composed of aggregations of different functions and elements that accommodate their inhabitants' livelihoods. After the 2011 Great East Japan earthquake disaster that caused the tsunami and the meltdown of the Fukushima Nuclear Power Plant, Momoyo Kaijima was part of the organizing committee of ArchiAid, a network of 300 architects and 16 university laboratories involved in post-disaster rehabilitation. Addressing the reconstruction plan of the coastal region of Ishinomaki-shi, they made a field survey, interviewing the village residents about their daily life and mapping the landscape and things that disappeared to figure out the reason for the destruction and make drawings of the lost spaces. The result was a collective drawing that linked the past, the present, and the future. In "A Pattern Book for Oshika Peninsula" (ArchiAid Oshika Peninsula Supporting Seminar, 2011-12), they showed the possibility of a new life in villages and a catalog of new elements needed for reconstruction. This method of putting together different pieces in one's memory could be called "Architectural Ethnography" [Kaijima 2018].

In 1980, Yasmeen Lari co-founded the Heritage Foundation of Pakistan, a not-for-profit organization engaged in research, publication, and conservation of cultural heritage to promote social integration, peace, and development. After the 2005 earthquake in the Kashmir region and the 2011 flood that devastated rural villages and beyond, Lari worked for the reconstruction and resilience of communities by engaging them in a self-help approach. Using traditional construction techniques is one of the key elements of Lari's work as it combines cultural values, empowerment of women and communities, and the use of zero-carbon construction processes. These technical solutions were outlined in the manual "DRR-Compliant Sustainable Construction, 'Build back safer with vernacular methodologies' Technical Support Program" [Lari 2011] through which artisans could be involved and trained for settlement rehabilitation and reconstruction. In the field of education, the "Disaster Preparedness Manual" and "Disaster Preparedness and Management" DVD [Lari et al. 2013] were additional tools of risk prevention realized in both English and Urdu for a broad understanding. The handbook includes illustrations and photographs that make clear the steps that should be followed "before, during, and after" the disaster so that people may understand and share the information. In the work of Lari, the knowledge of the place and the in-depth study of the past reveal its modernity [Corradi 2021] and the opportunities for human survival in the contemporary world.

Conclusion

In conclusion, before or after a disaster, vulnerable places must be understood by the nature of the territory and the relationships between the place and the community living there. Risk reduction strategies adopted by policymakers identify place-based knowledge and participatory processes as key elements that challenge architects' disciplinary expertise. The work of Atelier Bow Wow and Yasmeen Lari shows the advantages of a new relationship between architecture and anthropology. On the one hand, ethnographic observation makes it possible to (re) construct the narrative within which architecture exists: a landscape of memory that unites habits, livelihoods, and a sense of place. On the other hand, community involvement through education, participatory decision-making processes, and the recovery of traditional building techniques to "Built Back Better" is an empowerment tool that ensures the survival of the culture and economy of communities inhabiting vulnerable places in the future.

ENDNOTES

[1] This study was carried out within the RETURN Extended Partnership and received funding from the European Union Next-GenerationEU (National Recovery and Resilience Plan – NRRP, Mission 4, Component 2, Investment 1.3 – D.D. 1243 2/8/2022, PE0000005).
[2] See Architettura e Antropologia: Bilò 2019, pp. 11-23.
[3] G. De Carlo, Riflessioni sullo stato presente dell'architettura: De Carlo 1992, p.137.

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Silvia di Eusanio
University of Teramo, Economic and Social Sciences (ESS)
sdieusanio@unite.it

Rethinking urban spaces: An intersectional perspective

Key Words
Urban planning, Intersectionality, Corporeality, Gender policies, Feminist economics

The multifaceted relationship between *acting bodies and acted bodies* serves as an agent of transformation; consequently, it is important to actively listen and have an open and continuous dialogue. Therefore, rethinking the city from the perspective of female bodies represents an opportunity to create urban spaces that both listen to and meet the needs of the entire community, especially the fragile female body.
Raquel Rolnik's 2023 text raises the question: What does it mean to feminise urban politics? This research critiques neoliberal economic policy's historical marginalization of 'vulnerable' bodies in urban planning and policy, reflecting on the inclusive implications of feminizing urban politics and its significance in perpetuating gender divisions and stereotypes in public space design [Valdivia 2021].
Since the 2000s, the neoliberal movement has increased this perception of urban production, further exacerbating marginalization by promoting a single model based on the white, able-bodied, heterosexual male form [Brandão et al. 2023]. While it's crucial to consider the importance of including the mothering body, such as creating public squares with comfortable benches for mothers to rest while supervising their children, it's also essential to recognize and address the needs of other types of bodies, including the elderly, LGBTQIA+, women with disabilities, women from minority groups, and single women, especially since intersectionality allows us to better grasp the vulnerability of the female body [Tavares 2019; Collins 2021].
The commitment to rethinking the city goes beyond the physical infrastructure but also requires reflection on social norms and power structures that perpetuate inequalities.
When a city takes into account these other bodies, it develops a community fabric that unites people and eliminates physical barriers that restrict attention and space management.
Therefore, according to Kern: "A feminist city puts care at the center, not because it should be the exclusive work of women, but because the city has the potential to distribute it more

equitably" [Kern 2021].
Cities can become vibrant and prosperous spaces that not only foster the well-being of the body but challenge gender roles and empower equity. Jane Jacobs proposed inclusive design solutions, including community participation, promoting walks and periodic meetings to empower dialogue and welcome, safe, and functional cities for all [2020]. Furthermore, being responsive to community needs, avoiding bad visual communication, being interactive and child-friendly, reflecting identification, inclusion, sustainability, and mutual participation [Simionato et al. 2023]. Inspired by Jacobs, this research focuses on encouraging female bodies to advocate for a female urban planning perspective, especially when confronting gender-based inequalities.
Considering that space can be shaped by diverse perspectives and cultural experiences, this research aims to consult and compare global southern and northern city policies and perspectives, specifically Sao Paulo and Rome, with a focus on feminist economics and its impact on urban policies. Although gender disparities are often associated with "developing" countries, women in "developed" countries also face unequal treatment in various fields [Arat-Koç 2012 et al.]. The policy comparison findings reveal that the absence of consultation and dialogue for participation in space redesign fosters exclusion and neglects the subjective experiences of vulnerable bodies. Going forward, policies must adapt to evolving societal needs and bodies, with this research aiming to raise awareness of strategies to manage and address these changes.
In order to effectively empower the vulnerable, it is critical to have spaces that are designed for or directly with subjects using the space. According to the 15-minute city theory, the ability to arrive in any location within 15 minutes is a sign of inclusion and sustainability and has an influence not only on the mobility of the city but also on people's care and wellbeing [C40 Knowledge Hub 2021]. For space to be lived functionally and experienced authentically, it should be constructed and regenerated by and with the perspectives of the bodies that will use it. Considering that, before, during, and after making policies, dialogue should be fostered. Without that, the authentic experience will be lost [Simionato L. et al., 2023].
Considering this perspective, the following policies will be analysed to evaluate the role of corporeality: The UN 2030 Agenda for Sustainable Development, the EU Directive 2023/970, and Brazil's Growth Acceleration Programme [PAC 2023] emphasise gender equality in broader societal goals such as digitalization, social inclusion, and mobility. This paper seeks to examine the similarities and differences inherent in these programmes and policies, providing insight into their effectiveness in addressing various societal needs.
This analysis goes beyond the official discourse to examine how, based on Veronica Gago's insights, we can examine the consequences of neoliberal economic policies based on the notion of 'homo economicus', and critiques the adoption of such behaviour as a prototype in economic theory. Furthermore, Le Corbusier's principles influenced spaces to transform them according to ideas about the male physique [Bernardini 2017; Jacobs 2020; Piras and Mazzaglia 2023]. In any case, we can point to the failure of economic theory to recognise economic behaviour rooted in a model unsuitable for all subjectivities living in cities, where, during the planning, urban planners failed to consider the distinctions between women's bodies and the needs inhabiting them (Muxi Martinez 2006). Consequently, females, to reclaim marginalised space, often must do so through occupation or performance [1], aiming to "carve out a space where one is not expected or allowed" [Bonu et al. 2023, p. 55].
This research aims to evaluate the impact of neoliberal financialized economic policies, including austerity, on urban spaces, demonstrating how these policies influence mainstream funding for infrastructure, innovation projects, and the likelihood of activism [Rolnik, 2018]. The findings reveal historical gender biases in urban planning, advocating for feminist perspectives to address needs based on the female body. Furthermore, while neoliberal policies perpetuate inequalities, grassroots resistance offers transformative potential, as highlighted by Verónica Gago in her book "A Razão Neoliberal," emphasising the importance of resistance starting from grassroots levels rather than top-down initiatives [2014].
Finally, this study aims to explore the link between gen[er policies, urban planning, and economic paradigms, highlighting how existing economic theories reinforce gender norms. Going forward, it offers insights into gendered experiences in urban policies, fostering dialogue for a more inclusive future approach [2].

ENDNOTES

[1] See the text by F. Sabatini and G. Palermo analysing the performance of the "Non Una Di Meno" movement in which the urban space was reshaped by a 'Handmaid', a reference to the novel and series The Handmaid's Tale [Atwood 1985].
[2] This contribution fits within ongoing doctoral research that I am conducting between Rome and São Paulo.

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Camilla Casonato
Politecnico di Milano, Department of Architecture and Urban Studies
camilla.casonato@polimi.it

Standing around the model. Bodies, participation, and landscape representation

Key Words
Models for participatory design, Cultural landscape, PGIS, Vulnerable communities, Sensory engagement

The participatory construction of representations of the territory is a fundamental tool in the processes aimed at bringing out the cultural and social values inscribed in the landscape, understood as "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (European Landscape Convention, Florence 2000). Although the use of digital technologies in these processes has been commonplace for several decades, participatory cartography [Burini 2007; Casti 2007; Debarbieux, Lardon 2003; IFAD 2009] still often uses analogue tools such as mind maps and diagrams, i.e. theoretical and essential representations in which visual similarity with the real places is marginal, symbolic content is high and the interpretive role of the tool is nodal. In the production of these representations, the construction of the image often does not follow a strictly projective logic, but rather a topological organization of elements. In many cases, moreover, different projective forms are combined in an intuitive and symbolic way, as can be seen, for example, in the maps produced in the context of development cooperation projects [McCracken, Pretty, Conway 1988; McCracken 1988, http://www.fao.org]
While this type of map has the advantage of producing representations linked to local knowledge with immediacy, it has limited potential in terms of quantitative data accuracy and georeferencing and is poorly compatible with forms of digital data processing. This limitation affects the communicative effectiveness of such representations outside the context in which they arise and limits their ability to influence decision-making processes.
The development during the 1990s of participatory GIS (Geographic Information Systems) - according to the various ways in which they are approached (PPGIS, Public Participation GIS; CiGIS, Community-integrated GIS; P-GIS, Participatory GIS; MIGIS, Mobile Interactive GIS) - has provided tools that make it possible to translate the knowledge acquired through cognitive mapping into advanced information systems capable of integrating metric, positional and

quantitative data and carrying out complex analyses [Casti 2007; Craig, Harris, Weiner 2002].
At the same time, reflections by geographers, particularly in the US, raised concerns about the social implications and democratic values of digital technologies for producing and managing geographic information. The use of such tools implies differentiated access, both to the technologies themselves and to the data, with the risk of strengthening geographical areas, social groups, power groups and weakening the excluded [Curry 1995; Harley 1990; Pickles 1995a]. These studies show how image and information management technologies offer the image of a virtual environment in which data and space are fully manipulable, with which the myth of a realistic and therefore objective and neutral representation is easily associated.
At an operational level, GIS and network technologies should be recognised as having important potential for the revival of a civic culture, in which new communities of dialogue give rise to real social interactions, albeit in virtual spaces [Pickles 1995 b]. However, when used in participatory processes, GIS has two major limitations: on the one hand, the risk of a significant gap between the participatory phase and the subsequent processing; on the other hand, the difficulty for the communities concerned to use and progressively update the data after the participatory phase has ended.
Given these difficulties, the approach proposed by Integrated Approaches to Participatory Development (IAPAD) is interesting, as it has developed a method for approaching the potential of geographic information technologies in isolated rural communities, but which can also be applied in different contexts [https://www.iapad.org/].
The system, called Participatory 3D Modelling, involves the local population in the construction of a model of the area based on official cartography. The process involves the use of readily available materials and the application of locally available technical skills [Rambaldi 2010] Making a model by hand is a collective experience that promotes community cohesion and information sharing and helps to overcome language barriers. The translation of the participants' spatial knowledge and mental maps into a concrete model contributes to the collective recognition of the characteristics of the territory and activates identity processes. At the same time, the transparency of the medium limits the possibility of messages being distorted in the dialogue between the parties.
An orthogonal mesh of wires is then superimposed on the model as a Cartesian reference system. The model is then photographed to simulate a photoplane and the conversion to vector images makes it possible to create a GIS. In this way, the information collected becomes searchable and implementable within a technologically advanced system, offering greater opportunities for sharing at a supra-local and institutional level.
The construction of a model combines the actual experience of space with the manipulation (physical and mental) of space through the construction of a three-dimensional representation of it. The spatiality of the model involves the body - individual and collective - on many levels. Firstly, because it has to be built through close collaboration, otherwise it would be impossible to maintain consistency between its parts and with the actual data. Once completed, it occupies a space 'consistent' with the size of the body, because, unlike a drawing or digital model, the physical model is truly three-dimensional. Finally, because it is tactile, it can be touched, pointed at, manipulated and modified. The model then encourages the participants to meet around the represented space, an encounter that takes place on several levels. First of all, the physical level, because the territorial model generally has a dimension that allows one to "place oneself around" it, to "surround" it, to "inhabit" its limits by placing oneself at its edges, literally at the limits of representation, where real space begins. One sits around it as around a table, to look together, but also to interact, thus creating a space for encounter and dialogue: the gathering of bodies becomes an 'engine' for the exchange of ideas. The model thus assumes its role as a 'double' of the real and, through the collective process of legend construction, collects (physically) and embodies (symbolically) all the physical data and cultural meanings of the landscape. The model, which is based on the physical manipulation of matter, thus allows the mental manipulation of space in a much more direct and "consonant" way to our inhabitation of the territory through the body. In a participatory context, it allows the community to appropriate real space, symbolically transforming it from a 'container' of bodies, separated from the cultural meanings attributed to it by the community, into a collective mediating object [Debarbieux, Lardon 2003] capable of holding together body, space and culture.
The case under consideration invites us to reflect on how the enhancement of a delicate system of signs and material traces, such as those that characterise the cultural textures of fragile landscapes, makes it possible to give voice to individual and collective experiences, opening up shared processes of knowledge and action, without renouncing the search for dialogue with the potential of advanced technologies.
An extended study could analyze the described methodology, investigating if and how, after the digitization of maps and the creation of PGIS, territorial governance can become more

inclusive, if the impact on decision making processes is relevant, and how the technological gap is overcome in the following steps of the management process.

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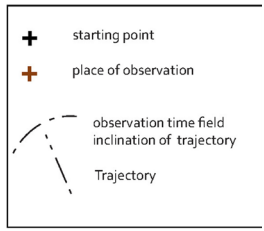
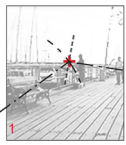
NAVIGATION CHART





A man is fishing

LOCATION : **PIER**

A tourist is sitting on a bitt wa
for the cruise ship gate to ope

LOCATION : **PIER**

The gate of the cruise ship on the pier.

LOCATION : **PIER**

A young woman pushing an el-
derly woman in a wheelchair.

LOCATION : **PEDESTRIAN STREET FOINIKOUDES**

A cyclist parked his bike
at the side of a telephone
booth.

LOCATION : **PEDESTRIAN STREET**

A shopkeeper placed a high stool in front
of the pavement of his store entrance in
order to prevent car parking.

LOCATION : **SIDEWALK IN FRONT OF STORES FOINIKOUDES**

A cyclist used pedestrian
guardrail to park his bike.

LOCATION : **FISHING HARBOUR SIDEWALK**

During day time , the area next
to the tree is transformed by locals
into a small recreational space.

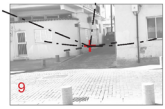
LOCATION : **PEDESTRIAN STREET PIALE PASA**

A residential building constructed in an earlier
era. The exterior balcony was apparently added
later to serve functional purposes of the upper
layer of the building.

LOCATION : **SIDEWALK PIALE PASA**

Tourists are taking pictures while
walking along a narrow street
perpendicular to coastline.

LOCATION : **CAR ROAD PIALE PASA**



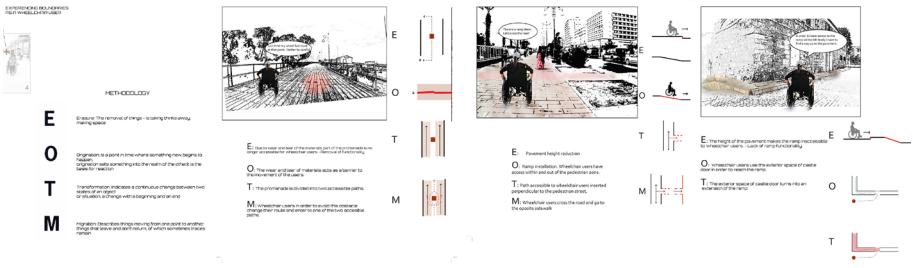
A narrow street, perpendicular
to coastline, used as a parking road.

LOCATION : **CAR ROAD PIALE PASA**

The initial observations focus on the ways people are using public space .

Navigating from person to person, through the different streets a map of the area appeared. A map of relations, networks and structures. (Urban Flotsam, p. 96)

People's activities create the identity of public space.



Angela Kyriacou Petrou[1], **Maria Hadjisoteriou**[2]
[1,2] University of Nicosia, Department of Architecture
[2] hadjisoteriou.m@unic.ac.cy

Design practices of inclusion

Key Words
Disabled body, Practices of inclusivity, Societal barriers, Diverse body, Design methodologies

Introduction
Through a process of unveiling the unseen body, the paper identifies strategies of design, as processes that integrate the disabled user as an active member of society. Based on the exploration of existing care centres and design practices, the paper will focus on identifying methodologies which help to make the disabled body visible in the city and unravel the disabling effects of society.
The objectives are to identify strategies and best practices which operate through ideas of inclusion of the disabled body, where accessibility (physical and social) is seen as an integral part of the design process. The intention of the research is twofold; to identify methods of normalising the presence of the disabled body in the public space and secondly to explore design strategies for centres of care that focus on the active body, rather than passive care. The purpose is to integrate users and redefine care institutions as spaces which incorporate diverse bodies and actions together.
The paper focuses on pedagogic research activities which investigate practices of incorporation of ideas related to inclusivity in design education [1]. Initiated by our involvement in a live project for the redesign of a children's special needs day centre, our research tasks focused on how disability issues could be better embedded in the teaching process. Visiting the existing care home for disabled children was a major catalyst in understanding the preconceptions about the disabled body. During the spatial and operational analysis of the institution, the findings revealed difficulties derived from the physical layout and the quality of the existing spaces of the care home, but more significantly, they exposed the problematic seclusion of the disabled children from the rest of the community. Despite the valuable support that the care home offered for the complex needs of the children, the isolation of the disabled community

from public view and public spaces of the city directly reflected the attitude of the able-bodied community.
Following our visit, subsequent assessment focused on methods and strategies of bringing together the public with the disabled community and understanding how disabled bodies are predominantly restricted through societal barriers rather than medical conditions.

Mobility in public spaces and the diversity of different bodies_ collecting narratives
With the intention of promoting ideas of mobility in public space, the first research task, a cognitive mapping of space (fig.1), considered mobility in the city and the diversity of different body experiences in the urban environment. Assigning priorities to space through different senses, and users generated opportunities to see the environment in a different way. With a focus on documenting stories of everyday actions, students used empirical understandings to create cognitive mappings, storyboards and films of how they navigated the city. Challenging traditional ableist ideas and practices and taking notice of diverse perceptions and experiences of occupying built space beyond regulations, mappings revealed creative opportunities of designing inclusive public spaces and the agency of alternative bodies.
The pedagogic challenge was encountered through an approach that provoked investigation into both the social and physical challenges faced by the disabled community. Not to see disability as something that is merely supported through hidden acts of welfare and design regulations, but to reconsider it as a creative opportunity to think about how we reinvent design for the diverse body. The idea of independent mobility as well as care is understood as something that is needed by all, to different degrees, thus, the role of the designer is to shape private and public spaces with inclusiveness for all.
We focused on how the built environment prejudices against our bodies in ways that we are not aware of- ostracizing both the disabled body and other marginalised communities- largely through societal discrimination. Investigations showcased how the problematic '*Medical model*' of disability is manifest in the local community and generally in architectural design practice – identifying how the medical condition of the disabled user is seen as the barrier to living a 'normal life'. Research assignments focused on promoting a shift towards an understanding of the '*Social Model of disability*' [Oliver 1990] – that is understanding societal barriers as the main barriers of integration (of the disabled body) into society. Building on the work of Jos Boys [Boys 2014, 2017] we examined the implications of various conceptualisations of disability related to design.

Architectural design as support for life experiences
The second design task focused on categorising programmatic activities which promote integration of users. Students were tasked with the development of spatial and programmatic explorations which examined the needs of the disabled body as a part of the design process, but also addressed the abled and disabled bodies together and not in isolation. Avoiding classic models of passive welfare, we explored ideas that endorsed the body as active and mobile- coinciding with different levels of assistance. Building on the idea of reading the architectural space as an infrastructure that supports and enables life experiences, in-depth research on existing architecture practices revealed methodologies that enhance the agency of the body in the built environment.
Case study reviews on Institutions for people with special needs enhanced learning from existing architectural paradigms. By recognising practices that shift away from the design idea of 'one size fits all' and embrace the diversity and inclusion of different abled bodies simultaneously, allowing for the identification of best practices and categorisation of methodologies in diverse aspects of the design process.

A search for Hybridity and community integration
Investigation of alternative care facilities, focused on integrating functions related to the active body, revealing ideas of hybrid programmes which included activities for mixed users. By introducing public activities within the grounds of an institution or activities of the institution taking place in public spaces, the disabled body becomes seen and active within society. Hybrid programmes can take the form of juxtaposed activities in shared facilities where the abled and dis-abled body co-exist in the everyday life of the community.
Opportunities for hybrid programmes were identified through various hybrid programmes such as, Athletic facilities (sport fields, swimming pools, gym facilities), Food preparation spaces (collective cooking, shared kitchen), Craft and creative activities and Cultivation and agriculture. Co-dependant activities were identified, where in many cases, the disabled users were the central actors in the organisation of the space – such as the café or collective kitchen. Focusing on hybrid functions, research identified strategies which go beyond the traditional

role of the architect to create physical space and alternatively explored the creative potential of all users in spaces of co-dependency, and as such, instigated opportunities of inclusion.

Accessible public spaces, landscapes
The underlying premise of pedagogic activities involved the identification of methodologies for normalising the presence of the disabled body in public spaces, in the city, in buildings and on public transport. By giving agency to the body, it became evident that physical accessibility leads to social acceptability and integration.
A particular aspect identified as a design problem was the accessibility and integration of nature and the landscape. Literature revealed a strong case for the use of cultivation and productive landscapes as a valuable activity for all users - A space where people could gather and work with their hands, cultivating food and creating spaces for communal activities.
Students investigated layouts, typologies, materials and optimum proximity of spaces which facilitated inclusive landscapes – allowing wheelchair access and creating tactile immersive environments. Simple spatial and organisational adjustments allowed for cultivation activities, accessible natural environments, such as unfenced landscapes and green roofs. Investigations also focused on the use of planted internal courtyards – with the intention of enhancing the relation of outside spaces within the building, creating views, tranquillity, and adaptability of spaces as a valuable elements of space organisation for spaces of care.

Tactility and sensory stimulation
Reflecting on their own experiences, students associated the body with both a sense of fragility as well as agency which could coexist. Case study reviews revealed the significance of the immaterial qualities of place (auditory, tactile, olfactory, gustatory, visual) and its ambience in designing for the intimate scale of the body. Sensory Stimulation and Tactility were seen as valuable factors in addressing the body of diverse abilities and its interaction with its immediate environment.
Thus, creating an awareness of the physical space and the sensations of the body was seen as a key factor of design.

Conclusion
Identifying design strategies in the studio environment was seen as a fundamental process that could help redirect architectural practice to focus on design based on inclusivity with an aim to identify tactics of making research actionable.

ENDNOTES

[1] Research Design Studio Unit 6 & Assisted Living Elective; tutors: Angela Kyriacou Petrou, Maria Hadjisoteriou, Department of Architecture, University of Nicosia.

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FIGURES

Fig. 1 - Cognitive mapping documentation. Source: Student Sophia Kalogianni, Unit 6, Tutors Maria Hadjisoteriou, Angela K. Petrou, Department of Architecture, University of Nicosia.

Samer Wanan
University of Edinburgh
s1355649@ed.ac.uk

Child's play in the Palestinian landscape: On vulnerability & attachment

Key Words
Vulnerable body, Precarious condition, Transitional object, Tactility

As part of my current PhD studies in Architecture by Design at the University of Edinburgh, this research-by-design project offers a collection of design artifacts to be placed in the Palestinian child's world for exploration and play. Taking the form of a sequence of boxes and short stories, a series of graphical and material explorations are curated around five themes to draw attention to specific Palestinian conditions. As an example, and in relation to the conference theme of 'Vulnerable,' I will discuss one of the boxes, named the Relic Box, to think about the questions of vulnerability and attachment in more detail. I will focus on how the vulnerable bodies of children act within a vulnerable environment in light of the ongoing precarious condition of Palestinian displacement in Gaza. Now if we look carefully at available footages of Palestinian displacement, we will see scenes capturing Palestinians at all ages, including children, holding tightly to domestic objects—whatever could be carried and deemed valuable—cling to the last thread of attachment between them and their homes. But what does the possession of a mundane domestic object, or a toy, mean for a subject in a precarious situation? What is the capacity of a subject to relate to the object in such conditions? How does the object, with all its embodied intimacy and memories, become an embodiment of displacement, and a manifestation of the tremendous loss: home(land) and family relationships? And in turn what identities, meanings and experiences can these salvaged artifacts reveal? In the aforementioned condition of displacement, a sense of vulnerability and fragility is often present, creating not only a threat to subjects lacking security during times of war but also inducing anxiety in vulnerable bodies, as they feel a loss of control over the situation. As such, both physical and psychological vulnerabilities are emphasized. So, before addressing the above questions, let us have a look at the various forms of 'vulnerability' and the conditions to which it is linked.
Searching through the available literature materials reveals how scholars utilize the term to address different topics and experiences. There are those who use it to relate to the position

of a minor group within social structures and systems due to factors related to gender, age, ethnicity, religion, or disability that can influence vulnerability to discrimination, marginalization, and exclusion; or those who refer to a fragile body within a violent and oppressive environment where subjugated bodies are exposed to and controlled by a colonizing or hegemonic power, and hence, being susceptible to physical or/and emotional harm, injury and illness; or those who link vulnerability to the exposure of environmental hazards, such as natural disasters, pollution, and climate change impacts. But there are also those who link vulnerability by referring to a condition of crisis or failure, a precarious situation, with a lack of access to resources such as food, shelter or education.

It is worth noting here the specific meaning that Judith Butler gives to vulnerability trying to build for "a conception of ethical obligation that is grounded in precarity." She argues that: "the bounded and living appearance of the body is the condition of being exposed to the other, exposed to solicitation, seduction, passion, injury, exposed in ways that sustain us but also in ways that can destroy us. In this sense the exposure of the body points to its precariousness" [Butler 2012, p. 141]. Butler's meaning of vulnerability is tied to the precarity of the body, particularly when exposed to solicitation and ethical demands from the Other at a distance. This idea of relationality and proximity is what interests me here, and I will return to this intermediary space or point of contact, where a subject meets an object to which they are attached, down the line. Now as vulnerability can manifest in various forms, the concept will be specifically deployed here in the case of a displaced body, particularly children, being exposed to emotional and physical injury. In a sense, what I am focusing on is the limit of this condition where a displaced subject is attached to an object under a condition of vulnerability. The body is vulnerable not only to physical harm but also to the threat of separation from an object to which a subject is attached.

To approach this condition, let us have a look at the psychological experiences of anxiety, trauma, loss and insecurity in a precarious situation while examining the role of what the psychoanalyst Donald Winnicott calls a 'transitional object' in mediating the tension between the interior subjectivity and exterior precarious reality. The aim is to explore the agency of an object and its significance to the subject in such conditions, and thus to explore the capacity of the self to relate to the object. To achieve this, the child, as a vulnerable body, will be utilized as a vehicle to illustrate the role of a toy object within a vulnerable environment.

When displaced, one might expect the feeling of vulnerability and anxiety to leave no room for a subject but holding tight to something, regardless of how small it is, that provides a sense of protection and security in such difficult times. Once moved, a 'salvaged' domestic object, gripped in a hand, intensifies past memories and intimate moments. In his analysis of miniaturization in The Poetics of Space, Gaston Bachelard contends that the smaller the space, the more the owner can feel that they possess and control it. As he argued, "values become condensed and enriched in miniature" [Bachelard & Jolas 1994, p. 150]. As such, attachment to home is intensified and materialized in an object form that maintains a bond with that home while symbolizing identity, family and land. In other words, home is compressed in a diminutive version through the miniature artifacts.

So in times of uncertainty, anxiety becomes the dominant feeling that comes along vulnerable conditions. The anxiety about not knowing what the future holds for them—whether it entails the destruction of their homes, or the possibility of losing family members or even oneself. The feeling of being out of control in a situation intensifies the meaning of an object to which the subject is attached. One may even become immersed in small spaces or objects as a means to detach from reality. For children, Donald Winnicott asserted that they play not only for pleasure but also "to master anxiety, or ideas and impulses that lead to anxiety if they are not in control." He goes further arguing that "Playing is itself a therapy" [Winnicott 2016a, p. 168]. Therefore, attachment to an object possessed by a subject serves as a means to transcend the broader condition of vulnerability happening in the background and its violent reality. Likewise, engaging with an object through play acts as a mediator at the borderline between the subjective experience and a vulnerable condition, revealing hidden anxieties and emotions in the process.

On the other hand, and when we have attachment to an object, intensified with meaning, there arises the threat of losing it, to part with the object. We become vulnerable by being susceptible to the possibility of getting detached from the things most valuable to us, whether that is an object or a family member—often exercised by the hands of aggressors who threaten violence against things to which we are attached. In the case of a displaced subject being detached from a memory object of their past life, they become exposed to a further loss: the total cut-off from the last bond that connects them with who they are, their identity. And in so doing, it feels like something inside, part of the self, has been killed. However, a valid paradox arises in this condition: once we lose the most valuable things to us, we also become invulnerable, that is

we have nothing else to lose.
In psychoanalytical terms, a cathected object is that object to which an individual attaches emotional significance, either positive or negative affect. And hence, the object embodies memories and emotions within its material folds. Winnicott, however, differentiates between "object-relating" and "object-usage." In object-relating, he explains, the subject alters themselves in such a way that they become attached to the object holding a significant meaning to them. He continues: "Projection mechanisms and identifications have been operating, and the subject is depleted to the extent that something of the subject is found in the object, though enriched by feeling" [Winnicott 2016b, p. 357].
Equally, those domestic artifacts have the capacity to be *used*. Winnicott, again, explains how the use of an object is more sophisticated than relating to objects. He argues that "usage implies that the object is part of external reality." In this sense, a salvaged domestic artifact can also be interpreted as a 'transitional object' that is *used* to deal with a fear of separation from home and family when contact is lost or absent. On one hand, using a small object provides a sense of security and protection, while its meaning is intensified due to the broader condition of precarity. But on the other hand, there's a denial of separation and loss—manifested by the absence of home or a family member—that through the use of transitional object a subject detaches and transcends from external reality. Another possible scenario to this condition is that the subject is willing to destroy the transitional object as a means of detaching themselves from the intensities of cathexis and entanglements associated with the object at hand, like a child destroying their toy. And then, I cannot help but hear a subject's impotent rage, perhaps a rage over the absence of home. With the object's destruction, however, the absence of home is further exposed. If an object part with a subject, what is the potential of utilizing it as a design tool? What narratives and hidden stories can be revealed by acting as material witnesses, how do memories be reconstructed through domestic objects? To what extent do such relics tell us about the experiences and identities of their owners? What insights do we gain into the larger political and socio-economic conditions taking place in the background?
To conclude this paper, and in connection with Butler's notion of the precarious body, it is worth reflecting on my own experience as a Palestinian writing about the topic amidst the current precarious conditions: the experience of witnessing images of violence and displacement from a distance, while feeling a sense of being both 'here' and 'there' simultaneously. In a sense, such scenes evoke a profound condition of precarity and vulnerability in my subjectivity, that is a feeling of being constantly subject to threat, both psychologically and physically, simply by being identified as 'Palestinian'.

ACKNOWLEDGEMENTS
I am grateful to my supervisors Professor Mark Dorrian and Dr. Ana Bonet Miro for the fruitful discussions during my PhD journey at the University of Edinburgh. This paper would not have been possible without their invaluable input.
Samer Wanan is currently undertaking an Architecture by Design PhD at Edinburgh School of Architecture and Landscape Architecture, part of Edinburgh College of Art, the University of Edinburgh. He holds degrees in architecture from Birzeit University and Newcastle University.

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FIGURES

Fig. 1 - Samer Wanan, Relic Box, 2024, resin 3D prints and sand inside a tin box, 9x16x5cm, Matthew Gallery. Photographed by author. The box is held within the installation metal frame as part of an exhibition showcasing the collection of boxes designed by author.

Francesco Stefano Sammarco [1], **Anna Terracciano** [2]
[1,2] University of Naples "Federico II" - Department of Architecture
[1] francescostefano.sammarco@unina.it, [2] anna.terracciano2@unina.it

From Limit to Limine.
Piazza D'Armi in Nola: from marginal place to new gateway to the city

Key Words
Military heritage, Reuse processes, Contemporary public spaces, Urban storytelling

This research [1] focuses on the large spaces of the Piazza D'Armi, in Nola, in front of the Principe Amedeo Barracks, which have long defined a vulnerable and marginal place. These parts of the city are a refuge for the invisible, the scene of degradation and inequalities, with unplanned spaces that are almost completely inaccessible, both physically and perceptually, due to broken boundary walls and gates. These critical issues need to be detected and interpreted in a proactive manner in order to implement a recovery and re-appropriation project for the city. This process is rooted in the latent potential of the square, an incredible 7 hectares in size, the recovery of which has always been a topic of debate between successive administrations and associations in the area.
Recognition of the value of the disused military heritage [2] and, in particular, of the large open pertinential spaces that characterise it, are an important opportunity for urban and social regeneration, also with a view to producing new public spaces and new supply chains for territorial socio-economic development. In fact, in the last decades, many studies and researches have focused on the effects generated on the territory precisely by the processes of decommissioning of military heritage, as well as on the obvious limits to the planning of public policies aimed at the reuse of these areas [among others, we can elaborate with: Aa.Vv. 2016; Damiani & Fiorino 2017; Gastaldi & Camerin 2019 and 2021].
The Piazza D'Armi and the former Principe Amedeo Barracks therefore fit perfectly into this line of research and urban policies, operating very much in the peripheral areas of cities, given the prevailing marginal location of these artefacts with respect to historical centres. In particular, the construction of the Principe Amedeo Barracks and the Piazza d'Armi (Square of Weapons) was commissioned by Charles III of Bourbon as a military outpost, during the process of expansion beyond the city walls of Nola, carried out from the 18th century onwards, with significant civil, religious and military buildings, and remained so until the Second World War,

during which it was the scene of the notorious massacre of 11 September 1943, when a series of massacres carried out in Italy by the Nazis began. In the years following the end of the war, after a brief interlude in which a wing of the barracks building was converted to house schools, now permanently closed, the slow process of decommissioning and decline of the area began.
The work that is the subject of this contribution, characterised by an integrated and multi-scalar approach, and which included an important phase of knowledge of the places and uses of these spaces on the part of the community, is aimed at promoting a regeneration project for the Piazza D'Armi, while respecting its value and historical image, in which the place at the 'limit' of Nola's historical centre is given a place, the idea of a large multifunctional square, strategically placed with respect to the main access routes to the city, and for which it can play the urban role of a new 'gateway' to the city itself. In the potential node of the Piazza D'Armi, in fact, a multiplicity of urban planning strategies and forecasts converge, in which an intermodal and access node to the city is also prefigured (cf. the Territorial Coordination Plan PTC [3] and the Preliminary Municipal Urban Plan PUC [4]).
The analytical-planning methodology was articulated through the construction of a (a) cognitive framework of the area structured with the following phases (1) the explorations of the places through several site visits and photographic campaigns, in order to deepen not only the physical-spatial knowledge of the area but also its consolidated uses and practices; (2) the recognition of relevant issues such as the role of these areas and of the artefacts in the historical-evolutionary dynamics of the city's construction, in particular in the relations of the Piazza D'Armi with its neighbouring context; the massive presence of walls/enclosures that generate a condition of closure, both physical and perceptual, with the city, and on which important reflections were focused in the design phase (3) the analysis of current plans, programmes and projects in order to assess the intentions and priorities of public action, in order to understand how an attempt has been made, over time, to intervene in these areas and what is currently being done or is intended to be done; (4) the restitution of these data, both quantitative and qualitative, through analytical-interpretative maps capable of narrating this place and its vulnerabilities through multiple points of view.
These issues were decisive for the definition of specific objectives, programmes and project actions within a (b) structured and hierarchical strategic framework. In fact, taking into account the current conditions of the Barracks and the Piazza D'Armi, as well as the spaces in the vicinity, 'Strategic Objectives' have been envisaged in which the square assumes a central role with respect to: the network of mobility and accessibility, also in terms of intermodality; the network of open spaces and the built heritage, in particular that of the historic centre; the environmental and peri-urban agricultural landscape plots; the equipment present in the context and the possible relations with other territorial centralities. Each of these strategies translates into a map capable of narrating an incremental planning dimension, which also aims to consolidate the city's geographical centrality and its key role in the Nola area as a territorial hinge. In this strategic perspective, in the end, an attempt is made to return a (c) planning framework in which the experimentation and punctual in-depth studies are hinged, understood as possible transformative scenarios, including a master plan of rules, through which to achieve the objectives set, such as the rethinking of the concept of 'beyond the wall', which emerged in the cognitive-interpretative phase.
The three design explorations, different but complementary, are: (1) "The urban park of the barracks", in which we rethink the edges of the square, trying to find a solution to the height difference that currently divides the area from the historical centre, rethinking the design of this large space and its relations with the context starting from the reinterpretation of the rectangular module of the Barracks itself; (2) "The Linear Park of the Circumvesuviana", in which the "retaining wall" separating the Piazza from the Circumvesuviana railway is rethought, envisaging the idea of an equipped border along which a cycle-pedestrian path can also run, and which intercepts different types of public space; (3) "The agricultural park between Nola and Cimitile", in which the relationship between the peri-urban boundary to the north, towards the municipality of Cimitile, is reconsidered, imagining a park with an agricultural vocation in which to introduce linear equipped elements, even at different heights, hooking up as the highest head of the terraces of the unfinished sports field, with the intention of constituting a perceptive connection from the Piazza towards the context.
With these actions, an attempt is thus made to build a regeneration project for the Piazza D'Armi starting from its vulnerabilities, presenting it for the role of gateway to Nola's historical centre and to other city and territorial resources. These actions are the outcome of reflections on processes to produce a new awareness of the values and potential of places and to promote practices of re-appropriation and recovery by communities. The research not only aims to enhance the military heritage and its neighbourhood spaces, but also tries to activate a series of regeneration processes of the entire urban context, towards new forms of habitability and

inclusion.

ENDNOTES

[1] The paper being proposed was developed as part of Assunta Scibelli's Graduate Thesis titled: "ex Limite a Limine. Piazza D'Armi: da luogo di confine a nuova porta per la città e per una rete territoriale di centralità diffuse", University of Naples Federico II, Department of Architecture, Bachelor of Architecture (ARC5UE) 2022, Supervisor: Prof. Arch. Anna Terracciano, Tutor: PhD Student Francesco Stefano Sammarco
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FIGURES

Fig. 1 - A drone photograph of the Piazza D'Armi and Barracks in Nola. Photo by Francesco Stefano Sammarco, 2022.

Camilla Casonato[1], Erica Cantaluppi[2]
[1,2] Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
[1] camilla.casonato@polimi.it

Heritage, community, and education.
The case of Museu da Citade in Sao Paulo

Key Words
São Paulo Community Museum, Landscape and cultural heritage education, Embodied experience, Interpretation, Movement

Introduction
The relationship between space, Cultural Heritage, and community is the central topic of several experiences of musealization of the territory, which examines the city as a dynamic entity with a past but also in continuous transformation, composed of objects and people, buildings and bodies, space and perception. The experience of space, the several ways of living it, traversing it, remembering it, describing it, are key to the process of recognition and construction of Cultural Heritage inscribed in the urban landscape.A significant international case, notable for its ability to gather and promote community self-representations of the urban reality of a large metropolis, is the City Museum of São Paulo (Museu da Cidade de São Paulo, MCSP), Brazil [https://www.museudacidade.prefeitura.sp.gov.br/ accessed 20 January 2004]. This paper outlines the themes of an investigation on this case. The activities carried out by the museum will be analysed considering the relationship between community, urban space, and the body. The experience of space will be investigated and interpreted through survey practices, educational actions, and participatory dynamics.Going beyond the idea of musealizing the territory as a nostalgic act of preservation, this museum is aimed to be a resource in urban development, an element of confrontation in the construction of metropolitan areas. While still inheriting its tangible and intangible heritage from the past, the MCSP wants to reflect on the city in the present, to constitute a permanent observatory, promoting a way to recognize collective identities. In the complexity of contemporary metropolis, identity values are not easy to be collectively recognized; therefore, it is increasingly important to stimulate a sense of belonging, capable of connecting different generations and coexisting cultures of the territory. Citizens are therefore involved in the museum experience also by integrating educational, often interdisciplinary, activities that take place in the urban environment.

The museu da cidade de Sao Paulo

The MCSP, part of the Department of Municipal Museums since 2018, features multiple locations in several houses built between the 17th and 20th centuries, of historical and architectural interest, distributed through the city. This tangible heritage represents at the same time a physical structure and a platform for the museum to develop its programs and actions.

The development of the museum was not generated by the existence of a specific asset, but it is related to the will of taking custody of general properties owned by the municipality. Although the museum was officially created in 1993, the first attempts to establish it date back to the 30s, and the original core of the collection was formed only by the end of the 60s; it includes commemorative images for the centenary of São Paulo from 1955, movable goods exhibited in the acquired houses, and the buildings [Aruda 2014].

While we can recognize a clear predominance of properties from the colonial period (especially the *Bandeirante* houses), educational projects implemented from the 80s in the museum program demonstrate the institution inclination to stimulate the participation of communities in the construction of a broad cultural collection, which also includes the intangible memory of places. Aiming to be the first museum in South America with a contemporary approach to the study of a city (dos Santos 2004) – featuring São Paulo as a permanent object of investigation – in 2003 the MCSP launched a new program. The project included interdisciplinary interactions with existing institutions, the enhancing and organization of the municipality collection, transversal educational strategies for schools; it promoted the continue training of educators and the integration of citizens as agents of the city's contemporary history. This approach intended to become a reference by incorporating ambiguities and contradictions of São Paulo's Heritage instead of producing a single-source interpretation [Mantovani 2014]. Therefore, the Museum created thirteen operating units named URBE (Unidade de Referencia em Bens e Experiencias), to connect urban landscapes with intangible traces of their past, establishing an inclusive and interdisciplinary concept of Cultural Heritage.

A journey through the city

For the celebration of the 450th anniversary of the city's foundation, in 2004, the municipality, in collaboration with the Universidade de São Paulo (USP), organized a series of surveys of the urban territory promoted by the MCSP [Cantor Magnani 2004, de Varine 2005, Villanueva Rodriguez 2006]. A heterogeneous team – environmental scientists, architects, urban planners, anthropologists, sociologists, historians – traversed the city mirroring a prior experience sponsored by the Centro de Cultura São Paulo in 1985, when twelve experts followed the routes of the city's first explorers for a week. They sought to understand how São Paulo developed a century later, experimenting with a quick and direct museological approach: the collected materials would constitute a starting core for the museum. The goal was to immerse the participants in the feelings produced by diverse voices and filtered by various disciplines.

Twenty years later, the MCSP decided to investigate on the concrete responses of the population to living conditions and on the strategies implemented to adapt to the city's changes. The team examined local initiatives, collective solutions to cope with new scenarios, forms of association and self-protection through a permanent participation structure using a dual approach of online communication and extensive on-site collection to reach the population. Testimonies were recorded and transcribed from mobile stations moving between neighbourhoods, then shared with the public in designated consultation areas.

As stated by Cantor Magnani, coordinator of the Núcleo de Antropologia Urbana at USP, while representations of the megalopolis often emphasize chaos and fragmentation, this "journey" was driven by the hope of identifying enduring aspects, collective solutions, systems of reciprocity, and the network of strategies without which social life would be impossible in a city of such size and complexity [Cantor Magnani 2004].

Territorial education

In 2020 the MCSP launched *Memoricidade – Revista do Museu da Cidade de São Paulo*, a journal aimed at disseminating current actions of the museum. The magazine reflects the dialogue between the inhabitants of the city, with its own diversity, and describes the process of Cultural Heritage recognition carried out by the institution. The relationship between communities and urban environments is particularly relevant in the second issue, that presents a discussion on the Covid-19 pandemic and its impacts. Emerging topics are the social relevance of cultural institutions in a transformed setting, the preservation of memories belonging to vulnerable communities and places, the endurance of participative educational activities to reactivate fragile territories.

Recent developments of this approach have been collected by specific working groups activated

in the Núcleo de Formação e Desenvolvimento de Públicos Museu da Cidade de São Paulo during 2021 and 2022, called *Vamos conversar*. The MCSP activated a debate on the experience and interpretation of urban spaces by cultural communities – defined by gender, religion, income, ethnicity, education; participatory processes and inclusivity are often mentioned as crucial in exploring the identity of the city and understanding its potential as extensive educational environment.
The very typology in which the institution fits, as *museu do território*, explicates its aim to generate knowledge about the city of São Paulo encouraging awareness among its inhabitants and visitors. Regarding this guiding pillar of the Museum, one of the publications from this activity, titled *Territórios educacionais: pertencimento e inclusão nos espaços urbanos*, recognizes the role of schools as promoters for projects that operate in its territory, forming an educational network for the conscious development of citizens. The document illustrates social urbanism activities implemented by the municipality with experts and tools from the MCSP, giving examples of qualification processes through the engagement of local communities within the schools surrounding. An interesting output can be found in the role that these various spaces played: they connect, in a network, the entire surroundings of an educational asset involving new voices, encouraging responsibility among its occupants, investigating representations already belonging to the territory and creating new ones, thus making places of coexistence much more democratic and diverse.

ACKNOWLEDGEMENT

This paper is the result of a joint study and is fully shared by the two authors; the manuscript's authorship is as follows: "Introduction" and "A journey through the city" are by Camilla Casonato; "The Museu da Cidade de São Paulo" and "Territorial education" are by Erica Cantaluppi.

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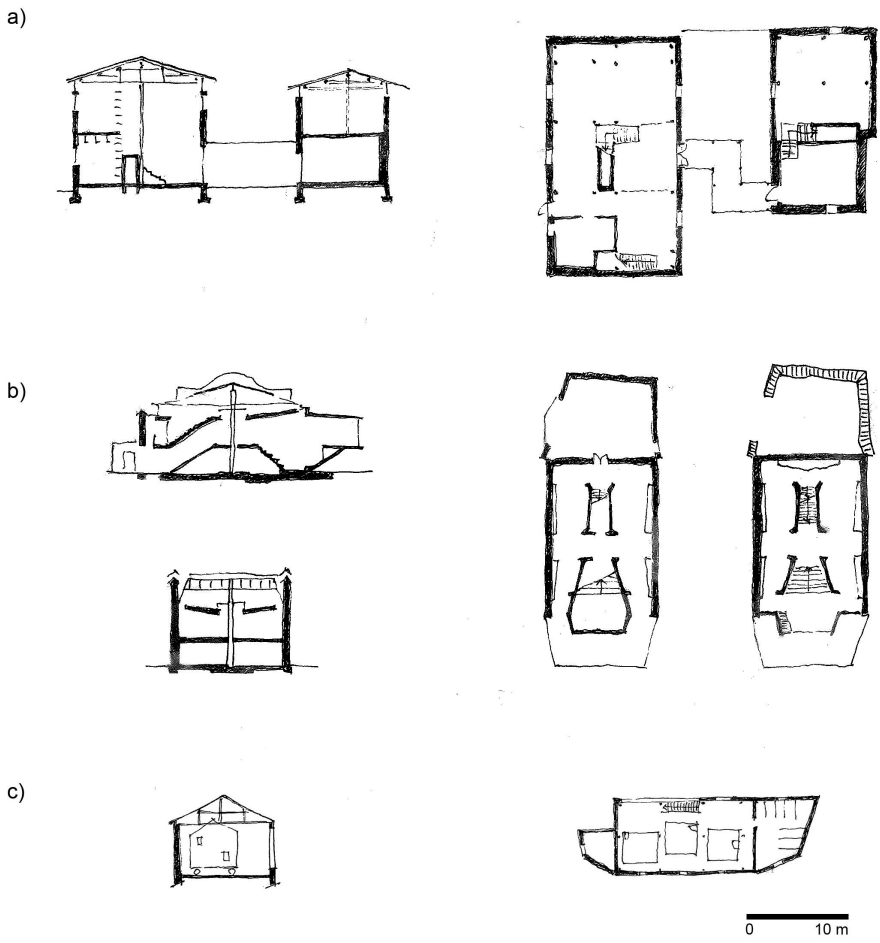
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Gerardo Semprebon
Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
gerardo.semprebon@polimi.it

Architectural design to regenerate fragile buildings in rural China

Key Words
Architecture, Design, Rural, Revitalization, China

A large part of traditional buildings in rural China are exposed to fragile conditions. These entail material aspects, such as perishable construction materials and increasingly abandoned building techniques, as well as immaterial ones, like the diffused desire to emancipate from a status of backwardness or economic unsuitability to repair instead of rebuilding. Vulnerability addresses both these buildings and the people inhabiting them since all the possible evolution scenarios bring ulterior uneasiness to already difficult situations. In the rediscovery of identitarian roots, rural habitats -and, by extension, traditional houses- increasingly play a pivotal role in awakening cultural values that, if not repositioned in the contemporary milieu, risk vanishing together with the physical crumbling of buildings. The "forgotten realm" mentioned by Koolhaas [Koolhaas 2020, p. 2] represents today one of the most fertile sources of identity in globalized citizenship, with rationalized planning and design flattening urban reals [Fabris and Semprebon 2019] and the political campaign to bridge the gap between the rural and the urban [Ahlers 2014, China Development Research Foundation 2017], which reached a momentum in the last years (Chen et al. 2023), calls for a 360 degrees commitment of academic, civic, and professional society. What ten years ago was a paradoxical condition for architects [Lin 2013], who had to reinvent themselves if they wanted to participate in a transformation process in a context where their professional services were not required, today has radically changed. The potential role of design at different scales has been increasingly acknowledged by the leadership, creating space for a new social and creative commitment (Semprebon 2023), witnessed by many recent initiatives at academic (Lee 2015, Semprebon 2022a, Berta et al. 2023), cultural [Li et al. 2018], and professional level [Bolchover and Lin 2014; VV.AA 2020; Wei 2021; Zhang 2018].
This paper selects and discusses three architectural projects executed on existing fragile buildings in rural China, displaying three different tectonic strategies of intervention. These

projects alter and graft new architectural bodies that manage to redeem conditions of poverty and idleness, leveraging the intrinsic qualities of architecture, the materials employed, and the connections between old and new. The tree buildings are today regenerated and reappropriated by the local communities and open to the public, not only tourists visiting the countryside in search of an escape from urban alienation but also citizens who have permanently moved to villages. The three projects are the Libraries Avant-Garde, Ruralation Library by AZL Architects, Tangle County (Zhejiang) built in 2015, the Xiadi Paddy Field Bookstore of Librairie Avant-Garde by Hua Li, TAO – Trace Architecture Office, Pingnan County (Fujian) built in 2019, and the Papa's Hostel by 3andwich Design / He Wei Studio, Songyang County (Zhejiang) built in 2015.

The Librairie Avant-Garde is a famous bookstore in China that has opened several branches in rural villages. In this case, two dilapidated buildings that had been abandoned in Daijiashan Village offered the opportunity to invent a new library and shop, keeping the atmosphere of a traditional environment. Beyond consolidating the rammed earth walls, the main works regarded the uplifting of sixty centimeters of the roof, which ensured natural illumination to penetrate from the top in the inner part of the buildings and the insertion of technological volumes in the interior. These new elements are placed in adherence to existing walls, contributing to their static function, or in coherence with the structural grid so that they preserve the proportions of the interiors and declare their contemporaneity through the material treatment of surfaces.

The Xiadi Paddy Field Bookstore is another shop in the same chain. In this case, the ruin was isolated from the village, reachable only by a pedestrian path immersed in the crops. Only three rammed earth walls remained from the previous structure, creating a double-height semi-closed space open on one side. Here, the design strategy was to insert a concrete structure completely alienated from the rammed earth walls, with the task of both consolidating precarious structures and reorganizing the spatial program. A main space for performances is obtained from a stepped hall around which ancillary areas for storing books and reading are arranged. The vertical movement is emphasized by the new system of stairs, the sequence of dilatation and compression, and the gaps between the concrete structure and mud walls, which allow sunlight to drop from the sky. The new roof works like an umbrella, providing shelter and collecting rainwater.

The Papa's Hostel is a project of adaptive reuse, which consists of structural consolidation and reparation of damaged elements, plus the intelligent insertion of lightweight movable boxes that embody the new hostel rooms. Three of these elements placed in the large room on the second floor reorganize the space without really altering it but just adding semitransparent elements that give great flexibility in space arrangement and the required privacy for the hostel. Great attention is paid to the lightening system to emphasize the reflecting effects on polycarbonate and the absorbing capacity of rammed earth walls. The ground floor remains a large hall dedicated to welcoming guests and hosting shared activities.

In synthesis, we can say that the three approaches play on the relationship between contemporary and traditional by operating respectively in adherence to existing structures, reinventing space, inserting a structure detached from the existing one, and filling new elements inside a conserved and consolidated structure. These three projects unveil three interesting tectonic strategies that reject ideological positions on the ancient structure, such as integral conservation, therapeutic obstinacy, or acritical demolition, to field pragmatic attitudes oriented to exploit the old as a spatial and cultural resource instead. This posture is promising in the author's opinion since it is free of modifying what is inherited from history to write the story of contemporaneity, with its values, necessities, and sometimes losses. Rural poverty is ransomed without depriving its materiality and architectural body, which, in turn, nurtures a sense of belonging and cultural distinctiveness.

The results presented here certainly do not provide an exhaustive overview of the rich panorama of contemporary architectural experiences in rural China. Still, they suggest a stimulating point of entry in the debate on design in, from, or for fragile buildings. The functional programs of the new architectures leverage the tourist industry to trigger broader revitalization processes involving rural citizens directly or indirectly. The feasibility of the tree projects materialized from the increasing attention political campaigns and entrepreneurial actors are putting on the countryside revitalization, a program that is challenging conventional practices of demolition and reconstruction [Smith 2021; Semprebon 2022b] to find more sustainable and equitable routes to social inclusion and cultural valorization. As the projects introduced above suggest, the initial condition of vulnerability can be turned into original design experiences pragmatically grounded in specific sites but simultaneously able to contribute originally to architectural research in the broader context.

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FIGURES

Fig. 1 - Gerardo Semprebon. Three tectonic approaches to regenerate fragile buildings in rural China. Redraw from a) by reinventing space by inserting a structure detached from the existing one, the Librairie Avant-Garde, Ruralation Library by AZL Architects, Tonglu County (Zhejiang) built in 2015; b) by operating in adherence to existing structures, the Xiadi Paddy Field.

Maria Fierro
Università degli studi di Napoli Federico II, DiARC - Dipartimento di Architettura
m.92fierro@gmail.com, maria.fierro@unina.it

The "invisible" spaces of marginality: The case of Roma communities

Key Words
Marginality, Informality, Encampment, Invisibility, Communities, Open city

Contemporary transformations in the urban landscape are closely linked to profound shifts in intangible global conditions such as ethnic conflicts, extreme poverty, and socioeconomic inequalities etc. These seemingly distant factors intricately weave into the complex urban assemblage, configuring cities that are accumulation points of globalised living that "must be observed with renewed interpretative tools capable of defining the logics that generate its territoriality" [Lussault 2019, p.11]. This goes beyond the aspirations of control and stability held by certain urban design traditions. While the great metropolitan stage configures itself on a planetary scale, it continues to expose social injustices in spatial asymmetries, consistently rewriting the narrative of the "city of the rich and the city of the poor" [Secchi 2013]. These disparities manifest in various forms within the city, highlighting rights and norms evident in the emergence of "new urban-type settlements [...] representing new types of cities: slums, refugee camps, banlieux [...] non-cities or more-cities, as they exhibit characteristic features of urban agglomerations" [Lussault 2019, p. 30].
In a somewhat imperceptible manner, numerous "residual segments, grey zones [...] where ethnic and religious minorities, new poverties, immigrants, the marginalized, and the excluded sometimes find residence" [Settis 2017, p.70] configure themselves. The city's margins, whether visible or perceived, are progressively evolving into sites of socio-political exclusion and new forms of banishment. Acknowledging the existence of these other spaces within the contemporary city, this contribution stems from a doctoral research investigation, focusing on a specific aspect of marginality, urban exclusion, and the resulting spatial translations. The study delves into Roma communities inhabiting the margins of many European cities, posing renewed questions about the "right to the city" [Lefebvre, 1968]. This observation seeks to unveil urban and human invisibilities that develop in opaque territories, giving rise to unpredictable spatialities. The act of 'making the invisible visible' involves concentrating on the overlooked

aspects of the city, the 'spaces of exception,' and the informal, unmapped, and unrepresented areas. Viewing marginality as a condition where a subject, a group, or a territory teeters on the edge of the dominant system, the Roma community epitomizes this definition in both immaterial and non-disciplinary aspects as well as spatial issues. The investigation into the spaces inhabited, and at times constructed, by Roma communities allows for an exploration of a borderline case of marginality and social and urban vulnerability. From Bucharest to Naples, Roma communities find themselves besieged, facing systematic violations of human rights, starting with the denial of the right to live and the right to the city. Despite being the largest ethnolinguistic minority in Europe for generations, the Roma have been perennially viewed as 'others,' foreigners, and different. Whether migrants (in Western Europe) or the expelled (in Balkan Europe), they have shaped informal parts of cities or been relegated to 'spaces of exception.' Even after centuries in Europe, the Roma still do not fully enjoy the rights and services provided to the majority of citizens by states and the European Community. They often fall victim to discrimination, marginalization, and social and spatial segregation, rather than benefiting from EU-promoted cultural pluralism. In Europe and some Balkan cities, Roma communities face discrimination and expulsion, reflecting structural issues in the reception system and occasional perceptions of them as undesirable, leading to exclusion from the urban system. Cultural differences, upheld for centuries, contribute to repressive attitudes and fuel stereotypes, resulting in the construction of ghettos in Bucharest, anti-Roma walls in Slovakia, expulsions from historical centers in Romania, and Roma camps in Italy. The text goes on to describe the broader spatial issue of systematic Roma marginality and vulnerability, distinguishing between two spatial configurations: equipped camps and informal settlements. Both configurations translate into shantytowns akin to the global phenomenon of slums, representing fragments of the universe of camps populating our planet. The first is political, and the second is a self-organizing device. Both exemplify the denial of the right to the city and urban expulsions, intertwining social and spatial elements. The 'Roma camp,' structurally, acts as a political and spatial device producing difference and suffering. It ratifies strong social marginality by being conceived, realized, and managed for subjects considered out of place. Spatial and housing segregation, along with social and symbolic elements, synthesizes a state of exception that becomes permanent. Informal settlements, built at the outskirts of major cities through continuous negotiations between Roma and non-Roma people, are connected by an immaterial bond known as gage. The political debate on urban slums gained traction with the Roma Emergency in 2008. It's crucial to note that camp and settlement originate from two different logics. The settlement strives to remain invisible to ensure its enduring existence, while the camp is rendered invisible through urban expulsion. A paradoxical mechanism is observed, where the camp transforms into a settlement, and the settlement evolves into a city, offering a reinterpretation of the present condition. Observing the global phenomenon of slums, it becomes evident that they have historically served as shelters for uprooted populations, whether internal or international migrants. They do not represent the 'natural' living place of a social group, a cultural practice of an ethnic group, a space reserved for migrants, or a transit area for nomads. Primarily, they respond to the need for shelter when one is excluded. The text concludes by proposing a reflection on the differences between informal settlements and camps to discern urban vulnerabilities. The two develop distinct urban spaces and logics, with the former within urban boundaries and the latter beyond (if conceivable).

In the discussion of the Italian reality, the text distinguishes between two spatial configurations: the equipped camp and the informal settlement. Both translate into shantytowns resembling the global phenomenon of slums, representing fragments of the universe of camps that populate our planet. The first is political, and the second is a self-organizing device. Both exemplify the denial of the right to the city and urban expulsions, intertwining social and spatial elements. "The 'Roma camp' in its structural dimension is configured as a political and spatial device through which difference and suffering are produced. Conceived, realized and managed for subjects considered out of place ratifies a strong social marginality. The forms of spatial and housing segregation, but also social and symbolic, that these mono-ethnic settlements have synthesized over the years represent the materialization of a state of exception that has become permanent" [21 Luglio, 2021]. The informal settlements are built at the edge of the big cities based on the immaterial links between families and communities with a process of continuous negotiation between Roma and non-Roma people called gage. The political debate about the urban slum goes on with the Roma Emergency in 2008. Camp and settlement - originate with two totally different logics, the settlement makes itself invisible to ensure its enduring existence, while the camp is made invisible by urban expulsion. It's interesting to say that what we can observe is the paradoxical mechanism of the camp that becomes a settlement and the settlement becomes a city, giving a reinterpretation of the present condition, "Slums have always been shelters for an uprooted population - internal or international migrants - but

they are neither the 'natural' living place of a social group, nor a cultural practice of an ethnic group, nor a space reserved for migrants, nor a transit area for nomads. They consist above all of a form of habitat that responds to the need to have a roof to survive when one is excluded" [Aguilera, Vitale 2016]. Between informal shantytowns and authorized camps, a possible method of investigation is defined that sees the project as a knowledge tool that unveils latent conditions through complex descriptions and reads in the informal a learning possibility to reduce the disconnect between project and reality and to build new project demands oriented in a social sense. A methodological sequence "observation-interpretation-complex description-project" is proposed in order to know the existing - even the most invisible - and to build conditions of porosity, inclusion and openness of the city [Sennett 2018] recognizing an active role to the project, as a tool of knowledge and as a process, in the construction of possibilities.

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Diogo Faria
Porto University, FAUP - Faculdade de Arquitectura da Universidade do Porto
diogoepfaria@gmail.com

Queer spaces of the cityscape of Funchal

Key Words
Urbanity, Gender, Sexuality

Introduction
On the process of analyzing the contemporary cityscape of Funchal, it is considered to be predominantly shaped by conventional planning aimed at a generic user, much like in most cities. Within this framework, queer spaces in the public sphere of the urbanity are notably scarce, yet their existence is crucial and inseparable from the presence of dissident bodies. This essay aims to delve into the characteristics of these spaces, seeking to understand what makes them effective as sites of resistance to hegemonic norms.
Exploring the nuances of queer spaces not only allows for a deeper understanding of their significance but also highlights their function as sites of resistance. The scarcity of these spaces can be interpreted as a reflection of the predominance of discriminatory social norms, underscoring the need for the recognition and promotion of queer-friendly environments. The existence of such places, although limited, is essential in providing a safe and authentic refuge for a vulnerable sexual minority, thus challenging the pre-established social control.
Moreover, it is crucial to study these places not only from a theoretical perspective but also with the practical intent of preserving and even potentially expanding their presence. By understanding the characteristics that define them as spaces of resistance to heteronormative hegemony, we can contribute to the promotion of a more pluralistic society. This essay seeks, therefore, not only to highlight the scarcity of queer spaces in Funchal but also to provide insights that may inform the conservation of these places and, potentially, lead to their proliferation, acknowledging the crucial role they play in building a truly heterogeneous and horizontal city.

Interpretation of the urbanity of Funchal
Located in the North Atlantic, the volcanic formation of the Madeira Islands lies approximately

700 km west of the African coast and 850 km from the European mainland. The archipelago of Madeira consists of four groups of islands, with the Madeira Island being the largest and most inhabited. Administratively, it is an Autonomous Region of the Portuguese Republic with its capital in Funchal.
To fully understand the city of Funchal, it is necessary to adopt various perspectives, including one that sees it as an urbanization nourished by an island rich in forest and extensive maritime coast. Funchal's peculiar geography, resembling an amphitheater, shields it from northern winds through the robust central mountain range of the island, while its south orientation provides ample sunlight and a climate conducive to agriculture and human settlement. The geological amphitheater where Funchal lies is characterized by the steep slope reaching 1818 meters in altitude, deep valleys of streams, peaks, roads carved into the landscape, and the built mass, concentrated in the old city and scattered beyond.
As an urban center, Funchal was elevated to city status in 1508, and until the 20th century, its center was clearly configured in the lower zone, delimited by a wall erected due to invasions by French corsairs in 1566. The wall system, composed of volcanic stone, was accompanied by defense forts: Forte de S. Tiago; Forte de S. Lourenço (now a palace); and Fortaleza do Pico. From the beginning of the 20th century, with the demolition of sections of the wall and urban expansion, its center ceased to be defined by this defense ring, and the city grew, eastward, westward, and northward up to about 500 meters in altitude.

The pressing issues of the contemporary urban space in Funchal, such as downtown abandonment, real estate speculation, lack of public space, and the scarcity of "green" spaces in the urban fabric, deserve special attention. The city, predominantly planned for cars from the mid-20th century, does not respond to contemporary urgencies. Daily life, shaped by the widespread use of cars, seems to have resulted in a disconnection of the body from the place, reducing everyday life to a succession of interiors, with little sensory involvement with the environment and scarce opportunities for social interaction.
Indeed, the city of Funchal faces complex challenges, from managing public space to the need to create inclusive spaces and promote social diversity. The study proposes a critical approach, highlighting the importance of revitalizing the city to meet the needs of the local community, providing public spaces that foster social interaction and respect the human diversity that characterizes Funchal.

Framework of the Queer Space Concept
The city adopts attitudes to organize and control the desire of the body, focusing on the creation of easily monitored "docile spaces" [Cortés 2006, p.15] and on bodies that are absent or denied in order to suppress pleasures and desires in public spaces. In highlighting the complex relationship between buildings, bodies and structures, there is the added understanding that urbanity needs to reinvent eroticism in its public space. This implies creating places that transcend the limitations imposed by the contemporary city and the control of desire, promoting the presence of voluptuousness in acts that defy social norms, a fundamental premise of queer space.

> "In its most romantic form, queer space wants to dissolve the structures and restrictions of society and obliterate the space between the self and the other, engaging in sex as part of a voluptuous extension of the body in an oceanic world." [Betsky 1997, p.21]

The theoretical framework that guides this study of queer spaces is rooted in the understanding of the city as a space of domination. From this perspective, queer spaces emerge as sites of resistance, where non-normative identities and practices can flourish, challenging the hegemony of the urban landscape. As Betsky reiterates, ultimately, queer space offers a place of desire and sensuality of bodies opposite to the majority of the cityscape.
Queer theory offers a critical perspective on the social construction of sexuality and gender, emphasizing the fluidity and multiplicity of identities and desires. Queer spaces are not defined by a fixed location or physical structure but rather by their capacity to subvert dominant norms and create alternative forms of social interaction and identity formation. These spaces can take many forms, from bars and clubs to community centers and public parks, but they share a common ethos of sensuality and inclusivity.

Voluptuousness in Funchal
Public beaches like Praia Formosa serve as important meeting points and sites of sensual expression in Funchal's urban landscape. The accessible entry into the sea and the partially nude attire of beachgoers contribute to the erotic ambiance, making these spaces central

to queer and sensual expression. Despite economic pressures for privatization, these public beaches remain as resistant spaces, fostering inclusivity and community bonding.
The volcanic cones, particularly Pico da Cruz, offer secluded spaces for intimate encounters and sexual exploration away from the gaze of societal norms. Their elevated position provides both privacy and oceanic views, making them ideal sites for queer interactions. These marginalized locations, previously used for military defense, symbolize resistance and freedom for the queer community.
Watchtowers (*torres avista-navios*) integrated into the former merchant homes and pleasure gazebos (*casinhas de prazer*) in the gardens of suburban estates, constructed from the end of the XVII century, represent unique architectural features of Funchal's history. These structures, designed for sea observation and enjoyment, provide intimate spaces for private encounters and voyeuristic contemplation. Due to their discreet location, they potentially served as spaces for queer individuals seeking refuge from societal scrutiny.
The analysis extends to specific locations within Funchal, such as its beaches, volcanic cones, and architectural landmarks like the watchtower and pleasure gazebos. These spaces, despite their apparent differences, share fundamental characteristics that define them as queer sites. They provide anonymity and intimacy, allowing dissident bodies to explore and express their sexuality away from oppressive gazes.

Final considerations

What essentially characterizes the named queer spaces is their ability not only to tolerate, but also to celebrate and promote the sensuality and sexuality of dissident bodies, regardless of gender, sexual orientation or social context. In an urban context where accessibility to open public spaces is often limited by the very structures of the city, the demand for queer spaces highlights the importance of preserving them and finding new ways to provide inclusive and accessible environments. As Funchal continues to evolve, recognizing and celebrating its queer spaces can contribute to building a more diverse and accepting cityscape.
Both the public beaches and the peaks provide a wide space away from streets and buildings, allowing dissident bodies to be occulted and anonymous and, as such, to escape the gaze of the hegemony that judges and controls. The lookout towers and pleasure gazebos, on the other hand, embody anonymity through the four walls that form an intimate space that allows its user to see without being seen.
In the capital of Madeira Islands, the sea emerges as a unifying element present in all three nominated examples. Funchal's insular status gives the sea a paradoxical role, being both the diffculty of reaching other territories by land and the possibility of imagining what exists beyond the horizon. The maritime horizon acts as a mental escape from the social restrictions imposed on queer bodies, becoming a common theme in the spaces analyzed. The relationship with the sea is especially queer in the case of beaches, where physical contact with the water becomes synonymous with partial nudity, thus reinforcing the sensual nature of these places as spaces of voluptuousness.

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FIGURES

Fig. 1 - Reverend J. N, Funchal Bay, 1880, Royal Collection Trust. The image shows Praia do Toco, bellow, in the foreground and the volcanic cones in the background, with Pico da Cruz in the center.

4 / VULNERABLE ENDNOTES

Arianna Scaioli
Politecnico di Milano, Department of Architecture and Urban Studies

By tracing a reflection starting from the preparatory text, and building an open platform for discussion, this ex-post text engages with the several contributions declining the concept of vulnerability. As mentioned in the introductory text, within the contemporary discourse, vulnerability emerges as a crucial concept, especially within the context of interconnected crises that reveal various forms of stratified vulnerabilities. To disentangle the complexity of the current crises, design disciplines and practices have re-centred the attention towards living bodies as a medium to refocus our disciplines. The EURAU Milan 2024 conference delves into this theme, organizing it into four panels: Habitat, Gender, Borders, and Care. This structured approach investigates the intricate relationships between vulnerable bodies and the spaces they inhabit, challenging and deconstructing preconceived notions of 'normality' and universal design. Addressing various forms of vulnerability related to gender, ethnicity, class, religion, age, impairments and difficulties of bodies places the design exploration at the forefront of care, inclusion, safety and accessibility. Therefore, we have encouraged a cross-disciplinary reflection on how vulnerable bodies can generate a sense of agency and purpose in making their rights, knowledge and identities visible in space.

Within the panel, Habitat, the papers have focused on the vulnerabilities inherent in urban and rural environments and the communities within them. It emphasizes participatory design processes and the integration of local knowledge to create resilient spaces. The various research in this section highlight the importance of community involvement in urban planning and architectural design. They explore the regeneration of fragile buildings, improving informal settlements, and creating inclusive urban spaces. These efforts aim to enhance resilience by incorporating traditional building techniques and fostering social relationships, addressing material and immaterial challenges.

The Care panel delves into the intersection of care practices and architectural design, highlighting the creation of environments that promote well-being and inclusivity. This section emphasizes the importance of designing spaces that cater to the needs of vulnerable individuals, such as patients, caregivers, and disabled persons. The studies discuss the role of architecture in promoting well-being, the challenges of balancing work and care responsibilities, and the importance of sensory and multisensory experiences in inclusive design. These approaches aim to create environments that support everyone's well-being by integrating care practices into architectural design.

The Gender panel examines the intersection of gender and spatial design, advocating for urban environments that are inclusive and equitable. This section emphasizes the need for incorporating diverse perspectives, particularly those of women and LGBTQ+ communities, in urban design and planning. The studies explore how gender-sensitive design can challenge hegemonic norms and promote inclusivity. They discuss architecture's adaptability in response to social instability, the reduction of stigma through inclusive design, and the rethinking of institutional spaces like prisons to better accommodate vulnerable populations. This approach aims to create more balanced and inclusive urban spaces that reflect the diverse needs of all inhabitants.

The Borders panel investigates border areas' spatial and social dynamics, focusing on creating inclusive and resilient environments. This section highlights the potential of architecture to foster new territorial identities and social cohesion in cross-border cities and marginalized areas. The studies explore the transformation of public spaces to promote

interculturality and integration, the conflicts related to urban interventions, and the redevelopment of marginal areas into vibrant community hubs. These efforts aim to address the unique challenges of border areas by emphasizing community involvement and historical understanding, ultimately fostering inclusive and resilient spaces.

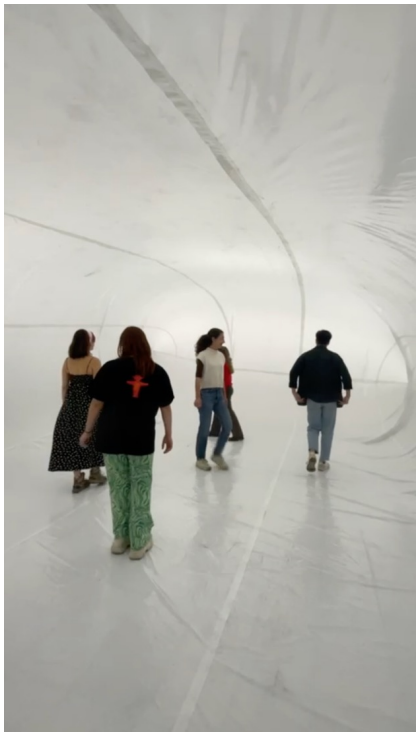
In conclusion, the various contributions build a semantic landscape centered around the concept of vulnerable bodies in space and time, and their significance within a spatial and design reflection. By observing the variety of experiences and how they contribute to modifying both the design approach and the outcome, the session becomes an enriching platform for rethinking our tools and methodologies when confronted with the issue of designing for vulnerable, unheard marginalized bodies.

Edited by the Inter-Active Scientific Committee and the Milan Organising Committee, see p. 21

5 / AUGMENTED

/ On modified and enhanced bodies and the interaction between the physical body and virtual space or artificial intelligence.
The convergence of physical space and the augmented body is a rapidly evolving field with the potential to dramatically transform our interaction between the physical world and the digital realm. We could define the augmented body as a physical human body that has been technologically extended (XR) using augmented reality, virtual reality, wearable devices, or other digital technologies to enhance perception and physical or cognitive capabilities.
Inquiring about the body-space relationships mediated by new systems of digitization can mean: discussing human-computer interactions in their different spatializations, assessing the impacts on the perception of space, exploring the possible effects on the design of physical space at different scales, questioning the educational and interaction capabilities of new technologies that hybridize body, space, and artificial intelligence, reflecting on the role of the digital to foster interaction, co-design and decision-making in the perspective of inclusive and open processes, to foster a growing awareness about the ethical and social implications of relating physical space and the augmented body.

This session welcomes contributions which include but are not limited to:
/ How XR technologies influence architectural and urban design, urban planning, and the creation of physical spaces;
/ Perceptual and cognitive shifts: exploring the space-based impact of XR on bodily perception, movement, and interaction;
/ How can XR technologies be used to facilitate social interaction and collaboration, also through the new possibilities given by AR-based tools in BIM and GIS platforms;
/ How can XR technologies be used to create more effective and engaging learning, educational, and training experiences in physical spaces?
/ Research on user-centred design, usability, and user satisfaction in augmented environments;
/ Wearable Technology and Its Impact on Daily Life;
/ Human-Computer Interaction and user-experience in Augmented Environments;
/ Interaction, co-design, deliberative and participation tools based on new technologies;
/ Security Privacy and Identity Concerns in Augmented Spaces: how XR reshapes our understanding of the body, identity, privacy and self-expression;
/ Historical perspectives: the evolution of mixed reality and its interaction with the physical self.



La idea no es vivir para siempre, la idea es crear algo que sí lo haga

Andy Warhol

Organizado por:

Antonio Cobo Arevalo
Escuela Superior de Diseno
Prof. Javier Ruiz Sanchez
Escuela Tecnica Superior de Arquitectura de Madrid
Prof. Aleksandar Sasha Dundjerovic
Royal Birmingham Conservatoire
Maria Jose Martinez Sanchez
Staffordshire University

Con la colaboracion de:

Rodolfo Garcia Vazquez -
Director Artistico Os Satyros (Sao Paulo, Brazil)
Prof. Stephen Simms
Royal Birmingham Conservatoire
Maria Nieves Martinez de Olcoz
Universidad Complutense de Madrid

Aleksandar Dundjerovic[1], Stephen Simms[2], Maria J. Martinez Sanchez[3]
[1,2] Royal Birmingham Conservatoire – BCU, UK
[3] Scott Sutherland School of Architecture and the Built Environment – RGU, UK
[1] aleksandar.dundjerovic@bcu.ac.uk

Body-centred strategies of urban scenography and cybernetic theatre: Two practice-based research case studies 'The Cybernetic Cabaret' and 'Looking for Andy'

Key Words
Performative events, Body centre experience, Urban scenography, Cybernetic theatre

Over the last four years we have been commissioned to develop a series of performative events that bring the body as the centre of dramatic immersive experiences within site-specific events and urban environments. The departure point for our intervention, is the manifesto for Cybernetic Theatre that the Cybernetician Gordon Pask developed in the context of the Fun Palace (Cedric Price 1965).
Cedric Price's *The Fun Palace Project* was commissioned by theatre director, author and pedagogue Joan Littlewood. It was meant to be culturally complex, interactive and educational, bringing together dance, film projections, theatre performance, and music. Bringing community and culture together. The visionary architect Cedric Price created drawings for The Fun Palace published in Architectural Review in 1965. Price's approach to Fun Palace was not that different from Littlewood's thinking about multiple interactive spaces in which the working-class could engage in making arts and producing culture. He wanted a space that could be improvisational, trans¬formational and mobile, capable of bringing the technology of his time. He wanted discoveries in cybernetics and information technology to help human conditions. The Fun Palace as an idea became a symbol of a space that can respond to the social uncertainty of Britain in the 60s and become a living place, being and thinking in a different way about life. Integrating computer technology and social activism with participatory performance would give to working-class and their community creativity and a new sense of collective identity. In The Fun Palace, Price created placeness as an active movable architectural space where the design constitutes a playground for the audience to interact and play with the elements in the space.
The concept of 'The Cybernetic Cabaret' (2021, Stoke-on-Trent, UK) which was performed as part of the EURAU2021 conference, emerged from the influences of interactive technology and cybernetic theatre on the ways Fun Palace is imagined. The performance was interactive

– body-centred, combining elements from live to recorded and digitally mediated. The performance takes us through various rooms or rather locations that house different activities, allowing the audience to interact with the presented content. The activities were performed live as a performance and filmed as in a cinema room, using live digital Zoom theatre. The performers participating in the Fun Palace Cybernetic cabaret come from different countries, reflecting on present-day Britain's international position. The live audiences and the online audience following on Zoom are invited to take action with the performance structure and interact with it. The performance starts with the narrator announcing he/she will be curating the audience throughout the show. Curation is taking us through the region's history, starting from Wedgwood and developing to Fun Palace. We invited a video choreographer, a community dance group from India, to perform live on Zoom theatre - a live performance artist creating as things were happening. The main action of the performance takes place in a space filled with balloons where the audience play and reconfigure this dynamic space.

'Looking for Andy' (2023, Sao Paulo, Brazil) presents a performance installation piece in Praça Roosvelt, in collaboration with the theatre company Teatro Os Satyros. It was a piece with a white inflatable structure, that staged a play on *Looking for Andy* (Warhol) in the context of Sao Paulo, Praça Roosvelt; an area that has been regenerated through the theatre and community engagement activities that Os Satyros have been developing. The main scenography piece in Looking for Andy explores the relationships between inside and outside space triggering the interaction and involvement of the audiences in the space. This temporary device embodied the interactivity of the performance, bringing together audience and performers to create an immersive experience.

This paper questions what are the consequences of the ideas built within Prices and Littlewood's dream of a new design for a space that interacts and responds to the audience/performers? Our practice-based methodology has shed light on strategies of designing interdisciplinary body-centred spaces that can have an influence in architectural design and landscape. Our presentation will include some performative elements (a performer, balloons and small pneumatic structures) to offer an experiential understanding on our research enquiry and our strategies to explore body-centred spatial design.

FIGURES

Fig. 1 -The Cybernetic Cabaret. EURAU 2021, Multiple identities: The civic function of Schools of Architecture in Europe.
Fig. 2 - Looking for Andy (2023, Sao Paulo, Brazil). Design and construction of the urban scenography inflatable device.

Asma Mehan
Texas Tech University, Huckabee College of Architecture
asma.mehan@ttu.edu

Corporeality in Virtual Spaces:
An exploration through AR/VR technologies

Key Words
Augmented reality, Virtual reality, Architectural space, Corporeal experience, Sustainable design

The integration of AR/VR in architectural space is reshaping our interaction with the built environment [Milgram, Kishino 1994]. This study delves into the transformative role of augmented reality (AR) and virtual reality (VR) in architectural spaces, revolutionizing how we interact with the built environment. It explores the intersection of AR and VR technologies with corporeal experiences, fundamentally altering architectural design and user engagement.
Utilizing Milgram and Kishino's virtuality continuum and Heim's virtual realism, the research examines the blend of real and virtual worlds [Heim 1998; Milgram & Kishino 1994]. Gibson's theory of affordances in virtual environments underpins the analysis of user interactions [Gibson 1977].
The study critically evaluates cases like the Virtual Reality Venice Biennale and AR in urban planning [The Virtual Reality Venice Biennale 2018; Schnabel 2009], assessing their impact on spatial perception and engagement. A key focus is the FabriCity project, which has been exhibited at the Venice Biennale 2023 as a case study, assessing its impact on spatial perception and engagement. The study concludes by advocating the integration of AR/VR with sustainable design principles, underscoring their potential in creating adaptive, inclusive urban environments.
To conclude, the study highlights AR/VR's potential in redefining architectural practice and calls for integrating these technologies with sustainable design principles [Achten, 2017]. This research contributes to a deeper understanding of how AR/VR technologies can be harnessed to create more adaptive, inclusive, and responsive urban environments.

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Aaron Paterson[1], Marian Macken[2], Sarosh Mulla[3]
[1,2,3] Waipapa Taumata Rau | The University of Auckland,
Te Pare | School of Architecture and Planning
[1] aaron.paterson@auckland.ac.nz

Embodied Drawings and Virtual Twins

Key Words
Architectural Drawing, Inhabitable Drawing, Virtual Twin

Architects use virtual twins in practice: a digital model of the proposed building is created using 1:1 software that stands in for reality. Here, simulations rather than drawings are produced. The shift from drawing to simulation favours rendering and predictive control, discarding "the human body as the common basis of design and experience" [Scheer 2014, p. 103] and dismissing the long-standing practice of "imaginative inhabitation of drawings" and that a digital full-scale—or rather scale-less—capabilities omit this bodily presence of the drawer [Emmons 2005, p. 233]. This research reaffirms corporeity in the virtualisation era through creative practice methods and reflection on an exhibition, Drawing Room, at the Toi Moroki Centre of Contemporary Art Christchurch in New Zealand in 2020. Drawing Room demonstrates a virtuality that includes the drawer's bodily presence. The research introduces the "twinned body of architecture" concept to explain the exhibition's drawing processes, align the authors' practice, and advocate for dynamic interactions between real and virtual spaces. The project addresses aspects of architectural drawing, particularly body, scale, and time, through the lens of the inhabitation of drawing in both the making and encountering drawing.
Federica Goffi parallels the problematic relationship between drawing and building in architecture and the concept of the "king's two bodies" in medieval fiction. In this analogy, the "natural body" represents the physical building, while the "sempiternal body" symbolises the architectural drawing that acts as a substitute for buildings during their transformation, making visible the intangible. [Goffi 2007, p. 88-98]. Here, buildings are seen as unfinished and can be reworked through drawing. This view recognises architecture as a dynamic field, shifting from seeing designs and structures as static blueprints to viewing buildings as continuously unfinished, open to modification through drawing.

Goffi's concept of the "twinned body of architecture" suggests that drawing is an embodied act—an instrument to reveal the hidden presence of buildings. Drawing Room aimed to demonstrate the making and encountering of architectural drawings, engaging the entire body in both gallery and virtual spaces.
Drawing Room explores the embodied experiences created by inhabiting a full-scale architectural drawing alongside a virtual twin. Virtual reality is employed to engage with this duality and is viewed as an embodied drawing, thereby reshaping how the "real" space is perceived. The creative work blends physical and digital spaces through performative architectural drawing practices to speculate on the relationships between architecture, bodies, and drawing. Drawing Room featured two linked components: Drawing Machine, a kinetic sculpture with a rotating aluminium arm that fills the gallery and draws with light and sound, and Edge of Shadow, a virtual reality animation designed as a virtual twin. Drawing Room offered a novel approach to architectural drawings and bodies by focusing on creating drawings in space rather than of spaces operating at both full-scale embodied and virtual. Here, bodies and drawings are interactive.
Part one of the exhibition, Drawing Machine, is a 12-metre-long, bead-blasted aluminium frame. An electric motor powers its movement across the gallery floor on rubber tyres. In a slowly repeating arc, it passes through light beams; shadows appear and change. These shadows are designed, not accidental. Within the gallery, a full-scale drawing made with light comes and goes. A parametrically generated soundscape establishes another rhythm over the frame's movement, where the movement mechanics are recorded and replayed. Visitors cast their own shadows, and their sound and movement blend with the spatiotemporal drawing, creating a network. This network includes the drawing itself, the light used in its making, the space it occupies, the sound for orientation, and the bodies interacting with it.
Part two is a virtual reality experience, Edge of Shadow, that begins with a realistic digital rendering of Drawing Machine moving across the gallery; its projected shadows are recorded. In this virtual reality animation, walls and floor disintegrate; the drawing machine is doubled, mirrored, yet its arc and anchoring point to the gallery wall remain. The gallery's plan grid provides a framework for new context and geometry. The projected shadows are materialised, casting their own shadows. These shadows need planes and surfaces to fall on: a new peripheral edge catches them. The virtual component is no longer an instructive simulation and becomes an abstract fiction where realistic renderings of the gallery installation depart towards unbuilt forms. Inhabiting the digital ghost creates an uncanny presence. Sounds from the gallery merge with the virtual experience, then deviate with the overlay of the sound in the headset. The gallery visitor experiences the drawing in virtual reality, sequentially in time, and as a shadow participant. If a drawing records gestures, then these gestures represent a performance. The series of actions making up a drawing constitutes an embodied performance. Edge of Shadow changes from an architectural simulation to a simulated drawing—a drawing perceived as a performance. The virtual twin—Edge of Shadow—supplements and revises the "real" object—Drawing Machine—with additional information. The impact is that the virtual twin's physical object is cast into a new, ambiguous realm of imagination. This understanding mirrors Goffi's concept of "architecture's twinned body", where buildings are perceived as ongoing works open to alteration by drawing. Like Goffi's analogy of transforming the natural and sempiternal bodies into a "composite body", the two parts of Drawing Room simultaneously coexist and intertwine [Goffi 2007, p. 88-98].
To reaffirm corporeity in the virtualisation era, Drawing Room looks at an older form of 'virtual' that Homay King denotes as 'potential on the cusp of becoming' and differs from the common perception of virtual reality as being simulated and computer-generated [King 2021, pp. 125-160]. This supports a dynamic perspective of buildings or drawings, viewing them as evolving trajectories or flows. In this view, the drawing constantly evolves, highlighting its interaction with the human body, which is also in movement. The research interprets Drawing Room through Bruno Latour's and Albena Yaneva's Actor-network theory, providing an ontology to understand the body's relationship with space construction and drawing [Latour, Yaneva 2017, pp. 102-111]. This theory blurs boundaries between the body, technology, and environment, hinting at a shared dynamic relationship. The body and non-human elements like light, shadow, time, and sound play an active role and develop new meanings and a co-presence. Instead of passively responding to a representation, the viewer re-composes an architectural subject from the physical and virtual drawings. Gallery visitors questioned how to interpret the relationship between Drawing Machine and Edge of Shadow. This questioning highlights the active engagement of body and mind in forming personal understandings, mirroring the process of mentally inhabiting a drawing. Consequently, the exhibition transforms into a participatory space where the virtual is embodied, signifying potential on the verge of realisation.
As illustrated by Drawing Room, architectural practice can make software-based drawings

that activate the human body and allow a sense of inhabitation. Through its use of virtual twins, this exhibition challenges the architectural paradigm of static drawings, advocating for a dynamic, interactive approach.
This aligns with how architects traditionally envision themselves within their drawings during building design. For example, Marco Frascari describes how the architect's drawings activate the compass and the body where the builders' bodies move through the compass's orientation in the drawings [Frascari 1993, pp. 2-15]. Drawing Room emphasises the importance of the human body's presence in creating and interpreting architectural designs. By blending digital and physical elements, Drawing Room defines architectural drawing as an active, embodied experience, moving beyond representation to an immersive engagement with space where designs are not just visualised but inhabited.

ANNEXES

Drawing Room
Catalogue: https://researchspace.auckland.ac.nz/handle/2292/55231
View exhibition:
https://www.youtube.com/watch?v=1_4TJnCDQjU
https://www.youtube.com/watch?v=V1_86_HZCXU&t=224s
Keywords: Architectural Drawing, Inhabitable Drawing, Virtual Twin
Contributors: Fabio Morreale, Clovis McEvoy, Xiaoling Cheng, Tony Cranch

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FIGURES

Fig. 1 - Aaron Paterson, Sarosh Mulla, Marian Macken, Drawing Room, Toi Moroki | Centre of Contemporary Art Christchurch (CoCA) 2020–221. Top: Drawing Machine, the drawing apparatus explores drawing with light: a moving apparatus generates shifting shadows. Bottom: Edge of Shadow, the VR component of the Drawing Room. Photos: Simon Devit.

Tino Grisi
Politecnico di Milano
tino.grisi@polimi.it

The generative artificial intelligence as tool of human augmented intuition and sensitivity in architecture

Key Words
Atmosphere, Generative AI, Intuition, Sensitivity, Spatial predictiont

The emergence of generative artificial intelligence (AI) for spatial architectural imagery constitutes a milestone in the ongoing evolution of the symbiotic relationship between humanity and technology. Employing sophisticated algorithms and deep learning models, this technological paradigm achieves remarkable proficiency in generating representations of spaces, thereby ushering in novel dimensions within the realms of creativity, intuition and prediction. The convergence of generative AI for architectural images with the human body delineates a captivating panorama wherein predictive capacities and spatial experiences seamlessly interlace within metaphorical domains, elucidating aspects hitherto imperceptible.

The Integration of Generative AI and Human Perception
The philosopher and Catholic thinker Jacques Maritain (1882-1973) posited that art and creativity serve as indispensable instruments for investigating and comprehending the intricacies of the world. In this context, generative AI emerges as a contemporary collaborator, pushing the boundaries of creative expression through the synthesis of unprecedented architectural spatial images. Maritain's perspective, emphasizing the pivotal role of creative intuition in the artistic process [Maritain 1966], resonates cohesively with the interplay between generative AI and human intuition. The training process through which artificial intelligence is used to generate images can be scrutinized through an aesthetic lens. Maritain advocated for art as a harmonious amalgamation of form and substance, a concept wherein AI provides an avenue for the exploration of novel aesthetics, often surpassing the capabilities of individual human creativity. The generation of architectural spatial images, facilitated by AI, becomes a canvas for unique poetics, transmuting conventional elements with futuristic innovations, resulting in the emergence of beauty forms that forge novel pathways in the evolution of architectural perception. Furthermore, aligning with Maritain's view of art as a vehicle for exploring the

world, generative AI assumes a role as a newfound means of environmental exploration. It shapes architectural spaces that are not only visually apprehensible but also experientially and symbolically interpretable by the human body. Consider, for example, an interactive exhibition space where generative AI collaborates with artists to create an immersive sensory experience. The AI, analyzing visitors' movements and preferences, dynamically adjusts lighting, sounds, and spatial configurations. As visitors navigate the space, they become active participants in the artistic exploration, with the AI responding in real-time to their bodily presence. The spatial representations crafted by AI transform into a realm where the body becomes a playground, foreseeing and envisaging its presence in architectural scenarios that are as yet unrealized but intuitively graspable. In this synergy, the creative intuition steering new aesthetics, guided by AI, transcends the cognitive domain to become an extended bodily experience.

Crafting Emotional Atmospheres with Generative AI

The philosophical contributions of Gernot Böhme (1937-2022), a prominent figure in perception studies, can be seamlessly integrated into this discourse by prioritizing an examination of the spatial dimension within the realm of human experience. Böhme's conceptualization of "atmosphere" [Böhme 1995] serves as a foundational framework to articulate the emotional resonance that spaces evoke in individuals. Within this context, the application of generative AI becomes a pertinent consideration for shaping and predicting spatial atmospheres, affording individuals the virtual exploration of diverse scenarios and architectural environments, even prior to their physical instantiation. The incorporation of the "atmosphere" concept introduces an additional layer to this symbiotic relationship. Generative AI, operating not only in the generation of spatial forms but also in conjuring the emotional and sensory atmospheres associated with these spaces, aligns with Böhme's notion that atmosphere unifies the perceived and the perceiver. This unity prompts the perceiver, sensing the generated atmosphere, to manifest corporeally in a distinctive manner. To further enrich our understanding of atmospheric considerations in architecture, we can turn to the works of architect Peter Zumthor (1943-). Zumthor, known for his emphasis on phenomenology and the experiential aspects of architecture, shares a profound resonance with Böhme's ideas. The interplay of light, materials, and spatial arrangements is meticulously orchestrated to craft specific atmospheres that influence visitors' perceptions and bodily experiences, creating an atmosphere that goes beyond the visual, and engaging people on a sensory and emotional level [Zumthor 2006]. Drawing inspiration from Zumthor's approach adds a practical dimension to the theoretical framework proposed by Böhme. Imagine an AI-driven architectural design process that not only considers spatial forms but also meticulously tailors atmospheres, drawing insights from the emotional and sensory impact. This integration of generative methods with the atmospheric principles could revolutionize how we conceive and experience architectural spaces, providing a nuanced understanding of how AI generated architecture can influence human perception and bodily engagement within spatial environments.

Augmented Reality, Sensory Engagement and Architectural Visualization

The capability to virtually compare and undergo diverse spatial atmospheres holds the potential to shape design decisions and enhance the quality of urban life. Leveraging advanced sensors and AI algorithms, a kind of smart goggles synchronously analyze the environment. Consider a scenario where an individual, navigating a city street, desires to envision the area with a new architectural design. Here, AI-powered "glasses" digitally manipulate buildings, colors, and spatial arrangements in alignment with specified design parameters. Augmented reality becomes instrumental when AI-generated images overlay onto the physical environment, integrating proposed architectural changes with existing structures, thereby creating an immersive experience where bodily perception converges with the vision of a potentially transformed environment [Van Krevelen 2010].

Augmented reality extends beyond visual modification, incorporating enhancements to sensory capabilities. For instance, users can virtually "feel" the contrast in atmosphere between the current state and the proposed one by selecting an option in the goggle menu. This may entail perceiving simulated temperature changes, hearing modified ambient sounds, or even virtually experiencing the texture of novel building materials. AI continuously adapts and optimizes sensory experiences in real-time, taking into account the user's physical location and gaze direction. It adjusts imaginative elements seamlessly to ensure a cohesive interaction between the tangible and augmented worlds.

The predictive capabilities of AI come to the fore through the simulation of movements and actions within generated spaces. It forecasts how the human body will engage with specific environments, factoring in variables such as object arrangement, lighting, and architectural layouts. This predictive functionality aids architects in the design process while enabling

individuals to anticipate and comprehend their own bodily movements and positions in imaginary scenarios. The concept of body localization in imaginative spaces becomes palpable as AI generates images and furnishes an anticipated perspective on how individuals may interact within these dynamic, virtually generated architectural creations [De La Fuente Suárez 2016].

Human Psychic Enhancement and the Future of Architecture

However, it is imperative to delve into the ethical ramifications intrinsic to this technology. The boundary separating reality and virtual representation poses a potential blur, exerting an influence on perception and decision-making processes. Ensuring a responsible and conscious adoption of such innovative technologies necessitates transparency an examination of the psychological consequences that may arise. The conflation of reality and imagination has the potential to impact the very perception of reality itself. Striking a delicate balance between creative imagination and a grounded comprehension of physical reality is paramount, mitigating the risk of excessive detachment between virtually generated expectations and lived experiences.

The anticipatory engagement with virtually generated spaces unlocks novel avenues for creative exploration in architectural design, enabling individuals to pre-experience concurrent narratives and bodily interactions in yet unrealized worlds. For example, AI can foster new and deeper understandings of spiritual space by moving its users beyond clichés and static references. The creative use of this technology stimulates contemplative imagination and generates dynamic and previously unknown visions to create spatial representations that promote a profound spiritual experience. The application of artificial intelligence in the field of sacred design furthers the evolution of ecclesial spaces and helps them better meet the modern-day needs of their users. This shift in perspective does not see space as empty realms in which to seek God but as integral to the spiritual experience. The goal is not to replace the religious experience but to enrich and facilitate it through structures that encourage reflection, prayer's attitude, and communal experience in a deeper and more harmonious way [Grisi 2024].

In conclusion, traversing the dynamic terrain of generative AI within the field of architecture not only amplifies predictive capacities but also unveils novel avenues for probing spatial dimensions. This underscores the critical significance of upholding a profound interconnection between architecture and the instrumental experiences in shaping our comprehension of existence. The transformative potential resides in a reinvigorated and robust interaction among individuals, through visionary modalities.

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FIGURES

Fig. 1 - TGArch+Leonardo AI, Future Park, 2023 / The new holy landscape, 2024.

Adel Al Bloushi
UAUIM - "Ion Mincu" University of Architecture and Urban Planning
adl.architetto@gmail.com

Virtual postures. Presence and simulated spatial phenomena

Key Words
Virtual Reality (VR), Spatial perception in virtual spaces, AI augmented architectural design

The foundational premise of our argument is a recognition that architectural design is a non-linear and indeterminate "process" of modelling a potential future architectural artefact [Buchanan 1992; Lawson 2005; Simon 1988]. Furthermore, one might even attempt to create an exhaustive model of any design process, at which point a paradox becomes apparent: any design process happens in the experiential continuum of the architect, implying a designing posture. Not any posture, but rather one that can reinforce something akin to an "Archimedean Point" from which a potential future part of the world can be ordered. Co-ordering designed postures and architecture from such a designing position needs further abstraction so that the idea of a body in architectural space can be instrumentalized. Thus, the need for the idealization of bodies, standardization, ergonomics, and, more recently, computer simulations (for example: crowd simulations, rag dolls, etc.). Further abstraction reduces the matter to several dimensional constraints, codes and flows, a reduction which makes its instrumentalization easier within any given design methodology, but, at the same time, trivializes the body.
One description of architectural design is that it is an imaginative projection of spaces, which needs a capturing method, usually in the form of representational "sketches". Yet such sketches often leave open the question of how exactly posture is captured within the imaginative projection. Only when the sketch can be reasonably interpreted as being from a first-point view that a posture within the space can be inferred with some mental effort, an idea in line with the well-known view a photograph invites its viewer to engage cognitively and emotionally [Barthes 1981; Benjamin 1972; Sontag 1973/2007]. Here one must pause and consider that this level of engagement is not guaranteed neither with a photograph nor with a hypothetical depiction of architectural space, precisely for the requirement that viewer be predisposed and equipped for such an immersion. Nevertheless, while designing, an architect would need to oscillate between two fundamentally different stances, one of ordering and one of imagining experience, leading

to seemingly unsurmountable paradoxes. More importantly, such abstractization of posture neglects the continuum of experience in space as well as in time. To fully understand a posture vis-à-vis architecture one must account for the dynamics of bodily movement and experiential motion, an idea Tschumi discusses thoroughly [1994, 1981/1994, 2005]. Unfortunately, most of the representational material in architectural communications only shows static postures via renders, photographs, drawings, and so on, implying a cognitive burden one any viewer attempting to comprehend the past and future of that figure, which often is inadequately met.
An alternative representational model is offered by virtual reality (VR), which is able to offer "a perception of being physically present in a non-physical world by surrounding the user of the VR system created with images, sound, or other stimuli" [Freina, Ott 2015]. However, in the AEC industry most of the focus has been on using VR and AR (Augmented Reality) as supplemental ways of viewing a building proposal, useful for client engagement, design support and review, construction support and review, operations and management, and training [Delgado et al. 2020]. A more recent development has been in enabling team collaboration in immersive virtual environments [Yu et al. 2022]. While these applications certainly have their uses in the industry, one must note that they are removed from the imaginative projection of architectural spaces from the creative mind to the digital medium. Importantly for our investigation, while immersed in simulated worlds one retains the kinesthetic, an illusion brought about by the successful and rapid coordination of position between the real and virtual worlds which feeds into the simulation of the stimuli, furthering the sensation of "presence". One implication of this kinesthetic presence is that without the posture allowing for an Archimedean ordering, modelling the inhabited virtual spaces needs different tools. One can mimic to a limited extent, using gestures and gadgets, some of the modelling commands found in typical 3D modelling systems [Ergün et al. 2019]. Yet the opportunity lies in the coordination between computation and design intent within a virtual environment that allows for phenomenologically coherent decision making, which involves bodily-aware responsiveness.
Such coordination, in turn, necessitates frameworks to computationally "translate" architectural intent into models that extend geometric relationships beyond BIM-like databases. These frameworks would fall on a spectrum between fully curated and uncurated. Fully curating a framework means establishing the rules for creating valid outcomes, and these rules might encode stylistic, legal, structural, economic aspects, to name a few. It also sets the semantic and logical boundaries of what can be considered a meaningful architectural intent capable of being translated by the framework into an architectural model. At the upper limit, it is not unlike a large parametric model operating through various layers of abstraction, and at different scales, from the level of an architectural detail to that of the urban context. One could reasonably speculate that such a framework should be able to address and mimic any number of formal design methodologies. A further possibility would be the negotiation between heterogeneous design methodologies, leading to formal hybrids, however, this would not only add complexity, but it might also necessitate a well-designed system of analysis and synthesis capable of handling contradictions and competition between design intentions.
Uncurated frameworks are more difficult to define since we have not yet seen real-world examples (the nearest example by analogy would be LLMs (Large Language Models)), and this paper will explore the conditions and criteria for such design environments. The first requirement is to step away from generating a patchwork of image metaphors towards an A.I. system that can create valid models. Such a system should be fundamentally different, more akin to cutting-edge Reinforcement Models, which have been shown capable of simulating agency and decision-making in artificial environments [Canese et al. 2021; Ha 2019; Jara-Ettinger 2019]. This new system must make decisions about constructing models from intentions, and as such must have not only a solver, but also a system of general analysis and synthesis to aid in negotiating between potentially contradictory intentions.
Designing or training the framework is obviously a different undertaking and experience than designing the architectural artefact within the VR enabled by that framework. If a convincing simulation of reality is produced and the illusion of "presence" is strongly induced, leading to a meaningful phenomenological engagement with virtual artefacts, then the architect "inhabiting" this virtual landscape would infuse their own subjectivity into it in a manner that does not abstract away the sensing, feeling body. Our hypothesis is that retaining full awareness of one's own body whilst in a state of "presence", thus receiving instant feedback on design decision, makes the process of design more visceral, intimate, emotional, and potentially meaningful. Within virtual reality, the simulated architectural artefact articulates the continuum of experience and idea formation. Time, mimesis, context, and intertextuality is continued, in the mind of the architect, from the real world into the virtual world and vice versa. A simulated world can allow different angles from which to explore the idea of a posture as an architectural device, or in other words, it opens the possibility of starting architectural design

with non-idealized postures in mind. It might provide novel avenues of investigation leading to new insights into the social role of postures within spaces that allow communication via the body. What can be communicated? Does communication get polluted or enhanced by the architectural backdrop? Does the coded posture need a coded architectural backdrop. Can posture and architecture catalyze each other's coding? This paper will explore how these questions might be addressed by the aforementioned fully-curated and uncurated design environments within VR.

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Jennifer A. E. Shields,[1,2] Anna Osello[2]

[1] California Polytechnic State University, San Luis Obispo, Department of Architecture

[2] Politecnico di Torino, Department of Structural, Building, and Geotechnical Engineering (DISEG)

[1] jeshield@calpoly.edu

Cultural heritage and augmented, mixed, and Virtual Realities:
Accessibility and inclusion for people with disabilities for social and spatial transformation

Key Words

Cultural heritage, Neuroscience, Virtual Reality, Augmented Reality, Accessibility

Researchers in California and northern Italy from the fields of Architecture, Engineering, Neuroscience, and Computer Science are collaborating on an investigation into how Augmented, Mixed, and Virtual Reality applications can be utilized to support people with a range of physical, cognitive, and psychological disabilities in experiencing sites of cultural heritage. We propose that inclusive, accessible, spaces can be created and adapted to support visitors of all abilities in visiting the sites in-person. In the book Design for Inclusivity, the authors suggest: "Design exclusion does not come about by chance: it comes about through neglect, ignorance and a lack of adequate data and information." [Coleman et al. 2007] For all visitors, it is critical to consider the role of other senses besides the visual in the spatial, embodied, experience of cultural sites. In addition to supporting people living with disabilities, these technologies can improve every visitor's experience and contextual understanding.

In this abstract, we will briefly present:

1. Two small-scale pilot projects that have been completed, one in each country;
2. Plans for two larger-scale proposed projects, one in each country, to test specific technologies in specific sites of cultural heritage.

We are approaching the use of these technologies in sites of cultural heritage from the perspective of scalability with an iterative methodology. Small-scale pilot projects have been completed in each country to implement a virtual interactive experience as a preface to an in-person experience. In California, exhibitions of the work of Julia Morgan (1872-1957) - the first woman to graduate from the École des Beaux-Arts in Paris in Architecture, California's first licensed female architect, and architect of Hearst Castle - were produced in two modes. We worked with the archive of her personal and professional papers at California Polytechnic State University in San Luis Obispo to daylight her drawings, photographs, and letters, and make them visible and accessible to the general public through an interactive online exhibition

and then a physical exhibition at the University Art Gallery. The virtual recreation of the physical Gallery was populated with high-resolution images of Morgan's work and could be navigated online. Both versions of the exhibition used Augmented Reality in the form of audio overlays. Actors portraying Julia Morgan and her client William Randolph Hearst read from their letters to bring their conversations to life. This audio supplement to the primarily visual exhibitions enlivened the experience for all users, but specifically supported people with visual disabilities.

At Palazzo Carignano in Turin, Italy, the SAM project (Autistic Spectrum and Multimedia) uses Virtual Reality as an opportunity for educational integration for people with autism spectrum disorder. The Palazzo was designed by Guarino Guarini (1624-1683) for the princes of Carignano, and was the birthplace of the first king of Italy. It later served as the seat of the First Parliament of the Kingdom of Italy (1861-1864). The goal of the project is to prepare people with autism spectrum disorder to face a situation that is normally a source of stress and isolation, such as a visit to a museum or heritage site, with the objective of social inclusion. [Giaconi et al. 2021, p.97] A parent or trusted caregiver controls the robot avatar. VR is therefore used for cognitive behavioral therapeutic purposes, to channel the fears of people on the autism spectrum into more positive behaviors, stimulating visualization and imagination.

For a larger-scale test of technologies for sites of cultural heritage, we are planning to augment the physical experience of sites through digital model overlays (AR or MR) at Hearst Castle in San Simeon, California and Palazzo Carignano in Turin, Italy. These two sites of cultural heritage have both regional and national appeal and importance. A longer-term goal is to use M-BIM – a Building Integrated Model of the architecture with integrated digital models of each Museum artifact – as the basis for the use of interactive technologies on-site. [Tucci et al. 2019, p.1089] The goal is not to replace the in-person experience of cultural sites, but rather to supplement it and adapt it to varying needs and abilities. The use of interactive and multi-sensory technologies can improve the experience and knowledge gain for all visitors. The 'digital twin' of the building and artifacts also supports resilience in the face of climate change – providing detailed evidence of the cultural heritage elements in the case of damage or destruction.

The façade of Casa Grande at Hearst Castle includes numerous architectural antiquities acquired by William Randolph Hearst in Europe, and incorporated into the design by Julia Morgan. According to historian and retired director of Hearst Castle Mary Levkoff, "Morgan conjured the buildings to house these objects from a combination of steel-reinforced concrete, historic elements, and her own designs inspired by them." [Levkoff 2008] The 15th century 'Wildmen' statues flanking the front doors are in need of conservation, which will occur in-situ. Our new Augmented Reality exhibit at the Visitor Center will entail constructing full-scale Wildmen. The sculptures have already been laser scanned and modelled, and will be re-created for the exhibit using CNC routing. We will use video and audio overlays to show both the historical and secondary contexts of the statues, while providing visitors who have visual impairments with audio information, and vice versa. We are also fabricating a scale model of Hearst Castle that is meant to be touched – providing tactile input for visitors with visual impairments.

In addition to testing materials and fabrication methods for the sculptures and the projections, we are testing a methodology to measure neurological and physiological responses to the exhibit (using mobile EEG and eye tracking). These tools can evaluate the experience of the exhibit – and the sensory experiences of various spaces in Hearst Castle - for people without and people with various disabilities. This is a collaboration with computer science professor Dr. Javier Gonzalez Sanchez who has experience with EEG and eye tracking, and envisions a feedback loop between the physiological measurements and the audio and video projections for the exhibit.

Using the Building Integrated Model (BIM) of Palazzo Carignano, built from the point cloud of the facades, an Android device application and Virtual Reality experience is being created to train users with cognitive impairments to navigate the museum. Through the Android application, it is possible to see the different options available to reach the building, some content regarding the history, and how to behave during the visit. The VR experience, on the other hand, allows users to immersively experience how to reach the museum from Piazza San Carlo, and then appreciate, through the digital model of the palace, the façade and architecture of the palace. To further enhance the understanding of the museum, geometric and alphanumeric data inherent to the interior rooms of the palace are also included in the BIM model. Again, VR

is used to more inclusively communicate the contents of the museum. Through the game engine software Unity, it is in fact possible to translate the descriptions of the works into CAA (Augmentative and Alternative Communication) so that the content can be understood by users with autism. Since some typical elements of museum displays such as lights or mirrors can be disruptive to autistic users, the immersive virtual reality application also aims to accustom the user to what they will find in the real visit and to focus them on the elements of interest. Both projects have the support of professionals from the neuroscience branch both in designing the user experience and user interface, and in writing the content to be administered.

The planned projects at Hearst Castle and Palazzo Carignano will explore the use of audio and visual overlays on existing historical sites to improve the multi-sensory experience and contextual understanding for all visitors, while also supporting people with cognitive or sensory impairments. Next steps, underway, include seeking funding to construct the exhibits and test the methodologies at each site to refine them for possible application at other sites of cultural heritage in the US and Europe.

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FIGURES

Fig.1 - San Simeon, California, designed by Julia Morgan and constructed in the 1920s. 15th century Wildmen from Spain are highlighted in pink; the inset image shows the photogrammetry model of the Wildman on the right of the entry door. (photograph and photomontage by Jennifer Shields, 2023).
[bottom] Palazzo Carignano, Turin, Italy, designed by Guarino Guarini and constructed in the 1670s. This image is an overlay of BIM linework and photogrammetry. (digital image by Nicola Rimella, 2023)

Stefania Rasile
Independent researcher
stra.arch@gmail.com

Architecture, death and the digitalization of memory.
Cemeteries in virtual commemoration times

Key Words
Collective memory, Cemetery, Digital death

> "If we were to come across a mound in the wood, six feet long and three feet wide, with the soil piled up in a pyramid, a somber mood would come over us and a voice inside us would say 'There is someone buried here'. That is architecture." [Loos 1910, p.84]

The architecture of death has always dealt with the invisible. It symbolically represents the deceased through its material dimension, aiming to outlast time and perpetuate their memory despite their absence. The development of information technologies from mechanical-analogue to digital has changed the way deceased's memory is communicated, and stored. Carved stone, photography, hard disk, cloud: the sequence highlights the physical contraction of the memory container while the amount of information increases, apparently losing its physical presence. Today, the daily production and accumulation of personal digital data impact the post-mortem dimension of people. Contemporary societies are experimenting with a new immaterial space to commemorate the deceased, where digital objects such as photographs, texts, video, and audio, apparently verge on immortality being devoid of materiality and, therefore, of caducity. This phenomenon has been defined by contemporary sociologists with the term Digital Death: studies on the relationship between death, collective memory and digital technologies. [Arnold 2018, p.3]
What role does the architecture of cemeteries play in the context of the digitalisation of memories?
The cemetery is an urban site that serves two main functions: depositing the bodies of the deceased and preserving their memory. The horizontal cemetery is the most frequent in the contemporary city, arranging funerary architecture in an enclosed exterior space. Today it is put in crisis by the progressive increase in population, the secularisation of society and new digital commemoration practices that are modifying the ritual of mourning.

The origin of the horizontal cemetery dates back to the XVIII Century in Western Europe. From the Middle Ages until that moment, the deceased were generally buried within the urban perimeter, in the fulcrum building of the society of that time: the church. The church was not only a place dedicated to religious worship but also a meeting place for popular parties and markets. There was a daily promiscuity between the living and the dead: the historian Ariès defines it as a period of tamed death. [Ariès 1975, p.33] In 1804, the edict of Saint-Claud forbade burial inside the church for hygienic reasons and due to Enlightenment ideas of secularisation and anti-clericalism. [Malone 2018, p.9] An infrastructure of death consisting of cemeteries sprawled outside the city, where the body of the deceased was disposed underground while their memory remained visible through funerary architecture in the landscape. According to Aries, with the displacement of the deceased towards cemeteries outside the urban perimeter, a process of socio-cultural removal of death began. [Ariès 1975, p.83] The historian Vovelle observes a paradox in this period: on the one hand the deceased were physically absent from the city, on the other, they started to appear in the names of the streets and squares, as well as in monumental architecture to keep their memory alive. [Vovelle 1983, p.349]
In contemporary times, the suburban cemeteries of the XVIII Century were incorporated into the expanding city. The result is an island, a city of the dead within the city of living that preserves its programmatic independence and perpetuates the socio-cultural removal of death phenomenon. The sociologists Elias and Gorer put in relationship the progressive estrangement between the living and the dead with the process of secularization and medicalisation of society. [Gorer 1955, p.49] Completely individualized and deprived of rituals, death is dissociated from the community, leaving the man in distressing solitude. In contemporary times more than in the past, people die silently and hygienically but they have never been so alone. [Elias 2010, p.9] Nevertheless, sociologists of Digital Death investigate a new phenomenon of proximity with death in the virtual dimension of social media. [Arnold 2018, p.5] Social media are not just a space for individual commemoration of the deceased but especially a space for communication and sharing between the living about the process of mourning. [Bennett 2015, p.350] In daily interactions on these platforms, there is a promiscuity between profiles of both the living and the deceased, thereby engaging with the concept of death. This condition has a resemblance to the Medieval relationship between the living and the dead when they generally coexisted in the church's space rather than being in radically separated domains.
In a time in which the commemoration practice is becoming virtual, it is worth reflecting on how the phenomenon of the digitalization of memory influences the contemporary transformation of the cemetery. The Digital Death phenomenon provides a new virtual social dimension of death, a digital place where the dead can be commemorated through countless digital memories. This has architectural and urban consequences: on the one hand, existing cemeteries inherited from the XIX Century are today integrating digital technologies. Some cemeteries are digitizing the commemoration, having digital memorials with information about the deceased accessible with QR codes placed on Tombs or having a digital map made by GIS which organizes the database of the dead. [Arnold 2018, p.101] On the other hand, a new typology of vertical cemeteries is emerging as multifunctional buildings which return to be planned inside the city and integrate the use of digital technologies providing new commemorative spaces. The potential of integrating digital technology into the actual infrastructure of death is evident in both the functions of the cemetery as a repository for the deceased and an archive of their memory.
The corpse of the dead has progressively lost on the one hand its sacrality, due to the secularization process of society and on the other hand its dangerousness to health, due to the progress of technology. Nevertheless, the corpse of the dead hasn't lost its role in shaping collective memory. The cemetery is a monument for collective memory with a timeless relationship with the concept of myth and therefore, ritual. [Rossi 1966, p.170] The union between architecture and digital technologies represents a typological transformation where the cemetery adapts to technical and cultural changes to provide new spaces suitable for contemporary dynamics.

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Nistorescu (Marinescu) Andreea – Gabriela
Ion Mincu University of Architecture and Urban Planning,
Doctoral School of Architecture
andreea.g.nistorescu@gmail.com

Synthesis and synergy.
The role of human-centered design in interior architecture and the dynamic interplay between physical and virtual environments

Key Words
Human-centered design (HCD), Interior architecture, Virtual Reality, Augmented Reality

As technology changes the way we interact with spaces, the field of interior architecture is at a crossroads between tradition and innovation. Exploring the dynamic field of design, this analysis delves into the fusion of physical and virtual elements. The focus is on integrating tangible and digital components to construct environments that not only fulfill functional needs, but also engage and inspire those inside them.

Interior architecture is experiencing a paradigm change that makes it harder to distinguish between real-world and virtual places as technology develops. The task of designing spaces that harmoniously combine these two domains while giving people wants and experiences top priority falls to designers. Human-centered design, which emphasizes empathy, inclusion, and adaptability during the design process, is a potent way to address this problem.

By bridging the gap between virtual and physical settings, human-centered design can have a transformative effect in the field of interior architecture. As technology develops, the integration of real and virtual places becomes increasingly important, offering designers both opportunities and challenges. The function of HCD in resolving these issues and creating opportunities for a harmonious coexistence between the real and virtual worlds is examined critically in this essay.

Interior architecture has historically been based on the material elements of the design. But the lines separating the real world from the virtual one have become more hazy with the introduction of digital technologies. Human-centered design (HCD) is becoming an essential tool in the design thinking paradigm shift needed to create environments that smoothly incorporate both dimensions.

Human-centered design (HCD) has its roots in the early 20th century, evolving from industrial design principles that focused on improving usability and functionality. Visionaries like Henry Dreyfuss and Raymond Loewy pioneered the concept of designing products and spaces with the user needs and experiences in mind. This approach gained momentum in the mid-20th century with the rise of ergonomic principles and user-centered design methodologies.

One pivotal moment in the history of HCD was the publication of Donald Norman's book "The Design of Everyday Things" [1] in 1988, which emphasized the importance of understanding user psychology and behavior in design. This marked a shift towards a more human-centric approach across various design disciplines, including interior architecture.

Fast forward to the present, advancements in technology offer new perspectives on HCD methodology. For example, virtual reality (VR) and augmented reality (AR) technologies provide designers with fascinating tools to simulate and evaluate interior spaces from the user's perspective. These technologies allow for more interactive and iterative design processes, enabling designers to gather feedback early and iterate designs based on user experiences.

One innovative approach to HCD involves the incorporation of biometric sensors into interior spaces. These sensors have the capability to track various physiological responses, including heart rate variability and skin conductance. By capturing real-time data on users emotional states and stress levels, designers gain invaluable insights into how occupants interact with their environment on a deeply personal level. This data-driven approach enables designers to create environments that are not only responsive but also adaptive to users emotional needs. By incorporating biometric feedback into the design process, specialists can create spaces that promote relaxation, enhance well-being, and ultimately foster a more harmonious relationship between occupants and their surroundings.

Human-centred Design (HCD) places the human experience at the forefront of the design process. Designers can enhance both functionality and well-being within environments by empathetically engaging with users and thoroughly analyzing their needs, preferences, and behaviors. The relationship between physical and virtual environments is evolving and HCD serves as a guiding principle for adapting to it in terms of interior architecture.
Innovative design solutions are necessary to overcome challenges that arise from the coexistence of physical and virtual environments. For instance, how can the tactile and sensory qualities of physical spaces be preserved in a virtual setting? What steps can be taken when designing virtual spaces to evoke the same sense of presence and connection as their physical counterparts? HCD provides a strategy for resolving these issues by emphasizing user feedback, iterative prototyping, and a comprehensive understanding of human behavior in both fields.

To tackle this challenge, designers can employ various strategies. For instance, haptic feedback technologies can simulate tactile sensations, allowing users to interact with virtual objects and surfaces as if they were physically present. Additionally, advancements in spatial audio technologies enable designers to recreate immersive soundscapes that enhance the sense of presence in virtual environments.
Moreover, achieving a seamless sense of presence and connection in virtual spaces requires meticulous attention to details such as spatial layout, lighting, and materiality. This entails crafting environments that not only feel authentic but also immersive, mirroring the sensory experience of physical counterparts.

Human-Centered Design (HCD) fosters holistic well-being by encouraging active user engagement, transforming environments into interactive ecosystems reflecting community needs. In interior architecture, textiles and materials shape user experiences. Material science advancements offer intriguing possibilities, such as the development of responsive materials that dynamically adjust to environmental changes or user interactions, revolutionizing interior design.

Self-healing surfaces, exemplified by the "Living Architecture" [2] project at the University of Colorado Boulder, employ bacteria to autonomously mend cracks in concrete. Likewise, thermochromic textiles, as explored in initiatives like MIT's "Reconfigurable Fabric Environment," [3] dynamically alter color and shape in reaction to temperature variations, presenting versatile design options. Through the integration of these innovative materials, designers can create

interior spaces that are interactive and adaptive to users evolving demands, in accordance with Human-Centered Design (HCD) principles.

In essence, by carefully evaluating how these elements engage with human senses, behaviors, and emotions, human-centered design ensures that environments are tailored to enhance user experiences and promote well-being.

Ensuring that design solutions are accessible to a wide range of people is a fundamental principle of HCD. This involves addressing issues related to physical limitations, various cognitive abilities, and differing levels of computer literacy in both real-world and virtual contexts. HCD encourages designers to create inclusive environments that meet the needs of everyone, regardless of their physical or technological limitations.

An innovative approach to this could involve leveraging emerging technologies such as augmented reality (AR) or artificial intelligence (AI) to develop adaptive design solutions that dynamically adjust to individual user needs in real-time. This could revolutionize how we approach accessibility in design and architecture by providing personalized experiences that cater to the unique requirements of each user.

In the digital realm, Human-Centered Design (HCD) prompts architects to prioritize inclusive design when developing virtual architectural models. For example, projects such as the Virtual Reality Empathy Platform [4] developed by the Architecture, Culture and Tectonics Research Group at the University of Sydney demonstrate this approach. By integrating features such as voice commands and adjustable interfaces, architects ensure that virtual environments accommodate diverse users, including those with disabilities. This commitment to accessibility aligns with HCD principles, putting people first.

In my opinion, human-centered design (HCD) represents a crucial paradigm shift in the field of interior architecture. By prioritizing the needs and experiences of users, HCD not only enhances the functionality and aesthetics of spaces but also addresses the ethical implications of design decisions. Designers must consider factors such as privacy, accessibility, and the potential impacts of technology on social interactions to create environments that truly benefit and empower individuals

As we look to the future, the integration of physical and virtual environments presents both exciting opportunities and significant challenges. HCD will undoubtedly play a pivotal role in navigating this landscape, fostering collaboration, embracing interdisciplinary approaches, and ensuring a commitment to creating environments that enhance the human experience across diverse dimensions.

In summation, Human-Centered Design (HCD) serves as a guiding framework for interior architects as they navigate the intricate interplay between virtual and physical environments. Embracing a blend of enthusiasm and critical inquiry is essential. While enthusiasm propels innovation, critical analysis ensures practicality and addresses inherent challenges. This delicate balance is paramount for crafting spaces that not only captivate but also effectively cater to diverse human needs and aspirations. Through the lens of HCD, designers and architects are equipped to harmoniously merge digital and tangible elements, ultimately enhancing the human experience within built environments.

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Julia Nerantzia Tzortzi[1], Tara Sahafian[2]
[1]Politecnico di Milano, Department of Architecture Built Environment and Construcion Engineering (DABC)
[2]American University of Cyprus, Larnaca, Department of Design
[1] julia.georgi@polimi.it, [2] tsahafian1259@aucy.ac.cy

Analysis of water element integration in the architecture and landscape of Persian Gardens amid the hot and arid climate of the Iran's desert

Key Words
Persian landscape, Water elements, Landscape design

This study scrutinizes the methodologies employed in incorporating the water element into the architectural and landscape design of Iranian gardens situated in the hot and arid climate of the Iranian desert. The research aims to comprehensively analyze the strategies and techniques utilized to harness and integrate water features within the design elements of these traditional Iranian spaces. The examination encompasses an exploration of historical precedents, contemporary practices, and environmental considerations, providing a holistic understanding of the intricate relationship between water usage and the unique climatic conditions of Iran's desert. In this research, we delve into the whole journey of water in Iran's desert by the hands of Persi ancient's architects.

The source of water in the Persian garden which located in arid and semi-arid regions is qanat. Due to high evaporation, transportation routes took the form of qanats, guiding groundwater to consumption areas through tunnels. The water circulation initiates beneath the foothills of mountains, where the water table is closest to the surface. The qanat tunnel gently slopes downward from this source, gradually converging with the steeper slope of the land surface above. The water finally flows above ground where the two levels meet. To connect populated or agricultural areas with an aquifer, qanats often extend for long distances. Water wells are another water source in Persian gardens. In addition to qanats, for periods of drought and to saturate the garden and fill its numerous ponds, a water well with the water equipment used for providing enough water to fill the garden's pools during dry seasons. Water from water wells rises to the surface by the cows, head to water reservoirs or water basins. Water reservoirs serve as storage facilities for water in gardens. Water is transferred from qanats or water wells to these reservoirs, and in times of emergency, the stored water in reservoirs is utilized. In Iranian gardens, water is prominently displayed. Architects ingeniously guide water into and out of the ground, creating a pervasive presence of water across the entire garden

area, even within the interior spaces of buildings. The water first boils beneath a wind catcher in a basin, rising to dissipate desert dust and cool its warm wind with moisture. Subsequently, water features were integrated into buildings of old gardens, referred to as summer houses. It enters a basin with fountains in the central building, flowing out in various forms into the main living room. Sometimes they used carved marble stones to create waves to enjoy the waterfall's sound and visually amplify the volume of water. On sweltering summer days, especially during midday, garden residents relaxed along the waterfront. The water circulates in various basins to humidify and cool the desert air, culminating in an ornate water fountain strategically positioned along the garden's main axis. The front water element, considered an essential element in building a garden, is mostly constructed in front of the main building. Its main aspect aligns with the length of the building and takes various forms, including rectangles, squares, polygons, and circles. Its dimensions correspond to the height of the building to reflect a complete image of the water's architecture. Subsequently, the water flows from beneath the winter building into the public space of the garden, pouring into a large pool or streaming towards other canals to change the arid weather in the gardens. After irrigating the garden's trees, the water flows from canals towards streets and neighboring settlements, serving agricultural needs beyond the garden.

Persia ancient architects not only facilitated the passage of water through the underground layers and the irrigation of trees but also brought displaying it to permeate the spirits of the desert's inhabitants.

By focusing on the examination of water elements, such as qanats, water wells (gavro), water reservoirs (ab anbar), wind catchers (badgir), bathhouses (hamam), basins (hozcheh), pools, and fountains in the overall water irrigation patterns, this research looks to elucidate the intricate relationship between water elements and the spatial characteristics of both indoor and outdoor environments. The analysis encompasses a comprehensive exploration of these specific water features and their integration within the architectural and landscape design of the selected case study gardens. namely the Dolat-Abad Garden in Yazd and the Fin Garden in Kashan, serve as illustrative examples to facilitate a nuanced understanding of the role and impact of water elements in Persian garden architecture.

The findings of this research contribute to a nuanced comprehension of sustainable design principles in arid environments, particularly within the context of Persian garden architecture.

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Juan Carlos Dall'Asta[1], John Latto[2]
[1,2] Xi'an Jiaotong – Liverpool University, Department of Architecture
[1] juancarlos.dallasta@xjtlu.edu.cn, [2] john.latto@xjtlu.edu.cn

Reimagining body-space dynamics: Lessons from Shanghai, the contemporary land of toys

Key Words
Virtual Landscapes, Urban Identity, Shanghai, Land of Toys

Introduction
This paper examines the evolving dialogue between the human body and architectural spaces, spanning both physical and digital realms, adopting Shanghai as a case study. It parallels Shanghai's urban dynamics with the Land of Toys from Carlo Collodi's Pinocchio, exploring how the city's rapid urbanisation and technological advances embody modern urban experiences.
Shanghai represents the intersection of economic growth, technological advancement, and architectural ambition, mirroring the fantastical world of the Land of Toys. This parallel extends to the fusion of physical and virtual experiences within the metropolis, reflecting a new urban paradigm [Manovich 2001; Mitchell, 1995]. Shanghai's landscape presents a blend of opportunities and challenges in navigating these hybrid spaces, similar to the transformative effects in Collodi's narrative.
The study contributes to the discourse on contemporary urban landscapes [Batty 2013; Castells, 1996], emphasising the need for urban spaces that support physiological and psychological well-being [McCullough 2004; Greenfield 2013].

Theoretical Framework
In this study, Pinocchio, particularly the Paese dei Balocchi (Land of Toys) segment, is used as an allegorical tool for examining the intricate dialogue between human behaviour, space, and technology, echoing the urban fabric of Shanghai. Symbolising illusory freedom, the Land of Toys aligns with Baudrillard's concept of hyper-reality, where the real and virtual blend - a phenomenon distinctly observable in the rapid urban progression and technological integration of the metropolis. [Baudrillard 1994].
This allegory is crucial for understanding how Shanghai's architectural vibrancy, stimulates our sensory perception and cognitive understanding, drawing from Pallasmaa's insights

[Pallasmaa 2012]. The transformation of children into donkeys in Pinocchio metaphorically reflects the loss of self-identity in the digital age, echoing Turkle's observations on digital immersion [Turkle 2017]. These transformations, challenging traditional identities and interactions, are exemplified by Shanghai, through its digital landscape.
Moreover, Zumthor's perspective on the emotional impact of physical design, resonate with the architectural dimension [Zumthor 2006] whilst, Norberg-Schulz's theories on the phenomenology of space, elucidate how Shanghai's spatial design influences human experience and interaction. [Norberg-Schulz 1980].

Methodology
A comparative literary analysis has been adopted, juxtaposing the narrative of Pinocchio with contemporary architectural theory and contextualising these insights within the urban landscape of Shanghai. This approach is designed to bridge the gap between literary imagination and architectural reality, offering a unique perspective on the challenges faced by modern urban environments.
Commencing with an exploration of Collodi's narrative, focusing on the symbolic themes of illusion, transformation, and the influence of space on human behaviour, these elements are then paralleled with key theoretical concepts, particularly in relation to urban design, human experience, and digital integration.

Space, Perception and Experience
William J. Mitchell explored how digital technology and an increasingly interconnected world are transforming our urban environment experience and reshaping the physical and social interactions facilitated by our cities. As access to this virtual realm becomes an extension of our bodies and potentially may even evolve into bodily implants, this transformation dramatically shifts our relationship with our surroundings and how we engage socially and perceive the world around us [Mitchell 2004].

> "I construct, and I am constructed, in a mutually recursive process that continually engages my fluid, permeable boundaries and my endlessly ratifying networks. I am the spatially extended cyborg" [Mitchell 2004, p.39].

This vision starkly contrasts the phenomenological theories proposed by Husserl, who emphasised the importance of the subjective experience in understanding the world. According to Husserl, perception is not merely a passive act but an active engagement with the physical. He argued that our experience of space is not solely based on sensory input but is also influenced by our intentions, memories, and cultural background [Husserl 1913]. Husserl's concept of the "lifeworld" underscores the significance of lived experiences and subjective interpretations of space [Husserl 1936].
The momentary transition from the physical realm to a virtual space in a parallel world creates a new perception whilst remaining physically present in the city. As we navigate this hybrid space, it becomes apparent that the city is no longer just a physical entity but an amalgamation of our subjective perceptions, interwoven with the digital fabric that envelops it.
"The virtual is opposed not to the real, but to the actual. The virtual is fully real in so far as it is virtual" [Deleuze 1968, p. 208].

Embodiment and Space
Maurice Merleau-Ponty expanded upon Husserl's phenomenology by introducing the concept of embodied perception. He argued that our perception of space is fundamentally linked to our bodily experiences and movements. Merleau-Ponty emphasised the role of the body as a perceiving entity, famously stating, "We are in the world as in our body" [Merleau-Ponty 1945]. He proposed that our bodily experiences shape our understanding of space, suggesting that architecture should consider this embodied nature of perception to create meaningful spatial experiences.
Gilles Deleuze offers a unique perspective on space and perception. He challenged the notion of fixed and stable spaces, instead viewing space as dynamic and ever-changing. Deleuze argued that space is not a pre-existing entity but is continually evolving through interactions between bodies and forces [Deleuze 1986]. His concept of "becoming" posits that space is not a static container but a process of continuous transformation, thereby challenging traditional architectural design notions.
With an increased understanding and appreciation of the inseparability of mind and body, more attention has been given to the mindfulness impact of Affective Space. In this context, architecture is not just a physical structure but a living entity that interacts with the human body on sensory and emotional levels. It is proposed that space design should consider the

embodied experiences of individuals, recognising the influence of architecture on emotions, moods, and well-being [Matters 2012; Varela et al. 2016].

> "The Atmosphere of a City is the subjective experience of urban reality which is shared by its people" [Böhme 2017, p.132].

Discussion

Like Pinocchio's journey, driven by his desire to become a real boy, the quest for authenticity and truth echoes the challenges faced by contemporary urban cities. In an era marked by information overload, access to virtual worlds, and superficial interactions, Pinocchio's struggle to differentiate between reality and illusion serves as a cautionary tale. It reminds us of the critical need for discernment, critical thinking, and the pursuit of authentic experiences. The transformation from a wooden puppet to a real boy symbolises the potential for personal growth and self-actualisation. It reflects our own pursuit of fulfilment, often overshadowed by societal pressures and materialistic desires. Theoretical writings from Mitchell, Husserl, Merleau-Ponty, and Deleuze suggest that the fusion of virtual and physical realms influences our subjective experience of spatial understanding. Here, the city remains intrinsically linked to our embodied perception, engaging our sensory and emotional experiences in a dynamic and transformative manner.

Conclusion

This exploration of Shanghai, seen through the allegorical lens of Pinocchio's Land of Toys, reveals the city as a microcosm of the complex interplay between the human body, space, and technology in urban settings. It exemplifies the merging of physical architecture with digital realms, showcasing how this amalgamation impacts human perception, experience, and the embodiment of space. This study underscores the significance of designing urban spaces that not only cater to physiological needs but also consider psychological well-being, striving for a harmonious integration of the physical and digital dimensions.

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FIGURES

Fig. 1 - John Latto (2023) 'framing the virtual city'.

Elena Rocchi[1], Elizabeth Lerman[2]
[1,2] Arizona State University
[1]elena.rocchi@asu.edu, [2] liz.Lerman@asu.edu

Principled innovation in immersive learning environments:
a roadmap for transformative change at Arizona State University's Herberger Institute for Design and the Arts using "technologies of human expression"

Key Words
Innovation, Learning, Ethics, Inclusivity, Creative, Transformative

Introduction
LoThis paper explores how Arizona State University (ASU) reshapes online learning through an innovative blend of ethics and inclusivity. Rooted in the intersection of education, innovation, and experiential engagement, this study endeavors to delve into the transformative methodologies of choreographer, writer, and educator Elizabeth Lerman and Dr. Elena Rocchi. The focus is on understanding how these methodologies function as a dynamic resource, setting a new standard for the ethical and inclusive evolution of "technologies of human expression" dedicated to enhancing bodies and facilitating interaction between the physical body and virtual space.
The paper provides an opportunity to reflect on the implementation of ASU's framework for positive societal change, Principled Innovation (PI), within The Herberger Institute for Design and the Arts (HIDA). By incorporating creative methodologies outlined in Professor Lerman's Atlas of Creative Tools, the goal is to reflect on integrating PI principles, creative tools, and disciplines with a focus on the potential widespread dissemination of arts-based tools through online technology to impact digital learning. To illustrate this integration, the analysis reports on a pivotal case study conducted by Lerman at the University of Maryland, Baltimore County (UMBC) in collaboration with students, professional artists, thinkers, and practitioners in 2014. This case study is foundational, enriching the research with practical insights and guiding its trajectory toward transformative educational practices for online learning through repetition, testing, recalling, interpreting, receiving, and making sense. The discussion strategically draws from the IRC case study to plan interventions in three key areas.

Ultimately, the endeavor seeks to bridge technology-enhanced learning with human expression, emphasizing the crucial role of bodily action in immersive or extended realities. The body, regarded as a repository of memory, information, and experiential knowledge, emerges as

a powerful tool to transcend visual-centric perspectives within online environments. This exploration's core is the central question: "How can we foster a genuine sense of presence in immersive environments?"
The paper aims to contribute to ongoing dynamic and forward-thinking endeavors, laying the foundation for future immersive experiences rooted in inclusivity, ethical considerations, and democratic values. The study is positioned within the historical context of educational technological shifts, often neglecting ethical considerations and inclusivity amid innovations. Against this backdrop, it stresses the need for intentional reflection on the implications of innovation in online education. This is especially crucial in the fast-paced environment of ASU, recognized as both a strength and potential weakness, demanding a thoughtful examination of how innovation impacts the educational landscape. ASU's distinctive position, marked by the convergence of people, technology, spaces, and strategic partnerships like Dreamscape or Starbucks, is identified as a driving force in actively reshaping the landscape of technology-enhanced learning and human expression. This is particularly evident in immersive reality, extended reality, and augmented intelligence. The text highlights the significance of seizing this opportunity to explore fundamental questions about Principled Innovation (PI).

Purpose, objectives, goal
The overarching purpose guiding this research is to enhance our comprehension of how the Herberger Institute for Design and the Arts (HIDA) at ASU serves as a leader in advocating and investigating Principled Innovation (PI) as "technologies of human expression" by intersecting PI with Lerman's Atlas of Creative Tools. This comprehensive guide maps tools and a dynamic collection of evolving ideas and practices Lerman has utilized in her creative endeavors. These explorations hold the potential to provide valuable insights into the diverse applications of PI across various contexts.
Within this research initiative, three pivotal collaborative objectives are outlined to catalyze transformative and principled innovation within HIDA's academic landscape: Enhancing the Use of Principled Innovation (PI), Establishing An Architecture Collaborative In-person and Online Studio, and Developing a Canvas Platform for Independent Exploration. These objectives serve as navigational milestones, steering the research process toward implementing the Atlas of Creative Tools. The assessment of their impact spans diverse educational perspectives within HIDA, providing valuable insights into the transformative potential of creative tools in reshaping the educational landscape.
The goal is to comprehend how Lerman and Rocchi's transformative methodologies, grounded in arts-based principles and design tactics, leverage the potential of digital technology to create a more immersive and interactive online learning experience using human creative tools while establishing a new benchmark for the ethical and inclusive advancement of technologies.

Analysis
The analysis is anchored in a pivotal case study, specifically the Imaging Research Center (IRC) at the University of Maryland, Baltimore County (UMBC). This comprehensive nine-month exploration, led by Lerman in 2014, evaluated collaboratively with campus partners, and supported by the Surdna Foundation, engaged an interdisciplinary team including students, campus collaborators, and advisors from various domains for exemplifying hyper-connected tool sharing on a digital platform while pursuing overarching goals of ethics and inclusivity:
1. Reinventing Knowledge Dissemination:
Implementing new transmedia technologies to redefine how knowledge is disseminated.
2. Building a Transdisciplinary Learning and Research Community:
Fostering collaboration across disciplines for novel approaches to understanding and impacting cultural wisdom.
3. Educating the Next Generation:
Prioritizing the education of future artists and industry leaders through real-world, hands-on opportunities.
The analysis of the IRC case study extracts practical insights from a real-world application of innovative educational practice, shaping the overarching discussion and strategic interventions. Specifically, the examination of the IRC digital art tool pilot serves as the methodological cornerstone, directing the exploration of the potential to leverage and disseminate artistic tools through online technology. This alignment is intricately tied to the study's three pivotal collaborative objectives. Through the IRC case study, the research not only delves into the practical application of creative tools but also provides insights into the broader implications and potentially transformative impact on education and knowledge dissemination.

Discussion

The discussion strategically draws from the IRC case study to plan interventions in three key areas of teaching a course at ASU:

1. Enhancing the Use of Principled Innovation (PI) in Immersive Technology Courses in First Year:

Implementing insights gained from the IRC case study to enhance the incorporation of PI principles in immersive technology courses. The methodology involves redirecting a portion of the first-year course across the five HIDA schools into one to encourage future collaboration among HIDA Schools, Sociologists, and other ASU disciplines, creating an interdisciplinary learning environment.

2. Establishing An Architecture Collaborative In-person and Online Studio:

Leveraging lessons learned from the IRC case study to establish collaborative studios, both in-person and online, with a focus on fostering interdisciplinary learning. The methodology explores the prospect of creating an online studio for an online degree program tailored to programs like Starbucks College Achievement Plan (SCAP).

3. Developing a Canvas Platform for Independent Exploration:

Utilizing findings from the IRC case study to inform the development of a canvas platform that facilitates independent exploration for students and faculty. The methodology involves a phased approach, including designing, prototyping, seeking feedback, and refining the platform. The iterative process is crucial, and prototypes will be sent out for testing, with valuable feedback collected to inform refinements. Data collection includes feedback from faculty and students regarding usability, accessibility, and effectiveness, ensuring the final product resonates across diverse colleges.

This approach ensures that the discussion is informed by real-world applications and experiences, grounding strategic interventions in the lessons learned from the IRC case study. Overhaul, the discussion explores how enhancing the body-space relationship through the Atlas of Creative Tools impacts immersive learning environments and identifies potential collaborative projects that can enhance ASU faculty commitment to dynamic and forward-thinking endeavors. This sets the stage for future projects, underscoring the forward momentum in reshaping education through principled innovation. Central to this discussion is the imperative of the radical democratization of technologies, especially within studio or workshop spaces, dependent on reclaiming the body's role within immersive environments. This shift necessitates a paramount commitment to developing innovative tools tailored for this environment, emphasizing collaboration, inclusivity, and democratization.

Conclusion

Rooted in the historical context of educational technological shifts, this paper advocates deliberate contemplation of the implications of innovation in online education. Positioned at the juncture of innovation, ethics, and inclusivity within Arizona State University's (ASU) online learning landscape, it explores transformative methodologies devised by Liz Lerman and Dr. Elena Rocchi. Unveiling a pathway toward integrating the analog and digital realms through the body, it positions the body as a dynamic catalyst for the ethical evolution of emerging "technologies of human expression."

At the core of this progressive stance is the implementation of Principled Innovation (PI) within The Herberger Institute for Design and the Arts (HIDA), with a spotlight on Professor Liz Lerman's Atlas of Creative Tools. Inspired by Lerman's case study, the paper emphasizes the need to reinvent knowledge dissemination, foster transdisciplinary communities, and prioritize education.

Acknowledging ASU's distinctive position, the paper underscores the pivotal role of strategic partnerships in reshaping the landscape of technology-enhanced learning and human expression, especially in immersive and extended realities. The forward-thinking initiatives detailed in this paper lay a solid foundation for forthcoming immersive experiences marked by inclusivity, ethical considerations, and democratic values.

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FIGURES

Fig.1 - Photo by the author.

Cui Liu[1], Zhiyuan Gu[1]
[1] Zhejiang University, College of Civil Engineering and Architecture
mail: cui_liu@zju.edu.cn

An assessment framework of physical-virtual publicness in public space

Key Words
Public space, Publicness, Physical-virtual interaction, Assessment, Urban design

Publicness and spatiality are two fundamental attributes of public space. The nature of public space lies in the translation of publicness in space along with people's public activities. In the digital era, public activities are being transformed by physical-virtual interaction, which has resulted in many hot spots in social media. Different from the traditional public space that is predominated by the physical elements, such physical-virtual public space is composed of both physical and virtual spatial elements, and makes use of physical-virtual interaction to promote the publicness. It calls for a new framework to understand the nature of physical-virtual public space. This paper proposes an assessing model of physical-virtual publicness and applies it in Qiaoxi Historical Area of Hangzhou to identify the new features of physical-virtual public space.
Based on the classical urban studies of Conzen (1960), Lynch (1960) and many others, some scholars explored the features of public space from different aspects, such as access, agency and interest proposed by Benn and Gaus (1983), accessibility, inclusion and tolerance of difference by Young (1990), responsive, democratic and meaningful by Carr et al. (1992), ownership, accessibility and intersubjectivity by Kohn (2004), function, perception and ownership by Carmona (2010). These studies provide a solid basis to understand the multi-facet features of public space.
In recent years, several models of publicness were established to assess the multi-facet features of public space in a quantitative way, such as the star model proposed by Varna and Tiesdell (2010), the tri-axal model by Németh and Schmidt (2011), the OMAI concentric model by Langstraat and Van Melik (2013), the PSI pentagonal model by Mehta (2014), the PEM flower model by Lopes et al. (2019). These studies take publicness as the core attribute of public space that incorporates the multi-facet criteria. Although different criteria are used in different circumstances, nearly all of them are concentrated in the four dimensions of public space: form, function, control and meaning. But they focus only on the physical aspect of public space

and lack of consideration on the physical-virtual interaction.
Indeed, physical-virtual interaction has led to many new features of public space. For example, Kotus et al. [2022] find that digital technologies can serve as a substitute for the lost possibilities of physical contact. Nijholt [2020] suggests that a city's digital smartness should not only consider efficiency, sustainability and safety, but also make the city more attractive and playable to their inhabitants and to their visitors. McQuire [2017] introduces the concept of geomedia to describe a specific condition of our age whereby public space is networked and produces different kinds of social encounters. Serin and Irak [2022] assume that digital space acts as a conduit where the conceived and the lived are submerged.
Based on the above studies, this paper proposes a quantitative model of physical-virtual publicness to assess the features of physical-virtual public space. It includes four dimensions, i.e. form, use. control and meaning, and consists of both physical and virtual aspects in each dimension. Applying the model in the case, the paper defines the key criteria in each dimension as accessibility, usability, inclusiveness and vitality, and assesses the physical and virtual index based on multisource data and field survey.
For physical publicness, it uses Space Syntax for Visual Graph Analysis of the public space (physical accessibility), makes field survey about the function of adjacent buildings and facilities and about people present in the public space, then uses Kernel Density Analysis to visualize the distribution of functions (physical usability) and the presence of people (physical vitality), and uses Simpson Index to describe the diversity of people (physical inclusiveness).
For virtual publicness, it collects data from several social media (such as Amap and DianPing) to identify POI e-tagged on internet (virtual accessibility), distinguish those POI providing e-services (virtual usability), classify the comments for each POI into different categories (virtual inclusiveness) and count the number of comments for each POI (virtual vitality), then it visualizes the data in the masterplan through Kernel Density Analysis.
The visualized plan of the physical or virtual index in each dimension is represented with different colors to show the degree of publicness in different places of the case. The paper will identify the spatial features of publicness in different dimensions and make comparison between them. Then the paper will calculate the average index of publicness in each dimension, standardize the indices of different dimensions and mark them in the assessment model. The model can be used in other development stage of the same case to identify the rules of its transformation, or be applied to other cases to identify different types of physical-virtual public space.
Compared with former studies, this paper provides a new perspective from physical-virtual interaction to understand the publicness of public space and proposes a quantified model for assessment. Instead of achieving a single index of publicness to rank different public space, the paper aims to identify the features of different public space in different dimensions and physical or virtual aspect, so as to propose corresponding measures of improvement according to different typologies. It broadens the scope of urban design by integrating the physical space and the virtual space, and provides new perspective of place-making in the digital era.

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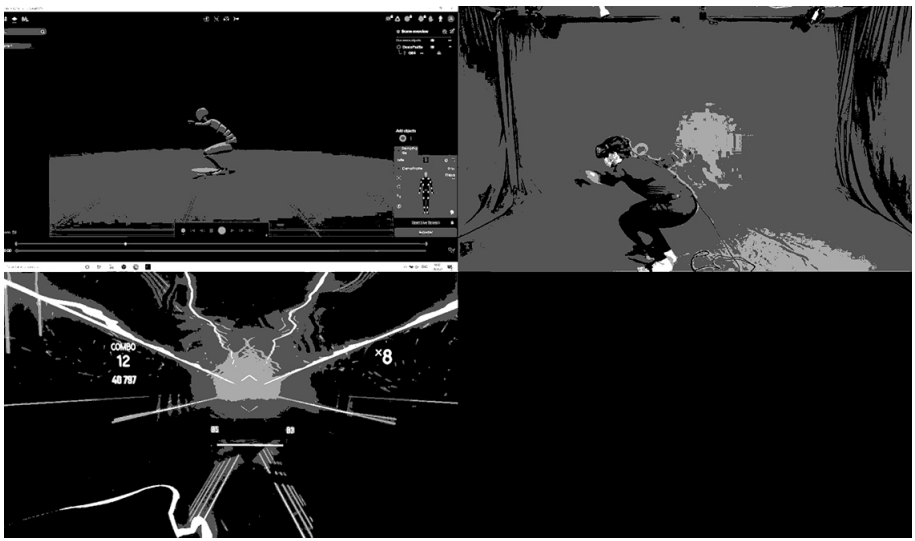
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Magdalini Grigoriadou[1], Giorgos Loukakis[2], Themistoklis Lekkas[3]
[1,2,3] University of Thessaly, Department of Architecture
[1] mgrigoriadou@uth.gr, [2] gloukak@uth.gr, [3] lekkasthemis@gmail.com

Beyond reality: exploring embodiment-disembodiment in Mixed Reality environments with non-euclidean geometries, innovative navigation modalities and perceptual dissociation in video games

Key Words
Embodiment-disembodiment, Mixed Reality environments, videog ames with non-euclidean geometries, Navigation modalities, Perceptual dissociation

Introduction

Architectural domains have witnessed an infusion of neuroscientific methodologies, contributing to an expanded cognitive theory enriched with insights from brain imaging [Mallgrave 2011]. This spatial awareness, grounded in physicality, transforms space perception into a corporeal experience [Van Kreij 2008]. In this current theorization, embodiment is considered as the main ability that everybody possesses to inhabit the space: the body is "spreading" its volume and by moving in the space, the environment is appropriated in one's favor. Space itself does not constitute an a priori experience, but rather it is a component of the embodied experience. Through this mediation, the space can be intelligible; the existence of a receptor is needed as a body provides the neurostructure to decodify the multiple elements that constitute each space.

On one hand, in contemporaneity, immersive digital environments present a unique experimental medium characterized by intricate interconnections of body movements, augmenting our experiences with innovative oneiric fluctuations [Jerome, Witmer 2004]. Extant research underscores the pivotal roles played by embodiment, body movement, body ownership, agency, orientation, and self-location [Kiteni et al. 2012]; embodiment or disembodiment, in this context encapsulates the sensorimotor state, morphological dimensions and mental representation of the body -whether digital or physical- in the broader cognition and perception of the world [Grabarczyk, Pokropski 2016].
The duality inherent in the embodied and disembodied conditions emerges as a lived emotional experience oscillating interdependently between these states. While the virtual body representation contributes to a semblance of ownership, the true embodiment is derived from the affordances of interacting with the environment, aligning with Gibson's ecological approach to perception [Gibson 2011]. Interestingly, in this metaphoric mode, immersion is sometimes

more connected with a sense of a more dream-like, surreal feeling of disembodiment, such as the sensation of falling. In this mode, the swing between embodiment and disembodiment is shifted from the visual representation of the virtual body to the auditory and kinaesthetic perceptual terrain.
On the other hand, in recent decades, the influence of digital design has led to a proliferation of instances showcasing non-Euclidean geometries in art, transcending conventional and architectural boundaries. This exploration has been a pervasive theme in major modern art movements, with examples ranging from Analytical and Synthetic Cubists, Italian and Russian Futurists, Constructivists, Dadaists and more. The characteristics of Hyperbolic and Elliptical spaces, with diverging and converging parallel lines, respectively, are key elements that can be also simulated as curved geometries.
In this context, the immersive surroundings evoke mesmerizing, interacting and occasionally enigmatic atmospheres. Thus, a unique perceptual shift is intricately tied to 3D audiovisual alternate realities of non-Euclidean geometries, where even the embodied non-human avatars engage with more dreamlike environments, expanding abstract tactile and kinaesthetic cues. This fluctuation between embodiment and disembodiment introduces a perceptual disconnect or mismatch between the experiences of the physical and virtual bodies.
In this double scheme, the presented projects, underpinned by contemporary research findings, draw upon human corporeal experiences, grounded perception and interaction. Mixed Reality Environments (MREs), as a research tool, stimulate human senses, enveloping individuals in a sensation of "being really in place" while influencing sound and visual interaction stimuli within the broader embodied perception [Bahrick, Lickliter 2012]. The multiscape of embodiment is constantly redefined and connected to the video game industry, providing an innovative research opportunity for identifying tangible embodied experiences of novel commitment practices [Chou 2015], spatial challenges [Hamari et al. 2014] and cognitive learning [Anderson 2011] interconnected to the spatial design.

Being Immersed in Virtual Environments. the case studies:
Virtual reality environments, characterized by a concentration of double entities such as avatars/bodies, foster body-movement interconnection and illuminate the intricate relationship between interaction engagement types and body-space research methodologies. The interplay of spatial configuration, inter-object distances and directions contributes to an embodied condition that can be further augmented using objects resembling map-like supervision [Darken & Silbert, 1996].
The presented projects encapsulate multifaceted theoretical inputs that probe the intricate relationship between the body and space within immersive digital environments. The embodiment terminology serves as a conceptual linchpin, encapsulating experiences lived through both physical and digital bodies. In the Disembody and Hybrid Postbodies projects, the temporal associations of avatars and identities delineate a novel body's mereology, culminating in an unsteady hybrid experience of otherness ripe for body-space associations and investigations. Interaction engagement is perceptually tripartite, encompassing the feeling of presence in the digital environment (fantasy), affective aspects of human and non-human interaction (communication) and regulatory properties of emotion (affect) [Bianchi-Berthouze et al. 2007].
The coexistence of imaginary elements and representative geometries can activate a special neuro-sensitive incorporative memory, bound to pre-logical gestures and body movements. This incorporative memory is associated with the internal constitution of body schemes. The virtual environments activate the incorporative memory, a function of embodied learning processes, since the body relates to the highly incorporative capacity of new postures, gestures and movements leading to an internal constitution of hybrid identities, in constant movement and diversity. [Pallasmaa 2011]

Even more, for the Immersive Artbodies project, as non-Euclidean spaces in digital environments invent special primordial forms, they raise interesting cognitive spatial challenges. Forms are ontologically different from the traditional Euclidean knowledge, and they closely resemble the unconscious experience of space. The confluence results in virtual environments where perceptual characteristics creatively combine video games and non-Euclidean geometries, seamlessly integrating non-Euclidean features with traditional Euclidean structures. The outcome is the creation of dynamic spatial constructs, spatiotemporal loops, teleportation abilities, perspective illusions and other elements that redefine the experience of space through various navigation modes.
The collision between the sensorial stimuli and the established Euclidean cognitive maps, internal in human beings, creates a sense of disorientation and distortion. The combination of

non-isomorphic perception of the environment with the extension beyond the sensory horizon leads to this new state of embodiment/disembodiment shift, induced by the multistable or bistable perception. [Backe 2021] These constant, temporal, dynamic, alternating embodiments in virtual environments provoke an unsteady hybrid experience of otherness and estrangement, leading to the argument that human reason must be restored to its function of turbulent aggressions against the endorsed reality. [Dalrymple 1984]
Space and motion are fundamentally interconnected in navigation. Navigation combines the space with the digital embodiment [Gibson 2011] and is the base element through which the gameplay acquires a language and therefore can operate at the level of a central organized system. This divergence from the Cartesian approach leads to the implementation of esoteric types of navigation often observed in nature.
The differences between spaces, non-spaces, Euclidean and non-Euclidean geometries, point towards new lines of interaction and new paths through space, generating diverse and more intriguing choices of movement. This condition leads to an alternation; active participation in these worlds is not a suspension of disbelief but rather a creation of a new belief. [Murray 1998]

Embodied Spatial Perception
The perception of space and objects within video games is not rigid; rather, it involves semiotic contingency and requires players to employ hermeneutic cognitive tools for interpretation. The interpretive approach fosters an understanding of the ambiguity present in non-Euclidean video games, [Totten 2014] resulting in a unique type of gameplay. Dipoles and dissociations within immersive games create changes in phenomenal perceptual schemes, contributing to a complex interplay between storytelling, sound, kinesthetic interactions and immersive designs. Drawing from Deleuzian concepts of repetitions and differences, the virtuality inherent in video games offers a vast array of possibilities. Virtuality, as a concept, represents a coexistence of ephemeral figures, a chaotic set of impulses generating spatiotemporal mutations. [Deleuze 1994] Each repetition in the gameplay introduces novelty, change, evolution and creativity. The virtual, with its dual nature of simulation and perversion, involves the reproduction of conditions through the repetition of the original and the reproduction of another through the imitation of the original, reaching a state of otherness. The virtual operates as a place where a double difference takes place, sustained by an illusion and creative perceptual emancipation. In digital environments, the representation of the virtual combines exact repetition with maximum difference, creating a collage of known and imaginative worlds simultaneously.
The virtualization or dematerialization processes that operate in our daily lives, supported by the advancement of digital technology, are translated not only to a bifurcation of the real but also into a set of the possible - through countless repetitions, differences and foldings. This creation or updating of a new, autonomous and real, is capable of producing simulacra that threaten the real [Baudrillard, 1981], has an opening to the future and injects meaning into the superficiality of the immediate metaphysical presence. [Levy 1995]

Conclusion
The fusion of the digital with the tangible redefines limits, ushering in an era of individual, subjective and personalized initiatives. Contemporary architectural space becomes an experimental field, blending diverse spheres and compounded bodies. The design approach involves steps from target expression to multisensorial analysis and selects a spatial pattern linked to a mind-map object arrangement to enhance user engagement.
In the digital realm, constructing new realities involves mental operations, transitioning from the singular and corporeal to the abstract, multiple and immaterial. The fluctuation between embodiment and disembodiment shifts from visual representation to auditory and kinaesthetic perception, resulting in a contingent assembly of objecthood, narrative space and fictional worlds. This aesthetic strategy enhances pleasure, immersion and engagement by blending physical and digital bodies, entangling cognitive maps and creating an unreal yet familiar architecture.

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FIGURES

Fig. 1 - Image from empirical stage - correlated audiovisual registrations, Hybrid Postbodies project (2022).


onst objLoader = new OBJLoader();
var index = 0;
var modelsFolder = "<?= $kirby->url("assets") ?>/models/"
var modelFiles = [
modelsFolder +"2.obj",
modelsFolder +"4.obj",
modelsFolder +"6.obj",
modelsFolder +"10.obj",
modelsFolder +"13.obj",
];
function loadNextFile() {
if (index > modelFiles.length - 1) {
meshes.forEach(mesh => {
mesh.visible = false
})
state.prevMesh = meshes[meshes.length - 2];
state.currMesh = meshes[meshes.length - 1];
state.currMesh.visible = true;
scene.scale.set(0.6, 0.6, 0.6);
animate();
return;
}
var url = modelFiles[index];
objLoader.load(url, (object) => {
var geometry = object.children[0].geometry;
geometry.center();
var baseMaterial = new THREE.MeshPhongMaterial({
color: 0x00ffff,
polygonOffset: true,
polygonOffsetFactor: 1,
polygonOffsetUnits: 1
});
var mesh = new THREE.Mesh(geometry, baseMaterial);
var geo = new THREE.EdgesGeometry(mesh.geometry);
var mat = new THREE.LineBasicMaterial({ color: 0xffffff });
var mat = new THREE.LineBasicMaterial({ color: 0xF4FF00 });
var wireframe = new THREE.LineSegments(geo, mat);
mesh.add(wireframe);
scene.add(mesh)
meshes.push(mesh)
index++;
loadNextFile();
},
}
loadNextFile();

Valentina Rizzi[1], Daniel Barba-Rodríguez[2]
[1] Università Iuav di Venezia
[2] Universidad de Valladolid
vrizzi@iuav.it

Virtualizing bodies in transformative platforms of corporeality: Embodied visualisation over flesh boundaries

Key Words
Embodiment, Transformative, Platform, Flesh, Installation

When conceiving of the virtuality of a body, we are often confronted with the complexity of ascribing to it the material and distinctive characteristics that we recognise to the present flesh. Yet, in the contemporary context, there exists a field of experimentation that retains a corporeality even in the virtual realm. This is not the corporeality of a lacerated or impaired body, but rather the digital incarnation of a vital organism.
The present contribution aims to explore the possibilities of such declinations in the field of visual arts and design practices in order to thematise the potential of bodily extensions that take on the status of propagation of flesh in the virtual sphere.
Furthermore, the research intends to analyse the forms in which the discourse around the corporeal is handled in its visual representations, where its status of presence is manipulated, where it is made accessible.
The research is framed within an embodied perspective of mutual co-formation of space, mind and body, within a transdisciplinary approach that incorporates transformative practices and image representation profiles. The hypothesis is that, accepting the premises of an embodied approach, it is possible to address the subject corporeality and transpose it into virtual and/or digital spaces with an awareness that does not contradict its essence. At the same time, such proposals must present themselves with the awareness that they provide a cross-section in extending complex and in-relation entities.
In the first section, we intend to analyse experiences that arise as virtual organisms online and, from various perspectives, investigate the forms of materialisation and dissolution of the body. To do so, we aim to present works that, starting from the body, emerge to work on the body itself in a virtual space, firstly through online events.
This is the case with Lilies in the Headlights (29.10.2021-29.12.2021), an online exhibition curated by Giulia Menegale during the pandemic, and supported by the Arts Council England,

with commissioned works by Romeo Roxman Gatt, Loreum, and Costas Kazantzis.
Secondly, the contribution aims to frame some of the platforms related to the theme of presence and corporeality to assess the responses and forms of deployment that the theme of the body is experiencing in the contemporary context. In this regard, we will mention the experiences of the Transmedia Research Institute, the dis.art platform, and the recent CThirteen community, a space for education and discussion among knowledge about the body through practices that place the variations of the virtual as access and screen to corporeality at the centre.
In this regard, experiences from the Transmedia Research Institute, the dis.art platform, and the recent community CThirteen will be mentioned. CThirteen is a space for education and discussion among knowledge of the body through practices that place the variations of the virtual as access and screen to corporeality at the centre.
These examples reveal, albeit with different origins, a common drive to experiment with corporeal re-materialisation in the digital that considers the body in its density over the mere flesh aspects. The breakthrough granted by the pandemic was not merely a parenthesis, but an opportunity to catalyse energies on an already active transformative process associated with the virtual which is not a fallback, but an operational choice in offering a representation of bodies that is conscious of its limits and uses the digital to reason upon the shifts of a relationship that must be considered in the contemporary era.
In the second section, the intention is to analyse the connection between the body and the virtual through installative displays. There are several ways in which physical reality and the virtual realm collide. Historically, it all relied on the audience's ability to imagine and speculate. Nowadays, however, digital technology has brought new ways of experiencing space. New spatialities that incorporate both the physical and the virtual. There are at least four major strategies used by artists to connect the physical body to this enhanced spatiality: visual, immersive, interactive and interconnective strategies. In each of these, the relationships between the audience, their bodies and the spatiality are entirely different.
The most essential way of achieving this desire is, of course, through the visualisation of any virtual dimension. By projecting images, many artists are able to add new layers of conceptual value to their works. They incorporate immaterial elements -such as time, memory, data, light, or essence/presence- into the physical dimension. This is evident in some very interesting sculptures by Daniel Canogar and also of the scenographic spaces designed by the artist -architect by training- Chris Ziegler.
Other artists, such as David Rokeby, a pioneer in the field of Media Art, pursue the immersion of the spectator in an alternative spatiality that offers a broader range of sensory experiences. Of particular interest in Rokeby's career is his artistic research on sound-driven spaces that react to the movement of the audience.
The real-time dialogue between a moving body and an enhanced space may be one of today's most spectacular features. Such is the case that there are artists who have become obsessed with exploring this design strategy. Interaction is the leitmotif of the entire artistic production of the French theatre company Adrien M & Claire B, both in their scenographic performances and in their art installations.
Finally, equally intriguing is the artistic research of the performance group Blast Theory on the social human condition and the consequences of living in a digital and socially networked environment. The interconnection between humans made possible by digital technology is historically unparalleled and therefore provokes new situations. Blast Theory's artistic praxis revolves around new social realities that, like in the virtual realm, are complex and not confined to a fixed context.
The contribution thus aims, through the analysis of selected case studies, to interrogate the possibility of a corporeal thought [Caleo 2021] arising from virtualised corporeality, subject to thermodynamic transformation processes driven by data, by the screen, by the online. The provision of resources derived from the body in the virtual realm offers a space to play and contest, to extend and reshuffle the boundaries of the material in terms of space and meaning.

ACKNOWLEDGEMENTS

This work has been conducted within the framework of the Research Project: "DIGITALSTAGE. Spatial Analysis of Digital Stage Installations of the 21st Century" (ref. PID2021-123974NB-I00, 2022-25), financed by the Government of Spain, MICIU/AEI /10.13039/501100011033, and the European Union.

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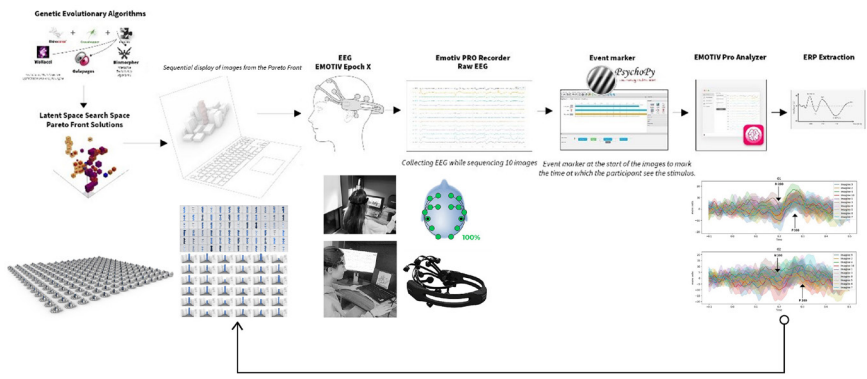
FIGURES

Fig. 1 - Source: https://www.instagram.com/p/CwSPOayloYj/?img_index=1


Genetic Evolutionary Algorithms
Latent Space Search Space
Pareto Front Solutions
Sequential display of images from the Pareto Front
EEG
EMOTIV Epoch X
Emotiv PRO Recorder
Raw EEG
Event marker
PsychoPy
EMOTIV Pro Analyzer
ERP Extraction
Collecting EEG while sequencing 10 images
Event marker at the start of the images to mark
the time at which the participant see the stimulus.
100%

Andreea Robu-Movila
Ion Mincu University of Architecture and Urban Planning
andre.movila@gmail.com

Neuroarchitecture.
From effective computing to affective computing in the design process

Key Words
Neuroarchitecture, Event-related potential, Architectural design, Paradox of Cchoice, Latent space curation

Design process in architecture has witnessed many transformative shifts in the recent years. The transition from top-down CAD augmentative tools to the generative ecosystem (CGD - computer generated design) based on effective computation, have promoted these "thinking tools" as design methods in themselves. However, this inductive bottom-up approach lacks the direct control over the final "form" as the designer builds the framework-algorithm and "in-form" the process by data and parameters. The computational universe promises a radical new approach to design where the focus is on process and the designer's work is relocated " to the design of the algorithm structure and the critique of its products'' [Scheer 2014, p. 156]. Beyond the lack of control over the outcome, a major challenge is that the computational approach is simplifying in relation to many ineffable and incomputable dimensions that the architect invest in a design process, such as the fundamental role that emotions have in reasoning and decision-making [Damasio 1994]. Emotions, perceptions and sensorimotor system are all part of our anchored cognition [Barsalou 2008] that is grounded and phenomenological entangled with the world, which explains why the architecture extends beyond mere computation. However, computation is the fundamental level of everything that exists, in all natural or artificial systems. Effective computation refers to what can be computed through calculus, however can everything be computed through this mathematical and the symbolic language? Architecture is considered to imply a level of complexity, depth and holistically approach that transcends effective computation in many ways. These ineffable and incomputable dimensions of the architectural problem can only be fully perceived by a human cognition whose "strength" emerges from "embodiment" [Pallasmaa 2011]. Architecture is therefore not only about form, rules and geometries, but also about human experience, atmospheres, affect and many more, which can hardly be quantified by numerical parameters. On this train of thought, this study

proposes to complement the benefits that effective computation brings to the design process with new tools that harness these human affective dimensions.
A way to bring valences of this affective experience into effective computing generative processes can be by appropriating the "affective computing" field of study [Picard, 1995], which is making use of computers and hardware devices to track and decipher human's emotions. Recent literature has overcome Decartes's cartesian dualism, legitimizing the fact that emotions have a significant role in reasoning and decision-making [Damasio 1996; Elster 1996, Bechara et al. 2000]. Emotions are therefore regarded as messengers of subconscious information, being biological signal through which we are making sense of the chaos in this information-overloaded world revealing the personal relevance of an event or stimulus for a person. Among many available neuroimaging tools EEG (electroencephalography) is one of the non-invasive measurement techniques that measures electrical activity generated by the active neurons in the brain through the scalp surface, using portable bio-sensors and amplification systems. This technique has the best resolution of response over time, up to ms. which makes it reliable to use for real-time brain-computer communication. The current EEG framework employs the ERP (Event Related Potential) component with a special focus on the ERP's P300 spike that reflects the changes in the EEG that occur within the first 300ms of stimulus onset, providing important clues about the subject's affective participation, its decision while making choices or expressing preferences [Palmer et al. 1994]. Its amplitude and latency are linked to sensory perception, engagement, and cognition [Woodman 2010]. As soon as these can be captured, this neurofeedback can be reinserted into the generative process in order to inform and evolve the generation.
Neuroarchitecture situates itself as an emerging field, the term itself being coined to denote the research at the intersection of neuroscience and architecture. Neuroarchitecture can be employed in two ways: either as a (1) study tool or as a (2) design tool. In recent times a considerable increase in the number of architectural studies have made use of neuroscience in their research. In the first category (1) EGG offered new opportunities for human-centered design while assessing the environmental effect of form, geometry or color on users as the impact of architectural style [Choo et al. 2017; Banaei et al. 2017] or the research on well-being and healing spaces [Sternberg 2010]. As for the second category (2) neuroarchitectre has been engaged as operative in the design process, as design tool via Brain–Computer Interfaces (BCI) as in the Mindsculpt study [Yang, Q et al. 2023].
For the current framework, a Rhino-Grashopper evolutionary genetic-generative algorithm (designing a tower in an urban context) has been coupled with an EEG commercially available EEG systems - EMOTIV Epoc X headset with 14 channels. This affective computing system has been used to control the generative phases by embedding the user's unconscious feedback, which can be inferred by this ERP component. EMOTIV Epoc X non-clinical EEG systems have proliferated on the market in the last decade, offering a relatively comparable solutions to professional and laboratory-based systems at affordable price, therefore it seem to be promising for use in architectural office practice. The signal captured by the EEG is interpreted upon the three dimensions: arousal, valence and dominance. The result of the qualitative analysis of the ERP in terms of amplitude and latency is sent back to the generative algorithm in Grasshopper to facilitate the designer curation of the morphogenetical potential in the direction desired by the creator, while leveraging the effective computation power. The final phase of this study (to come) is to train a neural network with the obtained data that would act as a "algorithm of preferences" (as Watanabe envisioned it in 1994), that would make possible the transfer of this framework from the laboratory testing environment to an architectural office.
Affective computing can be employed therefore not merely as a study tool but as a design tool too, capable of real-time synchronization with the generative process, thus facilitating a true form of co-creation that provides direct control over the algorithmically driven design processes. Since computation became a design method in itself, designers and architects are faced with rethinking human-machine relational intelligence as a co-creation environment, as a "direct manipulation" [Hutchins et.al. 1985] platform, because, "the closer we get to speaking directly to the machine, the more freedom of expression we have" [Coates and Derix 2014, p. 37]. Like any other tool man creates, Technology is a Pharmakon [Stiegler 2013] : it is not good or bad in itself, but depends on how it is used. This study aims to open a deeper debate on the future of the architecture discipline and its evolving design tools. This study introduces affective computation as an instrument that could be employed in generative design workflows in architecture and urbanism, through which can be build a co-creative "relational intelligence" portal, capitalizing on the transformative role of human perception and emotions as driving forces behind design decisions. Effective and affective computation should be regarded as complementary rather than in competition: while the former broadens the field of solutions through extensive computation and calculus, the latter narrows this field of solutions and helps

to make a decision by appealing to the embodied intelligence arising from emotions. Although the study in neuroarchitecture request trained researchers with multidisciplinary knowledge this bridge can result in fruitful collaboration. This transition from effective computing to affective computing can address the recent over-computerization of the design processes, as the future is not of singular AI but of human intelligence augmented by technology.

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FIGURES

Fig. 1 - The study methodology.

Sara Anna Sapone
Politecnico di Milano, Department of Architecture and Urban Studies
saraanna.sapone@polimi.it

Transformation of an antrhopic ecosystem.
Essemburg Park between physical experience and digital representation

Key Words
Urban nature, Societal engagement, Reclamation, Perception, Digitalization

> "Beauty is discovered through a process of mediation between the mind and body, between seeing and touching/smelling/hearing, between reason and the senses, between what is known through past experiences and what is expected in the here and now" [Meyer 2008, p.18].

Nowadays, in an era of unprecedented technological advancement, the physical experience of a place is often enriched by its digital representation, allowing us to discover and collect information that our individual physical bodies are not able to withhold. This both influences the experience of the place in that moment but also the storytelling surrounding it, emphasizing the hidden beauty of its nature, making an ordinary place feel special.
An interesting case to explore these notions, is the Essemburg Park of Rotterdam, a socio-ecological rich area located near the city's Central Station. Originally, the site was a polder landscape, the Blijdorpse polder, a typical Dutch biotope where the marshlands are reclaimed for anthropic uses, in this case linked to agriculture first and then rail transportation. This particular area was a freight yard belonging to the oldest city's railway, created in 1848. This function was abandoned in 1873, with the optimization of the railway network through embankments, leaving the space with an uncertain future. During this time, citizens started to reclaim parts of the area, with vegetable gardens created by the Turkish-Dutch community. In 2008, the citizens constituted the Pluktuin, now Essenburgparkgroep, an association that aimed to officially recognize this place as a park and to contrast the tentative housing development of the area by NS Rail [1] that held the ownership of the space. Another aspect used as leverage was to consider the original condition of the area as a polder landscape, suggesting using it to create a water collection area inexpensively whilst leaving it as a public green space. In 2017, pushed by societal pressure, the city of Rotterdam acquired the land from

NS Rail, appointing the Essenburgparkgroep for its upkeep, with the park officially opening in 2018 [2]. The principle was to intervene as little as possible, preserving the site's biodiversity and the spontaneous nature developed during the abandonment stage. This is a post-anthropic landscape, with nature developed on grounds altered by human uses, particularly rich in biodiversity as reported by ProRail's dossier [3], presenting a mix of spontaneously occurring plants favoured by seed dispersal carried by trains [Koster 1991].
The preservation of this site condition was possible through a bottom-up approach, with actions of physical appropriation of the space led by citizens, defining different spatial configurations within the park. The work was also supported by a designer, resident in the neighbourhood, able to translate the community visions into drawings and mediate with the administrations [4]. Leveraging the site's vocation and the need for water retention basins, the space design played with heights and pathways to create different experiences crossing the park, allowing to enjoy different habitat types whilst moving through it. One pathway is an external loop, in concrete on the lower side of the park and in compacted ground on the rail embankments. This linear and straightforward connection allows to appreciate the park moving at a higher speed, using bicycles, running or even walking in a straight line. Then, there is a system of informal pathways, moving between trees and traversing different heights, generating a sense of displacement in the urban setting. Along these paths, it is possible to appreciate a more variable experience of natural succession, with thicker assemblages of trees, open clearings and wetlands. In correspondence to the water bodies, small bridges are in place, self-built with wooden elements, quite precarious but that constitute a playful element to engage with the park conditions. [5]
This physical way to experience the park is complemented by the creation of an online platform [6], able to translate virtually the unique character of this place's biodiversity, a digital archive of the animals and plants present on site, constituted thanks to the user's inputs through their smartphone. This entailed a perceptual shift in the visitors, that don't look only for the "nice" plants and animals but also represent the "uglier" or banal side of nature, with its moulds, insects, and weeds. Traditional herbariums, created by ecologists, are done collecting samples on site, are nowadays transformed into virtual herbariums, where scans or pictures of the samples are uploaded on an online database. This is an ulterior evolution, an open-access platform, sourced from not only experts but also citizen's data.
The limitation of these tools is the creation of a catalogue that shows only singular specimens and not their interactions between them. To experiment in this sense, we tested with students [7] how to digitally reproduce a section of the site [8]. The idea was to evaluate the potential and limits of the digital representation of such an environment, to see how we as designers could benefit from this type of data, both to build narratives and use the information to drive the space-design. Starting from the aerial Lidar maps available on the AHN database [9], we estimated the vegetation density from above, to identify points to carry terrestrial scans. After the visit on-site, relying on our physical experience of the place and considering the retrieved data, we found an open area to carry the scans. This allowed us to represent different conditions characterizing the site: clearings, forests, and intermediate vegetation. This scan represents a moment in time, showing the complexity of the vegetation structure and the variation in section. Whilst designing it is frequent to abstract nature, without reflecting on plants' actual behaviour or the species' interrelation. Ideally, if repeated, the scans could emphasize the variations in the vegetation and, if inferred with species recognition [Nitoslawski et al. 2019], render a more precise representation of the site flora that is also geo-referenced. This may be useful to construct a narrative around the site through time, arguing the actual importance of its biodiversity for its surroundings and accounting for its changes, mirroring on a bigger scale the changes in the whole city, also in terms of vegetation adaptations to climate changes [Kowarik 2023].
This experience is situated in a broader research frame, a PhD dissertation that investigates the current and potential uses of emerging technologies for landscape architecture, considering a specific typology of sites, abandoned railyards. Looking at other applications that intertwine technologies and nature, with a focus on precision agriculture and urban forestry, the research moves in between the city's physical spaces and their digital representation, to stress the importance for design to consider existing ecologies as drivers, mainly to argue the current praxis in transformation processes. As shown also by other research, such as in [Urech, von Richthofen and Girot 2022], from the design perspective this may allow, with repeated campaigns in time, to account for the specific condition of a site with its vegetation, not only architectural representation with symbolic natural elements. This allows to consider it not only in the analysis phase but also in the design conception, implementation, and management, helping to avoid blank slate procedures that consider the existing condition as too complex to be addressed.

In the case of the Essemburg Park, the use of technology wasn't as crucial in the design conception or realization, more linked to bottom-up approaches, but pivotal in the storytelling surrounding wild nature. The physical alterations of the site were accompanied by technology usage to boost societal engagement, showing the potential for technology as a storytelling agent. After all, through time the area has already undergone three types of transformation: anthropic reclamation of a wetland for productive uses, natural reclamation after the abandonment stage and societal reclamation as public space to preserve its biodiversity. In insight, it could also be further integrated with the use of emerging technologies to monitor the site's changes and ease the place's upkeep, now carried out by the citizens, through minimal interventions targeted at maintaining the site's condition. The digital representation can therefore allow to appreciate and account for manifold aspects, both in a descriptive way and as data to design with. In this testing experience on site was interesting to evaluate the potential and limitations of emerging technologies in relation to the site's actual condition, realizing the importance to set properly a data campaign and the difference it entails in terms of resolution and final outputs, and usability of the images.
However, at least for the time being, this collection of data it is only limited to a visual experience, lacking other sensorial inputs. Instead, the experience of the body moving in the space, engages with the park with all the senses. It is an immersive experience but limited to fewer users and to a given moment in time. It is also a subjective perception, dependent on the individual and their capacity to perceive their environment, with significant differences between humans and the rest of the biotic community [Uexküll 1934]. For instance, as humans, we perceive plants as still. Using external tools, like photographs or videos, we can shift perspective to appreciate their movements [Mancuso and Viola 2013]. So, technology could also play a role in bridging the gap between the different physical perceptions in a place, not limited to the anthropocentric gaze. Ultimately, this precedent showcases an example of different possible perceptions of a place, both in the physical realm and in its virtual representation, opening up different potential perspectives to appreciate our cities' public spaces and conceive their future.

ENDNOTES

[1] Nederlandse Spoorwegen, NS rail, is the Dutch railway company that nowadays manages the train wagons and their movement.
[2] Historical data was sourced from the park website (in Dutch). See https://www.essenburgpark.nl/blik-terug/ (last accessed 14 January 2024)
[3] ProRail, the Dutch company managing the rail infrastructure, both physical and in terms of digital grid, commissioned a report to map and evaluate the Dutch rail landscape, establishing the biodiversity richness of its verges. See (De Groene Ruimte 2014)
[4] See the database website: https://waarneming.nl/locations/613795/photos/ (last accessed 14 January 2024)
[5] Catherine Visser from DaF-architecten. See to further expand : https://www.dafarchitecten.nl/projecten/essenburgpark/ (last accessed 14 January 2024)
[6] Interesting mapping work of the different soil types with diverse habitats, plant and animal species in the master thesis Awakening, by Fremke Lokhorst, accessible on : https://repository.tudelft.nl/islandora/object/uuid%3Aa8f347a1-ff22-4327-8cbb-4bba3fd9c23a (last accessed 14 January 2024)
[7] J. Wassenaar and V. Constantinescu, two students of the course Open Urban Data, held by professor Roderik Lindenbergh at TU Delft.
[8] The section was taken using the ecological transect method, typically used by landscape architects to evaluate the site's composition. It consists in the definition of a 10-meter section in a vegetated area, to intercept a profile of changing ecologies. An example can be found in [Gustavsson 2009]
[8] Open access Airborne Lidar data acquisition of the Netherlands, available on https://ahn.arcgisonline.nl/ahnviewer/ (last accessed 14 January 2024)

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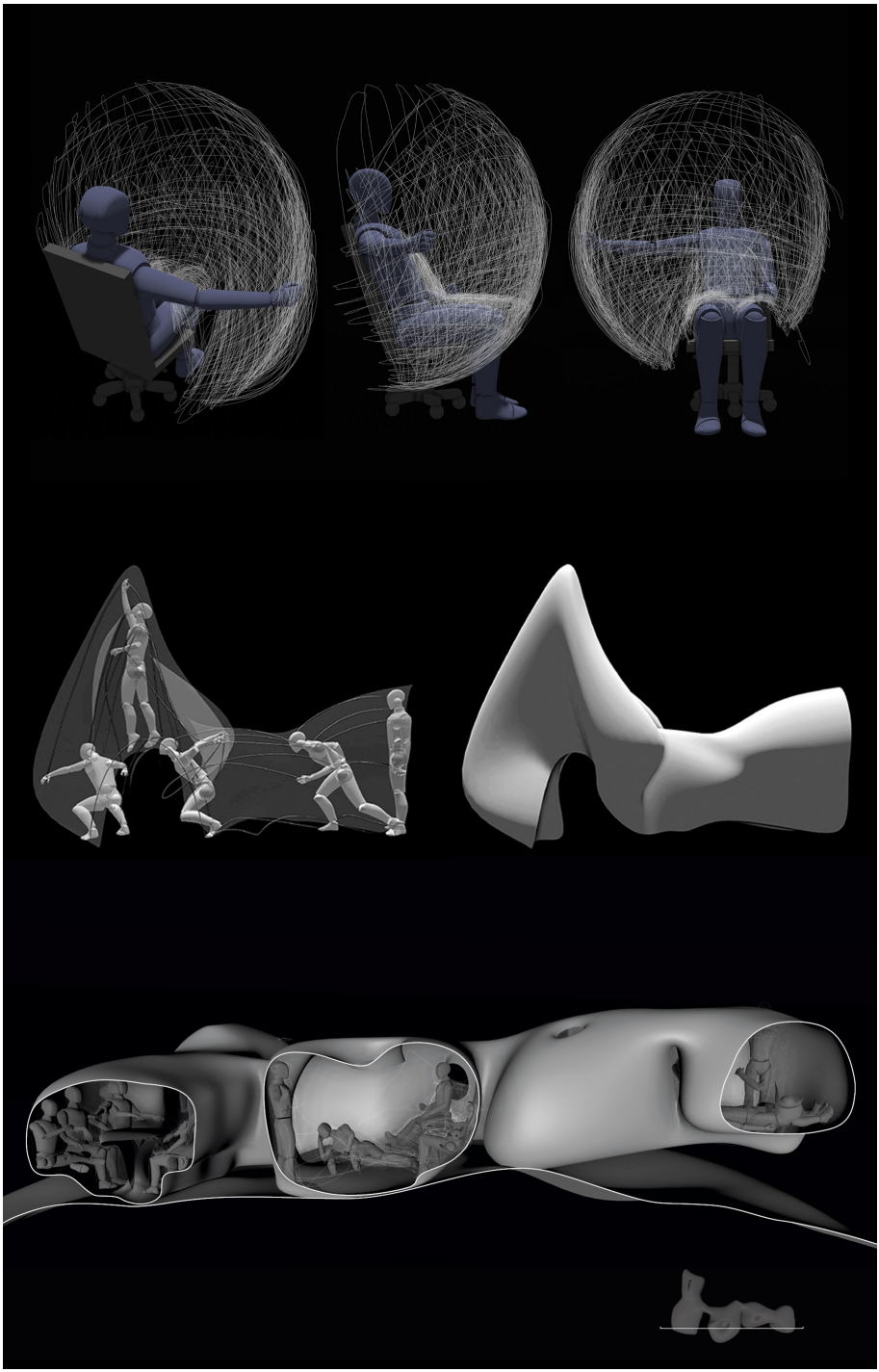
FIGURES

Fig. 1 - The Essemburg Park from Above, 2022, Satellite Lidar Scan, Infrared Imagery, Rotterdam. Open access data retrieved January 2024 from https://app.pdok.nl/



Sara Codarin[1], Karl Daubmann[2]
[1] Lawrence Technological University, College of Architecture and Design
[1] scodarin@ltu.edu

Humanizing VR:
Foregrounding the role of the body in Digital Twins

Key Words
Gestural modeling, VR Design, Immersive collaborative environment, Physical body, Digital design

Representational Transformations
The digital age in design has brought with it concerns about the diminishing role of the physical body in the creative process as everything focuses on the virtual. The mouse, as the most typical digital design input device, while functional, falls short in capturing the full range of human dexterity, especially in translating three-dimensional reality. The mouse moves across a flat surface as an analog for the flat construction planes required by most design applications. This reductionist approach is an extension of the interaction between observation and hand-drawn outcomes seen in historical practices, such as the Renaissance's development of perspective drawing, where physical devices served as early methods to transpose elements of reality onto a two-dimensional surface.
In the current landscape of digital design tools, virtual reality (VR) technologies like Gravity Sketch are investigated as a means to reposition the importance of designed corporeity by integrating the intelligence of bodily movements [Pallasmaa 2017]. VR tools are capable of capturing full-body movements and gestures, reintroducing the human aspect that is potentially at risk of being overshadowed by digital abstraction. These tools can be used in a virtual real-time, three-dimensional spatial design environment that allows for inhabiting the digital visualization with a human digital twin informed by the human body. Focusing on amplifying the presence of the human body in digital design, this contribution shares approaches and bespoke case study exercises of VR digital design workflows that emphasize the intuitive nature of designing with the body and working in a VR collaborative space.

The Human Body as a Tool of Analysis
VR tools link designers and their creations, fostering an engagement in thinking with the hands and hybridizing the practice of learning-by-doing in immersive environments. Frank Wilson's

"The Hand" highlights the importance of harmonizing mind and body through gesture [Wilson 1999]. This exploration leverages VR to cultivate intelligence able to merge drawing and modeling into a unified gestural process. In this regard, an approach to using VR design is structured to leverage both theoretical and technical knowledge in designing for and with the body.
This exploration includes a look at the development of technologies in the twentieth century that deepened the scientific understanding of both reality and the body, with influences from areas like cinematography and photography that eventually crossed over into the realm of design. Defining examples include the motion sequences of Étienne-Jules Marey that intertwined chrono-photography with anatomy [Dagognet, 1992] and Harold Edgerton's use of the stroboscope, which marked an advancement in photographic technology. This exploration seeks to make more connections between historic representation techniques and VR workflow. The stroboscope made it possible to capture motion frames as brief as 1/100,000th of a second, revealing movements imperceptible to the human eye. Similarly, Gravity Sketch enhances the temporal representation of body movements, augmenting the understanding of human motion, spatial awareness, and rotational constraints.
From the theoretical standpoint, parallels can be drawn to the Renaissance conceptualization of the human body, particularly through the work of intellectuals like Francesco Di Giorgio Martini. His sketches combined human figures with architectural plans, portraying the body as both an external, observable object and as an omniscient presence. These historic pieces represent the body not only as a physical form bound by geometric principles but also as an idealized figure that underpins architectural norms. As a counterpoint, VR tools act as platforms that emphasize ergonomic and individualized experiences. They enable the analysis and depiction of hypothetical spaces born from kinematic dimensions and personal experiences, offering a more immersive and firsthand approach to understanding and visualizing spatial concepts.

Workflows Informed by the Body in Space
The research focuses on realigning body movements into design processes, utilizing Gravity Sketch for experimental exercises that emphasize hands-on application in VR. This approach was implemented with a multidisciplinary group of designers during a workshop titled Digital Bodies/Digital Twins.
Each case study VR exercise is designed to explore the intersection of digital and physical design. Workshop participants engaged in tasks that ranged from tracing the extent of their bodies using VR tools to creating complex 3D models influenced by physical movements and constraints. This approach allows for the visualization and understanding of the bodies' capacities and limitations within a digital space. A selection of key VR exercises is described below.
Body Constraints
The initial task in the workshop, titled Body Constraints, introduced participants to Gravity Sketch, where they used the stroke tool to trace the outlines of their bodies, focusing on key points like shoulders, knees, chest, and waist. This activity helped them visualize the space their bodies could reach and understand the dynamic nature of body movements. Referencing Greg Lynn's interpretation of Edmund Husserl's concept in "Body Matters," the exercise emphasized each body's unique form, "anexact but rigorous" [Lynn 1998].
Bodies in Motion
The Still Frames of a Body in Motion exercise consists of using subdivision modeling in Gravity Sketch to create a series of keyframes that illustrate a body performing a motion sequence. The exercise then involves connecting the rotational points of the body's articulations with 3D strokes [Ingold 2013], visualizing the space between poses. This process culminates in the creation of a singular surface that encompasses the entire motion sequence. Throughout the exercise, participants alternated between embodying the movements and observing them, which ultimately resulted in a 3D-printed object that encapsulated the temporal dynamics of the motion.
Translations in Model Making
A Plaster Casting workflow was established to bridge virtual and physical realms through the digital twins. The process involved creating freeform objects by casting plaster in fabric formworks, shaped and influenced by specific hand gestures. These physically manipulated forms were then digitally modeled in VR. This approach highlighted the synergy between manual interaction and material response, leading to the conversion of tactile experiences into complex digital models.

Domesticity without Bones
The final assignment of the workshop aimed to synthesize the knowledge gained, focusing on designing a house concept based on Digital Twins/Digital Bodies principles. Participants were

to create a domicile, emphasizing the scale in relation to the human body. Gestural Domesticity uses curves in space to depict motions and spatial boundaries for various domestic activities [Berke and Harris 1997] using the body as the only metric for spatial configuration. Surfaces were defined by the strokes informed by body performances within programmatic spaces, then aggregated, entwined, and entangled in different configurations within single or multiple volumetric clusters.

Results and Discussion

The outcomes of these Digital Bodies / Digital Twins experiments reveal the transformative potential of VR in the design process. By placing the human body at the center of the creative workflow, designers can gain a deep understanding of the interplay between physical movement, spatial perception, and digital creation [Di Raimo 2010]. The shared real-time VR space in Gravity Sketch fostered a collaborative learning and experimental environment where workshop participants could directly observe and interact with each other's design processes. Designers in Gravity Sketch manually crafted geometry, with outcomes reflecting their skill and critical thinking beyond software capabilities. The workshop highlighted a link between gesture-driven design and complex forms, with VR enabling more fluid and freeform outcomes than traditional computational methods.

Conclusion

The VR Digital Bodies / Digital Twins experiments challenged the prevailing notion that digital design is detached from the physical body. By harnessing VR technology, the present contribution, supported by the case studies, demonstrates that digital workflows can be deeply human-centric, extending the reach and influence of bodily gestures in the decision-making phases of form-finding. This approach not only enhanced the creative capabilities of the participating designers but also imbued their work with a sense of humanism.

Future versions of the workshop will further explore the integration of construction materials and detailed architectural elements into VR design. This progression will align the workshop more closely with the comprehensive approach of a design studio, enriching the digital design process with a more nuanced understanding of the body and labor in construction.

Digital Bodies / Digital Twins offered a glimpse into a future where digital and physical design processes are not just parallel but deeply interconnected. The exploration of VR as a tool for design reinforced the idea that digital mediums can be as expressive and human-centric as traditional methods, opening new avenues for innovation in architectural design.

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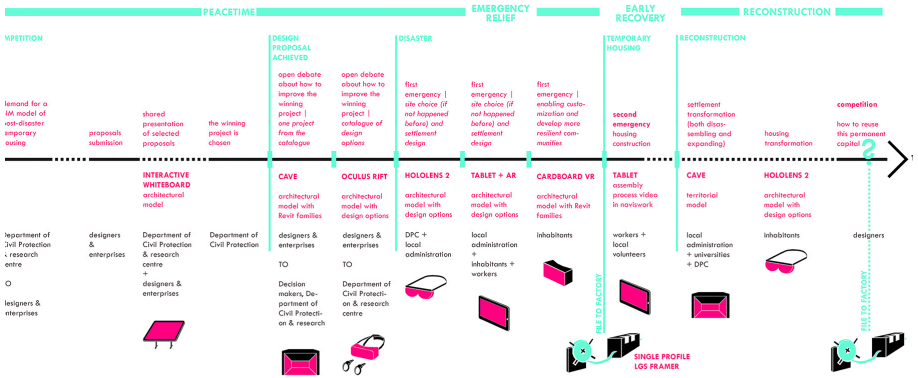
FIGURES

Fig.1 - The VR workshop exercises Body Constraints, Bodies in Motion, and Gestural Domesticity conducted using Gravity Sketch in a VR collaborative space.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DESIGN PROPOSAL ACHIEVED
open debate about how to improve the winning project | one project from the catalogue
open debate about how to improve the winning project | catalogue of design options
DISASTER
first emergency | site choice (if not happened before) and settlement design
first emergency | site choice (if not happened before) and settlement design
first emergency | enabling custo-mization and develop more resilient com-munities
TEMPORARY HOUSING
second emergency housing construction
RECONSTRUCTION
settlement transformation (both disso-sembling and expanding)
housing transformation
competition
how to reuse this permanent capital
2
INTERACTIVE WHITEBOARD
architectural model
CAVE
architectural model with Revit families
OCULUS RIFT
architectural model with design options
HOLOLENS 2
architectural model with design options
TABLET + AR
architectural model with design options
CARDBOARD VR
architectural model with Revit families
TABLET
assembly process video in naviswork
CAVE
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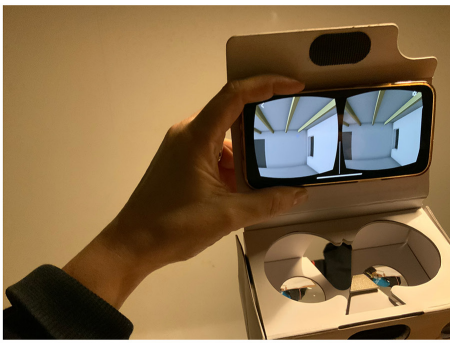

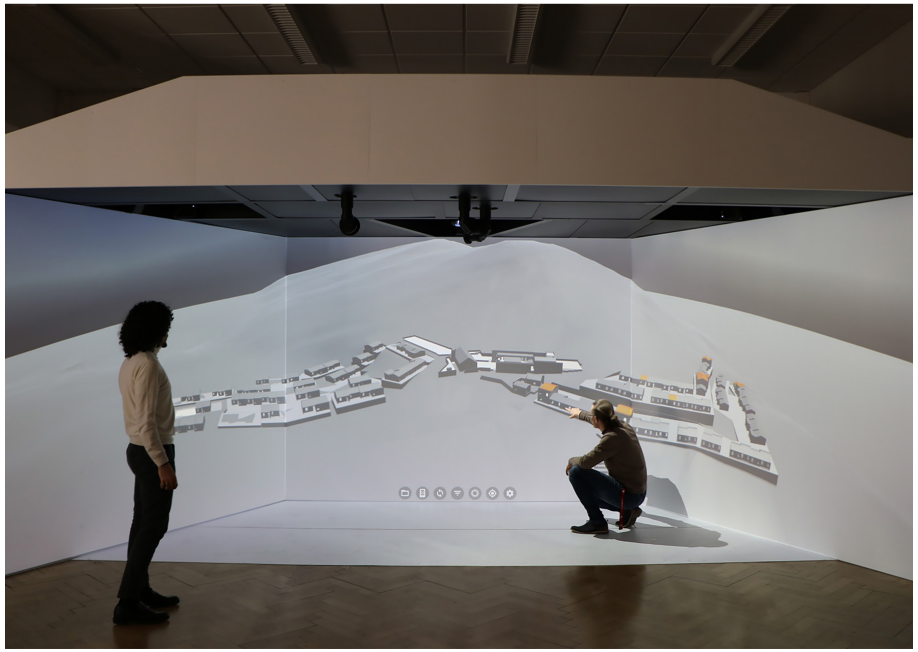

Giovangiuseppe Vannelli[1], Monica Rossi-Schwarzenbeck[2]
[1] University of Naples Federico II, Department of Architecture
[2] University of Applied Science HTWK Leipzig, Faculty of Civil Engineering
giovangiuseppe.vannelli@unina.it

When the body-space relationship needs wider understanding to foster participation.
A strategy to integrate reality, virtuality and stakeholders in post-disaster design

Key Words
Complex design, Temporary shelter, Digital transition, AR and VR, Transdisciplinary research

This contribution refers to a doctoral thesis on post-disaster design that, starting from the design of temporary shelters usually built during the early recovery phase, focuses on the crisis provoked by the seismic event. The dissertation aims to link together different design processes and phases: the temporary response of the early recovery phase, the reconstruction process and the revitalisation of the affected territories.
The complexity of the earthquake's aftermath challenges traditional design strategies and processes.
The research investigates this issue with reference to the Italian context, which is unusual considering the technical performativity and the number of projects realised to house displaced communities, although the lack of a specific post-disaster design culture is urgent to address. In this sense, architectural and urban design has to challenge its boundaries.
By virtue of these premises, the post-earthquake emergency is assumed as a field of exploration to broaden theories, methods and tools proper to architectural design. In this sense, some characteristics ascribable to this complex design demand are emphasised in the contribution: the impossibility of being on site, the large number of stakeholders and their phase-dependent variability. These characteristics lead to a reduction of the body-space relationship – when referring to designers – and at the same time the exponential increase of bodies – referring to stakeholders – involved in design processes. These elements are outlined here as meaningful for post-disaster design, understood as representative of complex design questions.
When an earthquake occurs, many sites are suddenly subject to transformative processes that address the emergency and a different group of stakeholders will correspond to each site; for example, the thesis mainly focused on the 2016 earthquake that affected 56 villages in marginal territories in central Italy.
Although the site visit – the spatial exploration performed by the body through the senses – is

generally considered a topical stage of the design process, when the same institution (the Department of Civil Protection in Italy) has to deal with so many sites and stakeholders, the current innovations that variously merge reality and virtuality can represent a meaningful tool in the design process to deal with such complexity, to foster interaction and decision-making and to ensure a broader interpretation of participation in the perspective of inclusive and open processes.
Within the dissertation, in order to avoid or minimize the reconstruction risk [Vannelli 2023], the post-earthquake design is assumed as a time-based design [Leupen, Heijne, van Zwol 2005] for an open [De Carlo 2013], open-source [Ratti, Claudel 2015], minor [Boano 2020] and processual project [Bocchi 2014]. At the same time, it is considered as a way to foster digital transition in marginal territories. In this sense, the post-disaster heritage can be assumed as a long-lasting construction site in which to develop further re-design processes where the integration of Virtual Reality and Augmented Reality can contribute to the definition of innovative scenarios for participation, simulation and forecasting.
The process described through the scheme presented here refers to a design experimentation for a reusable, flexible and modular housing system that allows for both its disassembly and expansion over time. The proposal intends, on the one hand, to cope with the unpredictable circumstances that may occur and, on the other, to avoid the "box effect" [Lizarralde 2010, p. 31] usually observed in temporary settlements. In the light of the complexity and need for interoperability in the long timeframe of these transformation processes, the possible roles and potential of immersive and non-immersive visualization tools have been explored [Rossi-Schwarzenbeck, Vannelli 2024].
Based on possible design scenarios defined in relation to the occurrence of the disaster, the outlined strategy is structured according to three phases: peacetime, emergency relief/early recovery and reconstruction.
In the light of the above, the simulation considers multiple stakeholders alternatively involved in the process at different stages. The uncertainty inherent in disasters required analysis and forecasting of the roles and relationships between inhabitants, workers, designers, enterprises, local administrations, Department of Civil Protection (DPC), and research centres.
The strategy starts with a design competition for temporary shelters launched by the Department of Civil Protection to provide the national government with a BIM model for post-disaster temporary housing. This procedure is proposed as necessary in the peacetime in order to avoid the acquisition of projects under emergency conditions.
After the acquisition of this first model, once the seismic event occurs, all the projects in the earthquake-affected sites will be realized to accommodate the displaced communities and then, afterwards, possible settlement or housing transformations may arise according to the inhabitants' needs, until the moment when a future competition can be launched for the reuse of the temporary heritage within other projects. In this process, the cooperation between the different stakeholders can be enabled and enhanced through the use of multiple AR and VR tools: the interactive whiteboard, the Cardboard VR, the Tablet featuring AR, the Oculus Rift, the Hololens 2, and the Cave Automatic Virtual Environment.
Within this research, 'participating communities' are understood by expanding the traditional meaning of the word 'community'. Considering that these transformative processes assume a trans-regional scale, the participating communities are the displaced people deprived of their houses, the representatives of the local administrations often unprepared to handle such complexity, but also the workers and designers who suddenly find themselves having to deal with an extraordinary amount and types of projects.
Therefore, in relation to each stage of the process, the preferable relationship between tools, stakeholders and purposes is considered on the basis of an in-depth understanding of the peculiarities of each device: Augmented, Virtual or Mixed Reality; possible number of users; required skills of the involved actors; costs of the tools; possibilities of interaction with the model and required software. As an example, we will refer to the least expensive and the most expensive tool: the Cardboard VR glasses and the Cave Automatic Virtual Environment.
Proposed in the stage between emergency relief and early recovery, cardboard VR glasses can be adopted as very common devices with the aim of engaging inhabitants through an immersive yet non-interactive visualization. In this way, a non-expert community, equipped with very inexpensive virtual reality devices implementing any kind of smartphone, can become part of the decision-making process.
The Cave – the most expensive tool considered in this research – is proposed to be used both in peacetime and during the reconstruction process. This VR space can allow around 30 people wearing special 3D glasses to be simultaneously immersed in the virtual reality of the design proposal and discuss it together. In peacetime, an open debate on how to improve the selected project in the competition is imagined between designers, enterprises, decision-makers,

DPC and research centres (considered as possible owners of the tool, the HTWK Leipzig was considered as such in the doctoral research). Furthermore, the Cave is proposed during the reconstruction phase to discuss the transformation of temporary settlements or the demolition and reconstruction of collapsed buildings between local administration, research centres and DPC.
Thus, the proposed strategy shows how a complex design process can be enabled and implemented in its different stages and according to its many stakeholders when using AR, VR and MR visualization tools. Moreover, the devices considered here were studied not only to realistically and immersively represent an architectural project, but above all to optimize the design, production and construction processes by reconsidering the involved bodies [Bianchetti 2020] merging together virtuality and reality as augmented bodies.

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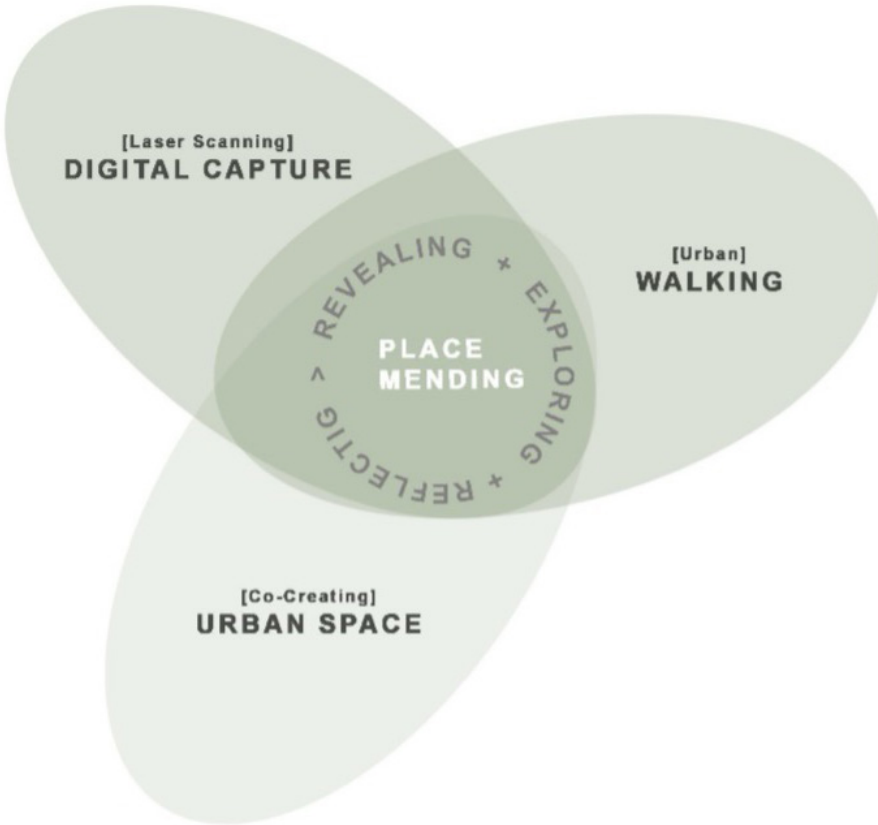
FIGURES

Fig. 1 - Giovangiuseppe Vannelli. A possible strategy to integrate reality, virtuality and stakeholders in post-disaster design to foster participation, 2022, scheme and pictures. Authors with Christian Irmscher.


[Laser Scanning]
DIGITAL CAPTURE
[Urban]
WALKING
[Co-Creating]
URBAN SPACE
REVEALING + EXPLORING + REFLECTING +
PLACE
MENDING

Daria Belkouri[1], Douglas Pritchard[2]
[1, 2] Robert Gordon University.
[1] d.belkouri1@rgu.ac.uk [2] d.pritchard1@rgu.ac.uk

Reclaiming the city for people. Digitisation of city walks to enhance urban co-creation

Key Words
Urban regeneration, 3D digitisation, Creative engagement, Urban walking, Co-creation

An understanding of the relationship between people and their experience of the [built] environment is of crucial importance in the development of liveable, healthy, and sustainable cities [Hollander & Sussman 2021; Goldhagen 2017; UN et al. 2023; Gehl 2010; Jacobs 1961]. The digital representation and analysis of the human body and its connection to the spatial context is rapidly evolving. It promises to provide new methods and evaluation techniques to enhance our understanding of our intricate relationship with the urban realm [Birenboim et al. 2019].
Pineo (2020) argues that healthy urbanism processes should be participatory, involving co-design and other methods to incorporate local knowledge, yet involving a fundamental shift in understanding and promoting policies that shape neighbourhoods and design of the built environment and public realm. Moreover, in the context of destructive practices, more frequent natural disasters affecting cities worldwide, planning recovery and reconstruction practices are research topics that require renewed attention [Banica et al. 2020].
In this study, we elaborate on the possibility of community co-creation by dissecting the city through reflexive descriptions of the urban experience, capturing community walks, and digitising the experience. The paper will critically reflect and discuss how the approach to conceptualising and representing the experience of urban walking holds the potential to question and redefine how the city is imagined and strategised. Walking will also be considered a form of research creation through affective encounters and creative potential with surrounding spaces.
When investigating the body-space relationships facilitated by emerging digitisation technologies (like 3D laser scanning and VR/AR/XR systems), we will evaluate the effects of technology on spatial perception while examining its potential impacts on co-creating urban space. This study will also consider how digital tools facilitate constructive dialogue and collaborative design to promote greater inclusivity and creativity. The scanning technology will be utilised to examine the impact of abstracted representations of city routes on individuals' perceptions of space.

It has been suggested that those who walk 'create' a city [De Certeau, 1984, cited in Bean et al. 2008, p.2834]. Walking may be viewed as a thorough exploration of the urban realm. Walking allows a more profound connection with the city through cognitive and multi-sensory inquiry where the 'peculiarities of place are apprehended at a slower pace' (Edensor 2010) would reinforce the idea that the process of deepening the relationship and subjective 'interpretation' of our cities could improve our experience of inhabiting urban spaces [Lynch 1960]. This research examines a technique for incorporating the inherent connection of walking with the urban design process, including virtual recordings and visualisations of the walking experience with infra-reflective, qualitative descriptions of the environment.
The exploration of mobile laser scanning in an urban context could provide tools for envisioning, analysing, and enhancing urban spaces co-created by the community. This research will be situated within the broader discourse on smart cities that embrace the idea that technology, when thoughtfully applied, could play a pivotal role in shaping resilient, socially connected, and sustainable urban environments with the hope that the transferability of methodology and study approach could be shared in similar contexts.
The methodology involves observing a hybrid urban environment, including physical and digital elements (Fig.1). This is achieved using a portable laser scanner to map the surroundings and create parallel representations of the city by utilising outputs from high-definition LIDAR scanning. Thus, nurturing the agency in integrating and embracing the technological advancements in sustainable urban narratives, this study aims to:
-Elicit ideas and speculate about urban possibilities. We will interweave walking and storytelling through the introduction of walk-along interviews. (Using the smaller scale neighbourhoods would allow for constructing a 3D model, streetscape views with sufficient spatial detail [Liao et al. 2022])
-Introduce the idea of place-mending through walking by digitising and visualising the walking routes from various eye-level perspectives, introducing an intergenerational approach that considers the multiple experiences and how they affect our perception of the city.
-Develop new ideas and co-create urban spaces to reclaim underutilised spaces for community benefit.
-Develop a place-mending toolkit for validating design decisions based on the co-creation and embodiment of rich qualitative accounts in the digital realm.
The data collection will involve conducting walk-along interviews (Phase 1), explicitly observing and reflecting on the immediate environment [Lynch, 1960; Pink et al., 2010; Middleton, 2011; Anderson, 2004] through audio recordings and 3D capture technologies. The purpose will be to explore whether a physical or conceptual place could catalyse new ideas, prompt diverse subjective viewpoints, and facilitate participatory thinking. Gathering data in real-time and while moving aligns with the objective of this research, which is to understand the environment better and engage in thoughtful immersion with the city. The materials gathered from walks (streetscape visualisations and qualitative accounts: participant's ideas, stories) embedded in the 3Dmodel (Phase2a) of the area will then prompt dialogue during co-creation workshops (Phase2b) and introduce the inclusion of the community to actively participate in the discussion on the experience of surrounding spaces and potential spatial improvements.
This study could offer a novel method through which stakeholders (citizens, professionals, designers) can recognise and employ insights into embodied mobile everyday life perspectives on the city in participatory planning processes. This research will strive to provide rich qualitative statements from various perspectives and add to the notion of urban planning framework, explicitly considering how those perspectives enrich the current theoretical approaches of automated walkability indexes and streetscape design principles generation. It will consider walking from a holistic perspective of inclusive place mending and reclaiming the city for people.
Furthermore, the proposed methodology could potentially be applicable in urban recovery or reconstruction in post-crisis situations through working with specific groups of people (migrants, newcomers, minorities, displaced communities affected by the aftermath of natural disasters), advancing understanding of the disparate intentions, strategies, and logics of city reconstruction to physically and metaphorically rebuild the affected areas, communities but also reconstruct their place identities.

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FIGURES

Fig.1 - Relationship between Digital Capture, Walking and Urban Context.

Carolina Pacchi
Politecnico di Milano, DAStU - Dipartimento di Architettura e Studi Urbani
carolina.pacchi@polimi.it

Just cities in the digital era. Hybrid spaces, bodily presence and planning

Key Words
Hybrid spaces, Digital sphere, Urban justice, Augmented bodies

The paper critically explores how models of urban justice, which in the past have been essentially based on the *equal spatial distribution of services and accessibility opportunities*, can be imagined and redesigned today, when inhabited spaces tend to become a complex mix between spaces in the digital and in the physical spheres, hybrid spaces or *hybridscapes*. The physical distribution of services and opportunities in our cities in the past was clearly connected to the physical presence and mobility of bodies in space, while, looking towards the future, it is increasingly clear that hybridscapes will entertain a much more complex relationship with bodies and their actual presence.

Cities and urban regions have been centre-stage in the debate about social justice and inequalities during the XXth century, and they still are today. Meanwhile, the type of space(s) people inhabit has been changing, slowly at first and, more recently, with ever-growing speed: in the digital era inhabited spaces are increasingly hybrid, formed by complex mixes of physical and digital ones.
The digital sphere includes social media [de Waal 2014], mobile applications to navigate urban life and to access services, digital platforms [Celata and Certomà 2022], crowdsourcing tools (Howe 2009), virtual and augmented reality environments, etc., while the hybrid one can be seen as formed by these last ones, plus the physical ones, and the spatial and social implications they have at both individual and collective level [Cowley, Joss, Dayot 2018]. They concern different areas of urban and daily life, such as work, education, social relations, recreation, shopping etc., and they are related to the production and treatment of large amounts of different individual and collective data [Kitchin in McKinnon, Burns and Fast 2023].
Such hybrid landscapes, hybridscapes, can be understood only recurring to a novel interdisciplinary approach, involving urban studies, planning, geography, digital sociology.

Hybridscapes are *complex and multi-layered socio-technical systems*, and their implications in terms of social interaction, dynamics of inclusion and exclusion and forms of differentiation and inequality are still under investigated [Kitchin, Cardullo, Di Feliciantonio 2019; McKinnon, Burns, Fast 2023].
The understanding of themes of urban justice and citizenship, as well as the insurgent dimension of struggles, have still to be fully explored in such spheres [Isin, Ruppert 2015]. At the same time, the smart city rhetoric, assuming a prominent position in urban debates [Rosol, Blue, Fast 2019], ultimately concerns only a specific form of socio-technical arrangement, linked to government and control dimensions (Zuboff 2019), unable to include the increased differentiation and fragmentation, and the different ways in which technology impacts on the lives of different social groups.

Looking at the spatial justice dimension, on the other hand, in the decades since 1980, *inequalities are on the rise* [Piketty, 2020], manifesting themselves at different scales, and becoming increasingly visible in spatial terms [Secchi 2013; Tammaru et al. 2021]. They are not a novel theme in urban studies, though. During the XXth century, the issue emerged firstly in relation to the rise of the industrial city and, in a later stage, in *reflections about the post-industrial transition, the emergence of a post-metropolitan paradigm and the diffusion of a global knowledge-based urban economy* [Soja 2000; Sassen 2005]. Planning practice, in turn, has long experimented redistribution strategies and tools aimed at tackling, reducing and mitigating the effects of inequalities. Dealing with spatial organisation, the traditional response proposed by planning policies has been essentially in terms of designing and providing, as much as possible, a spatially even distribution of (urban) goods and services [Fainstein 2010] aimed at ensuring a better and more substantial accessibility to all citizens. Such concepts are all intrinsically related to an understanding and interpretation of the *presence of bodies in the urban space as the central focus of attention*.
While many of the economic and social mechanisms contributing to the creation and reproduction of social and spatial inequalities are still at play in contemporary cities, and even in an exacerbated form, the digitalisation of many spheres of urban life for citizens has implied *further lines of fracture and further growing inequalities* [McKinnon, Burns and Fast 2023]. Thus, if we look at such spheres of contemporary urban life, *issues concerning fairness and justice, equal accessibility and the full deployment of citizenship rights* can be seen as highly problematic: not only it becomes impossible to deal with already existing inequalities with the spatial tools experimented in the past, but hybridscapes imply completely new forms of differentiation and inequality that have to be newly named, identified, and tackled with a new vocabulary and with novel theoretical, analytical and policy tools.

The main objective of the paper, which is part of an exploratory research, is thus to reflect upon the *possible paths to more just cities in the digital age*, and on what concepts of justice, fairness, equality, citizenship rights and bodily presence may mean in hybrid urban landscapes. The prospective aim of the research is to identify the lines of inequality and the possible paths to more just and fair urban environments, considering their increasingly hybrid nature, and the difficulties related to their under-explored nature and to the inapplicability of model of equal (spatial) distribution experimented in urban planning and policies in the past.
The guiding research question is therefore *if the model of equal spatial distribution of services and of maximising accessibility to opportunities for all citizens through spatial means is still valid and effective looking towards the future of cities, or if some elements need to be reimagined*.
In turn, this main research question can be broken up in three main specific questions:
-What are the hybridscapes in which we live? Which are the main emerging characters of the hybrid physical and digital spaces that characterise urban life? Which are the main differences with physical organisation of inhabited spaces in the past?
-Which are the main lines of injustice and formation of inequalities that characterise hybrid spaces? How is the 'smart city' rhetoric shaping lines of inequality in these spaces? Are there other, convincing narratives?
-Which elements and devices of the model of equal spatial distribution can still be effective in making opportunities for all more equal in the digital age, in which relationships between space and societ(ie)y are redesigned?
-Which different models may be imagined to ensure that inequalities will not be increasing in hybrid spaces in the future?

The paper will articulate and critically discuss such research questions in the light of the *transformations of the body-space relationships taking place in hybridscapes*, in order to

contribute to the definition of novel theoretical frameworks to explore urban justice issues.

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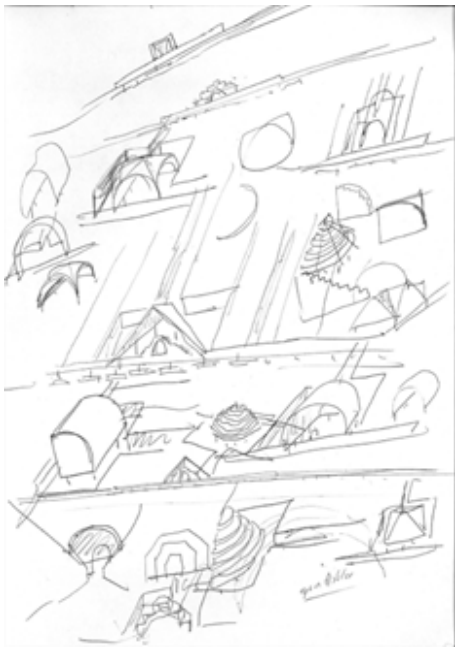

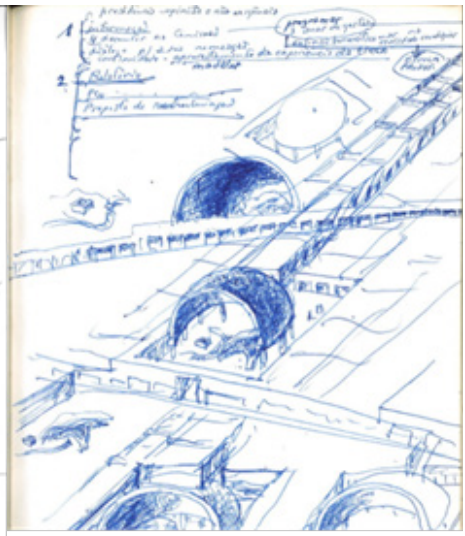

Álvaro Gonçalves[1], Pedro Guilherme[2], Sofia Salema[3]
[1,2,3]CHAIA / Universidade de Évora
[1]pmg@uevora.ptm, [3]ssalema@uevora.pt

Rescuing an unfinished vision:
A representation of the semi-dome of the Malagueira neighbourhood through Immersive Virtual Reality

Key Words
Álvaro Siza, Immersive reality, Malagueira's Semi-Dome

This research aims to investigate and represent, through the use of immersive virtual reality, the semi-dome of the Malagueira neighbourhood, an unbuilt element of the housing project designed by the architect Álvaro Siza (1931).
The Malagueira housing project (1977) was developed to address the urgent housing requirements of the city of Évora and laid the urban foundations for the city's expansion. The Malagueira semi-dome, along with other public facilities, was left unbuilt. Enrico Molteni states that this element's strategic location is reminiscent of collectivism in the neighbourhood's architecture: "In a barycentric position symbolic element is found, representing in general terms the concept of collectivism" (2013, p. 105). Previously, the importance of the semi-dome was diseased and was highlighted the various themes that arise from the complexity surrounding the project's conception: "The project is the laboratory in which Siza presents hypothesis and thesis about solutions. His lab tools are drawings, models, plans, and sections that recreate and instigate us to comprehend how building spaces could be, and their meaning" (Guilherme, Salema 2020, p. 187).
The neighbourhood is undergoing its classification procedure as a National Monument. Its inclusion on Unesco's National Indicative List of Álvaro Siza Vieira's work makes it imperative to research and communicate the project as a whole.
In the context of Évora European Capital of Culture 2027, the research topic to be developed in this dissertation is intended to establish a close relationship between the programme - Évora 2027 - and the role of heritage (publicising, enhancing, representing), through the possible holding of cultural events with a digital component, to open up the possibility of attributing representativeness to an invisible heritage.
The ongoing research focuses on the semi-dome and consists of four parts that describe and represent the immateriality of the project that is still waiting to be materialised: Genesis, con

ception and analogies; Matter; Representation and immersion.
The first stage lays the foundations for research based on Álvaro Siza's drawing archive, an extensive collection of records that includes sketches, rigorous drawings, photographs and models. This section aims to reconstruct Álvaro Siza's thought process, starting with the references he may have encountered during his travels and the projects that were being developed concurrently with the semi-dome's design. The aim is to establish common parameters that contribute to a coherent narrative and inform the project. The initial phase of the research involves constructing timelines that spatialise the evolution of the semi-dome idea, through the analysis of hand-drawn sketchbooks, understanding conception and analogies.
The second part of the research uses the same method as the first but focuses on the building's 'matter' to 'deconstruct' the semi-dome: a timeline will document the author's own built works to identify how particular materials and construction techniques were used to build the semi-dome. This will reveal the composition of each part from a structural and constructive perspective. Based on this logic, a third timeline emerges that includes the architect's travels through Europe and North Africa, focusing on his visits to Italy [1] and Morocco [2]. Thus, this timeline links the theme of genesis with the construction of the building. For the architect, travel was a research method, beginning with the observation and recording of references that shaped his perspective on architecture, both conceptually and materially.
The third section focuses on creating an accurate three-dimensional model of the building through on-site surveys and tests, which will provide a precise representation of the building's conceptual and material composition.
Finally, the theme of immersion is based on the exploration of new research and representation tools, including immersive virtual reality. This research method will allow the Malagueira community to directly experience and share their impressions of one of the plan's unbuilt elements. Immersive virtual reality enables users, whether professionals or not, to experience projects directly: "It offers a way to immerse themselves in a much more vivid experience in fields they may have seen as staid or uninteresting, offering them refreshing experiences full of ways to interact with what they can see, stimulating their curiosity and eagerness to understand" (Galan, Felip 2020, p. 49). This research is supported by previous studies that have implemented virtual reality technologies to educate the public about both built and unbuilt architectural heritage.[3]
This research is currently in its early stages, undergoing the first and second stages of (re) drawing Álvaro Siza's line of thought. The ultimate goal is to determine how new digital technologies can be used as tools to promote the dissemination and appreciation of tangible and intangible architectural heritage. These virtual tools establish a direct relationship between architecture and the general population. The community is engaged and informed about the building's urban value and its potential impact on their daily lives. Furthermore, the creative process can be transformed from an idea to a more interactive method of understanding and investigation, resulting in a final project.
The digital techniques employed in this research serve as tools for both developing the work and understanding the building from a formal and constructive perspective. They enable visualization, analysis, and interpretation of the unbuilt project and its relationship with the immediate surroundings.
In conclusion, this work aims to promote one of the components of Álvaro Siza's significant urban-scale projects. Although it is yet to be completed, the project is the outcome of a complex system that involves the participation of its inhabitants from its conception. It is essential to highlight the significance of this project for both the residents and the scientific community.

SUPERVISORS

Pedro Guilherme; Architect, Assistant Professor of Architectural History and Theory at the Architectural Department of the School of Arts. Affiliated to Center for Art History and Artistic Research (CHAIA). Primary researcher at "Malagueira Heritage for all. Contributions for its nomination".
Sofia Salema; Architect, Associate Professor of Architectural Desing at the Architectural Department of the School of Arts. Affiliated to Center for Art History and Artistic Research (CHAIA). Co-primary researcher at "Malagueira Heritage for all. Contributions for its nomination".

ENDNOTES

[1] "From the late 1960s onwards, Siza established important connections with various Italian architects during his frequent visits to Italy. This was a time when Italian design culture was focused on history and the city, with design seen as a moment of theoretical reflection that structured the architectural discipline

itself." (Mochini; Pietropaolo, 2016, p.17).
[2] " the tiles were blue-green, turquoise, because I had seen that - the idea comes from a visit to Morocco" (Siza, 2018).
[3] In 2020, the University of Seville implemented a strategy of using virtual reality to conduct virtual study visits to buildings in the historic area of the city. This was done in response to the pandemic context where access to public spaces was becoming increasingly restricted. The university opted to undertake surveys of three-dimensional models based on existing cartographic images, photographs and drawings.

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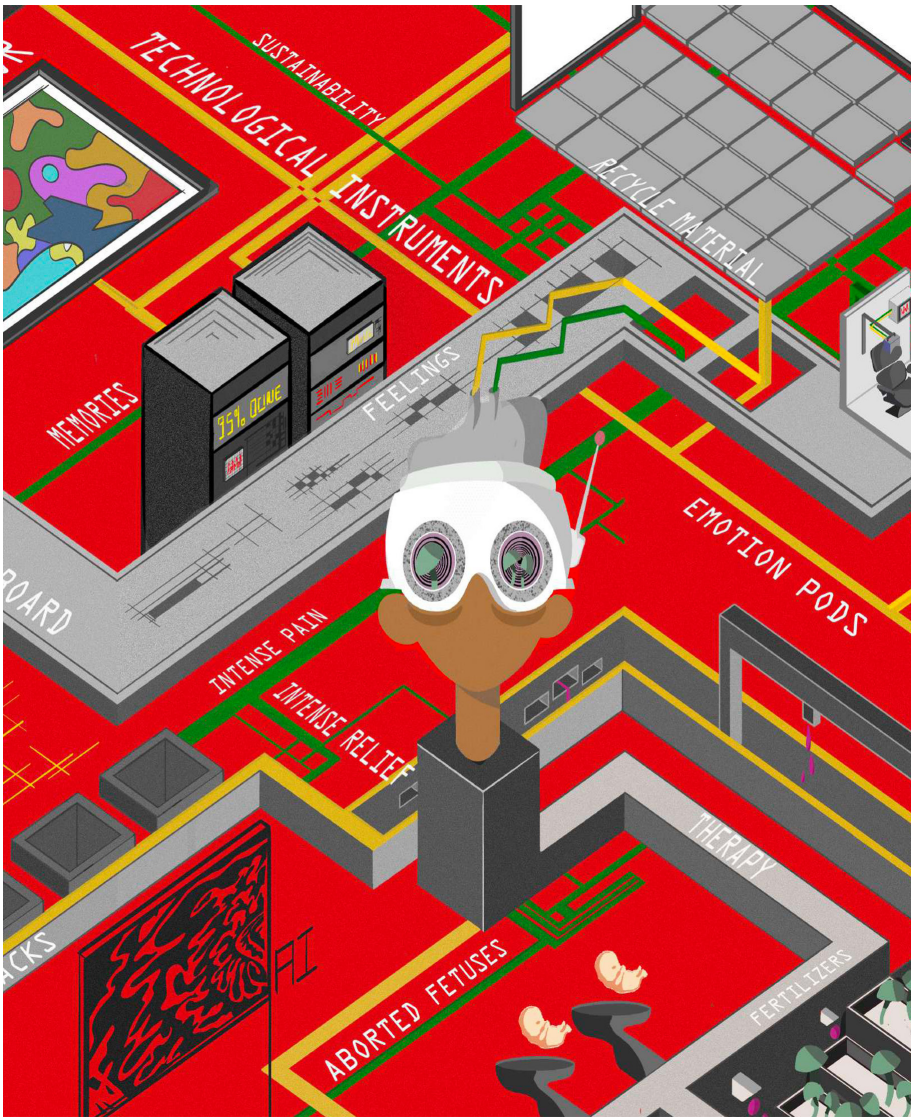
FIGURES

Fig. 1 - Exploration of the shape of the dome. Font: Malagueira.pt


SUSTAINABILITY
TECHNOLOGICAL INSTRUMENTS
RECYCLE MATERIAL
MEMORIES
95% Done
FEELINGS
EMOTION PODS
INTENSE PAIN
THERAPY
AI
ABORTED FETUSES
FERTILIZERS

Markella Menikou[1], Adonis Cleanthous[2]
[1,2] University of Nicosia
[1]menikou.m@unic.ac.cy, [2]kleanthous.adonis@unic.ac.cy

Prosthetic Intelligence:
Bridging the corporeal-ethereal gap in perceptions of space making

Key Words
Artificial intelligence, Corporeal, Ethereal, Architectural education

The paper describes the methodology adopted in an architectural design studio under the thematic 'Divining the future; technology is the answer but what was the question' [Mathews 2017], in order to challenge notions of the corporeal versus the ethereal in space making. The thematic of the studio poses technology as a lens to inspect the future of architecture, therefore it provides a fertile ground for inspecting the role of corporeity in the era of virtualization.
Specifically, students are asked to generate innovative propositions with technology as an integral part of the design process. This is achieved by integrating personalised insights from a pool of knowledge. Specifically considering both the conventional disciplines of mechanical, environmental and structural engineering, construction and building services and the not yet tested emerging digital technologies (including XR technologies). The limits of these disciplines are challenged through architecture and vice-versa.
Definitions of past, current and future technologies affecting architectural creation are established through critically developed positions afforded from the plethora of historic and contemporary theories surrounding the subject. The design studio reviews architectural theory to promote conceptual understanding of technology, function, programme and performance, in order to enhance appreciation of the interdependence of all parameters in space making and the relationship with allied technologies [Braham 2007].
The design studio starts from the realisation that history repeats itself. The programme is launched with the development of process tools for exploring possibilities of in-depth study of past patterns in order to inform and trigger visions of the future. The timeline of 500 years forward becomes the speculative proposition, the conceptual axis for incrementally projecting architecture into the future. Through the aforementioned methodology it becomes evident that regarding architecture current technologies such as virtual, augmented reality and artificial intelligence are nothing but one additional enhancement of body experience in space. Taking

this as a given fact, the seeming contradiction between the corporeal and the ethereal nature in architecture no longer exists; in fact, never did it exist.
Laugier's primitive hut reveals the mechanism through which human-made artifice transforms the environment utilising the most basic of tools: rearrangement of branches to bridge four trees. [Frampton 1995] The primeval conception of architecture as a specifically and essentially artificial environment make it the first step towards indirect or mediated technologically enhanced human experience tool. Tools are understood as the products of human intelligence leaping to instrumental 'arrangements' or compositions. Architecture is therefore understood as instrumental: both as a product of intelligent use of tools, as well as instrumental in and of itself. [Jones 1998]
The current false perception of a dichotomy between the corporeal and the ethereal is caused by a fear of new digital technologies. This is nothing new. There is a well-established line of historic precedents evidencing some architects' fear of new technologies, as well as some others' brave adaptations and eventual embracing. The fear that industrial scale mass-production alienates humans by eliminating hand-crafting is washed away by Joseph Paxton's mid-ninetieth century Crystal Palace. The fear of new building materials is alleviated by Labrouste in Biblioteque St. Genevieve; cast iron is given new form and purpose while retaining a continuity with the past. [Trachtenberg 2002] Likewise throughout the 20th century architects such as Buckminster Fuller, Archigram, Cedric Price and Alison&Peter Smithson [Colomina 2004] have entertained fears of production processes, new materials, transportation speed, remote audio-visual capabilities and information processing with utter enthusiasm, producing projects that embrace technology and point to future possibilities. Project such as the Dymaxion House, Plug-in city, Fun Palace and the House of the Future do exactly that, while celebrating all the aspects of human sensuality. [Banham 1996] These polemic projects are not simple exercises in technicising space but manifestations and paradigms in human experience enhancement through intelligent incorporation of technology in architecture. The corporeal essence of architecture is tested against the material. The body is ultimately tied to technology and architecture becomes the instrument of knowledge and pleasure.
Following the formulation of narratives about the deep future, students are asked to narrow the focus on the immediate future, approximately 100 years from now. A series of targeted workshops were introduced in the design studio in order to provide new sets of questions and parallel conditions, triggering innovative responses towards integrative technological thinking. Two student projects are briefly presented here, as examples of the resultant work in this design laboratory. The projects oscillate, most often unconsciously, between aspects of the corporeal and the ethereal, through views of technology from different angles and a variety of 'lenses'. Aspects of body, material, space and ether in architecture eventually and necessarily surface in the propositions.
The Robinhood Hub project is a contemporary interpretation of affordable social housing. The concept is that AI now plays the role of the state, subsidising through data harvesting the rental cost of residents, such as digital nomads. The building block consists of short-term rental living units and extreme leisure facilities that are also available to the public.
The project investigates the physical consequences of AI and assumes that the human body will always be the generator of information. The AI gathers information from the residents via their private living capsules. This is enabled by the make-up of the capsule which does not include conventional walls, floors and ceilings; instead these necessary boundaries are created by a dense network of AI hardware. This hardware includes a nervous system, sensors, batteries, ventilation system, computer brains, cameras, cathodes, sound systems etc. The users may attach prosthetic human parts that plug into the hardware becoming one with the shell of the building. The willing relinquishing of data not only subsidises the individual's residential cost but also allows for the provision of leisure facilities for the community. The projected increase of a sedentary life and available leisure time will necessitate extreme physical activities (such as diving, golf, wrestling, hiking and jumping). The AI drives the life cycle of the building by collecting data, processing and implementing improvements as needed.
The project Psychatopia attends a contemporary and future understanding of the notion of wellness. Aspects of conventional wellness activities such as meditation, art therapy, yoga, health and nutrition are translated into activities involving technological body enhancement. The proposal is a future adaptation of a wellness centre involving AI. Psychatopia presents a bold and futuristic architectural solution. It is assumed that by 2124 humans will need enhanced forms of experience and wellness. As humans have become increasingly numb to the simple pleasures of life, it is expected that in the future this trend will be magnified. The human body continues to be perceived as vulnerable flesh and blood to be pushed to extremes in order to activate the desired effects. Art is reinterpreted as the communion between the biological human brain and AI. Contemporary politicised human experiences like the right to

death (euthanasia) and the right to life (abortion) are treated as cyclical processes of wellness and healing, which when enhanced by AI mechanisms will morph into a new form of art production. A concoction of magic mushrooms grown out of fertilised foetuses, heightened emotional connection through AI and extreme physical pleasure result in electrochemical merging of machine and human brain to resolve life traumas. This will become the art of the future. Each architectural zone including the pleasure dome, abortion clinic, AI generator rooms, psychedelic hub, therapy rooms, emotion rooms, laboratories and mushroom growing rooms lead to a cradle to cradle process, using all the elements to sustain the users and the building itself. AI is at the centre of orchestrating all activities and spaces.
Evidenced in the above examples is the symbiotic relationship of the corporeal and the ethereal. The human body will continue to evolve with both digital/non-physical enhancement as well as mechanical prosthetics. AI is currently primarily discussed as a non-material manifestation without physical consequences. In fact these physical consequences of AI will be catalytic in opening up new opportunities towards developing innovative interfaces that radicalise our current understanding of body experience in space. The ethereal depends on the corporeal, and the corporeal will continue to synergetically evolve in parallel to the ethereal.

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FIGURES

Fig. 1 - Diving the future research laboratory, Psychatopia, digital drawing, Nicosia.

Douglas Pritchard[1], **Daria Belkouri**[2]
[1, 2] Robert Gordon University
[1] d.pritchard1@rgu.ac.uk, [2] d.belkouri1@rgu.ac.uk

Assessing quality in the convergence of the physical and virtual: Challenges and imperatives

Key Words
3D digitisation, Creative engagement, Cultural heritage, Community outreach

As seen in the recent fires at the Old Stock Exchange in Copenhagen, Notre Dame Cathedral in Paris, and the ongoing conflict in Ukraine, cultural heritage is increasingly VULNERABLE. Environmental challenges like natural decay, pollution, flooding, erosion, and human activities such as war and vandalism pose significant risks to architecture and sites. These pressures highlight the fragility of tangible heritage and underscore the critical role of 3D digitisation and VR technologies. This paper explores the impact of technological advancement, illustrating how technologies like terrestrial laser scanning (TLS), terrestrial digital photogrammetry (TDP), aerial digital photogrammetry (UAVDP), aerial LiDAR, and GIS mapping are valuable tools in digital preservation efforts to record and protect cultural heritage.

This paper will highlight the practical benefits of digitisation and analysis by integrating experiences from previous and ongoing urban and cultural interactive visualisation projects at the UNESCO World Heritage Sites of Aachen and Cologne Cathedrals and the A-listed Aberdeen Music Hall in Scotland. Advancements in digital technologies have revolutionized 3D recording and content creation capabilities, increasingly employed in surveying, architecture, construction, and cultural heritage, and have recently penetrated the consumer market. As previous research described [Remondino 2011; Pritchard 2017], modern terrestrial laser scanners and digital photogrammetric imaging systems provide highly accurate and objective as-built site records. These comprehensive digital recordings benefit culturally significant sites, aiding conservation, management, monitoring, and repair efforts and serving as an educational resource for scholars and the public.

The link between physical spaces and their digital, virtual representations is critical for ensuring data quality and adaptability and facilitating multiple uses and applications. This

connection allows designers, content developers, and exhibition professionals to utilise high-quality survey data, blending dimensional precision with creative opportunity. Using these tools across various disciplines enables the creation of more immersive, informative, and visually dynamic visualizations. Integrating survey-quality recording with advanced representation technologies helps open broader uses—from precise architectural analysis to engaging public exhibitions. Such seamless integration offers the potential for a more comprehensive and detailed representation of the built environment.

The application of TLS in the three listed case study projects goes beyond technical excellence; it is fundamentally about precision and reliability. Registered, high-quality laser scan data ensures that 3D models and simulations are 'certifiably' accurate dimensional representations of actual structures or environments. Factors such as resolution, accuracy, range, and coverage not only determine the immediate usability of the data but also set a high standard that preserves its future use—providing a timeless, valuable dataset.

The significant advancements in digital photogrammetry over the last decade were driven by improvements in imaging hardware and processing software [Giuliano et al., 2014]. This has led to higher-resolution digital cameras and increased computer processing power, enabling faster and more complex photogrammetric processing. Photogrammetric software such as Epic Reality Capture has become more automated, reducing manual intervention, and increasing processing speed, creating fully textured 'watertight' 3D mesh geometries considerably faster and simpler.

TLS provides fast and accurate point data of an object's surface but has lower image resolution and is restricted to line-of-site capture. Alternatively, TDP generates highly detailed and realistically coloured points, although it has lower metric accuracy and requires proper lighting. By integrating laser scanning with terrestrial and photogrammetry, the weaknesses of each method are mitigated while benefiting from their combined strengths, leading to a more comprehensive surface capture, improved modelling accuracy, and enhanced texture quality [Galeazzi 2018].

In addition to its role in graphic and architectural representation, digital documentation serves as a foundational resource for condition assessment, monitoring, and examining buildings' materials, structures, and environmental performance. This information is indispensable for formulating 3D reconstructive investigations, generating predictive simulations, and revealing underlying knowledge structures for architectural and structural analysis and monitoring. However, the surge in data collection has led to a flood of 2D and 3D digital information, ranging from realistic 3D models to proprietary formats and disjointed databases [European Union, 2022]. This abundance of data has created a highly fragmented yet information-rich landscape, raising critical questions about recording methods, data quality, and longevity.

Despite these technical challenges, the increasingly important role of 3D content development in education, creative expression, and multimedia presents an opportunity for enhanced collaboration and outreach [Bolognesi 2021; Kenderdine 2021]. The role of 3D content development extends beyond mere digital preservation, offering dynamic methods for active engagement. Through immersive VR and/or augmented systems, people from various backgrounds and locations can actively participate, explore, and interpret cultural heritage sites in real-time.

Cologne Cathedral - Initiated in 2017, the documentation of the Cologne Cathedral UNESCO World Heritage site was a collaborative project with the Dombauhütte and the Hochschule Fresenius University of Applied Sciences in Köln [Pritchard 2017]. Located in the centre of Cologne, Germany, the massive structure, whose construction began in 1248 and concluded in 1880, was once considered the tallest in the world until 1884. The Cathedral has withstood the ravages of wars, vandalism, and environmental changes over centuries. By the end of the project's data collection phase, a total of 608 individual TLS scans were taken with full 360-degree HDR imagery, capturing both the interior and exterior features of the Cathedral. These scans were combined into a unified dataset using cloud-to-cloud registration and established survey controls. One significant achievement of this process was creating a precisely measurable line that extends from the underside of the foundation level of the Cathedral to the peaks of its dual towers.

Aachen Cathedral - The 3D documentation of the Aachen Cathedral UNESCO World Heritage is an ongoing collaborative project between the Sapienza Università di Roma, Italy, Robert Gordon University, Aberdeen, Scotland, and in partnership with RWTH Aachen University, and the Dombauhütte Aachen [Pritchard et al. 2023; Attenni et al. 2023]. The project incorporated a digitally integrated methodology that combined TLS, TDP, and UAVDP to provide comprehensive surface coverage of the exterior and interior of the monument and simplify texture creation. As an analogy, the scan data acts as the dimensional skeleton, and the photogrammetry is the skin.

Aberdeen Music Hall - Opened in 1820, the Aberdeen Music Hall is an A-listed structure in the centre of Aberdeen and is one of Scotland's oldest and most historic concert halls. To provide as much 3D dimensional coverage as possible, the exterior and interior spaces were extensively recorded with a TLS system. Ninety-two individual TLS scans were taken with full 360-degree HDR imagery. The areas include the publicly accessible halls, main theatre, and cafe. The various inaccessible roof voids above the theatre and the two main exterior roofs were also recorded. In addition to the TLS, digital and thermal cameras were used to record the theatre's interior to identify areas of thermal ingress and poor insulation. The assembled data will be used for various purposes, including event planning and structural monitoring.

Integrating advanced digital recording technologies such as TLS, TDP, UAVDP, aerial LiDAR, and GIS mapping has proven indispensable in preserving cultural heritage. As indicated by the Cologne Cathedral, Aachen Cathedral, and Aberdeen Music Hall case studies, these technologies provide precise and reliable data and offer a method to overcome the vulnerabilities posed by environmental and human factors. The ability to create accurate, detailed 3D models and simulations ensures that these cultural sites can be digitally preserved as historical records and tools for ongoing research, education, exhibition, and conservation efforts.

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5 / AUGMENTED ENDNOTES

Gerardo Semprebon
Politecnico di Milano, Department of Architecture and Urban Studies

The daily reality we experience manifests as a blend of physical and virtual domains. The capacity to assimilate, process, and take action on data is no longer a prerogative of human sensory capacity and intelligence but a combination of information partially elaborated by machines and partially by people.
The so-called smart city is just one of the multiple examples of such a fast-evolving alliance between the physical and the virtual, which, nonetheless, opens a series of dilemmas in terms of ideological, pragmatic, and ethical issues on urban governance. For instance, while the delivery of public services can surely benefit from the implementation of real-time remote sensing, digital processuality, and simultaneous actions to be taken, the chain of decisions tends to inevitably escape the control of humans, the entrusting of responsibilities, and the invaluable exercise of critical thinking.
In a broader context, the call "Augmented" suggested that the convergence of physical space and the augmented body represents a rapidly evolving frontier with the potential to dramatically transform our interaction between the physical and digital realms. The augmented body has been framed as a physical human body technologically extended through augmented reality (AR), virtual reality (VR), wearable devices, or other digital technologies that enhance both perception and physical or cognitive capabilities.
This intersection of body and space through digitization systems called for an exploration of how new technologies mediate our experiences and perceptions. Investigating these body-space relationships involved discussing human-computer interactions in various spatial contexts, assessing the impacts on spatial perception, and exploring the effects on the design of physical spaces at different scales. It also involved questioning these technologies' educational and interaction capabilities, considering the role of artificial intelligence in fostering interaction and co-design and reflecting on the ethical and social implications of these hybridized interactions.
The "Augmented" session selected contributions that span a wide array of topics. These encompassed the influence of XR technologies on architectural and urban design, the perceptual and cognitive shifts resulting from XR on bodily perception and movement, and the facilitation of social interaction and collaboration through AR-based tools in platforms like BIM and GIS. Other areas of interest include the creation of effective and engaging learning experiences in physical spaces, user-centered design and usability in augmented environments, the impact of wearable technology on daily life, and the reshaping of our understanding of body, identity, privacy, and self-expression in augmented spaces. Historical perspectives on the evolution of mixed reality and its interaction with the physical self are also of great interest.
Some contributions have converged on social conundrums, how inherited participatory practices are still irreplaceable in transient societies, and how emerging issues are reshaping commons' engagements in the framework of an increasingly fluid and hybrid environment. Some authors emphasized how augmented bodies facilitate displacement situations and proposed new types of spatiotemporal coordinates, affecting social ties and shared routines. In some cases, nature has been addressed as the obvious counter-domain of social space, while in others, it has been framed as an inherent part of spreading posthuman environments. Learning processes have also been addressed as a key innovation point in extended realms. An emerging transversal aspect is, nonetheless, the critical attitude towards the potential of digital technologies. While some directions have already been clearly traced, the fourth industrial revolution appears still in its infancy stage, leaving ample room for exploring practical applications and ideological reflections, which these papers have addressed, detected, and questioned in different ways. The augmented domain of physical bodies is clearly not only a matter of how new tools change people's

lives but, most importantly, forces everyone to reconsider (self) identities in an ever-blurred context between the physical and the virtual.
By addressing these topics, the papers fostered a growing awareness of the profound changes and ethical considerations brought about by the integration of physical space and the augmented body, emphasizing its implication for design thinking and application.

PVBLICA

Marco Bovati, Anna Moro, Daniele Villa
IN-PRESENCE / THE BODY AND THE SPACE.
The role of corporeity in the era of virtualization

ISBN: 9788899586409
Pubblicazione luglio 2024

Tutti i testi di PUBLICA sono sottoposti a double peer review.

PUBLICA
Dipartimento di Architettura, Urbanistica e Design
Università degli Studi di Sassari
WWW.PUBLICAPRESS.IT