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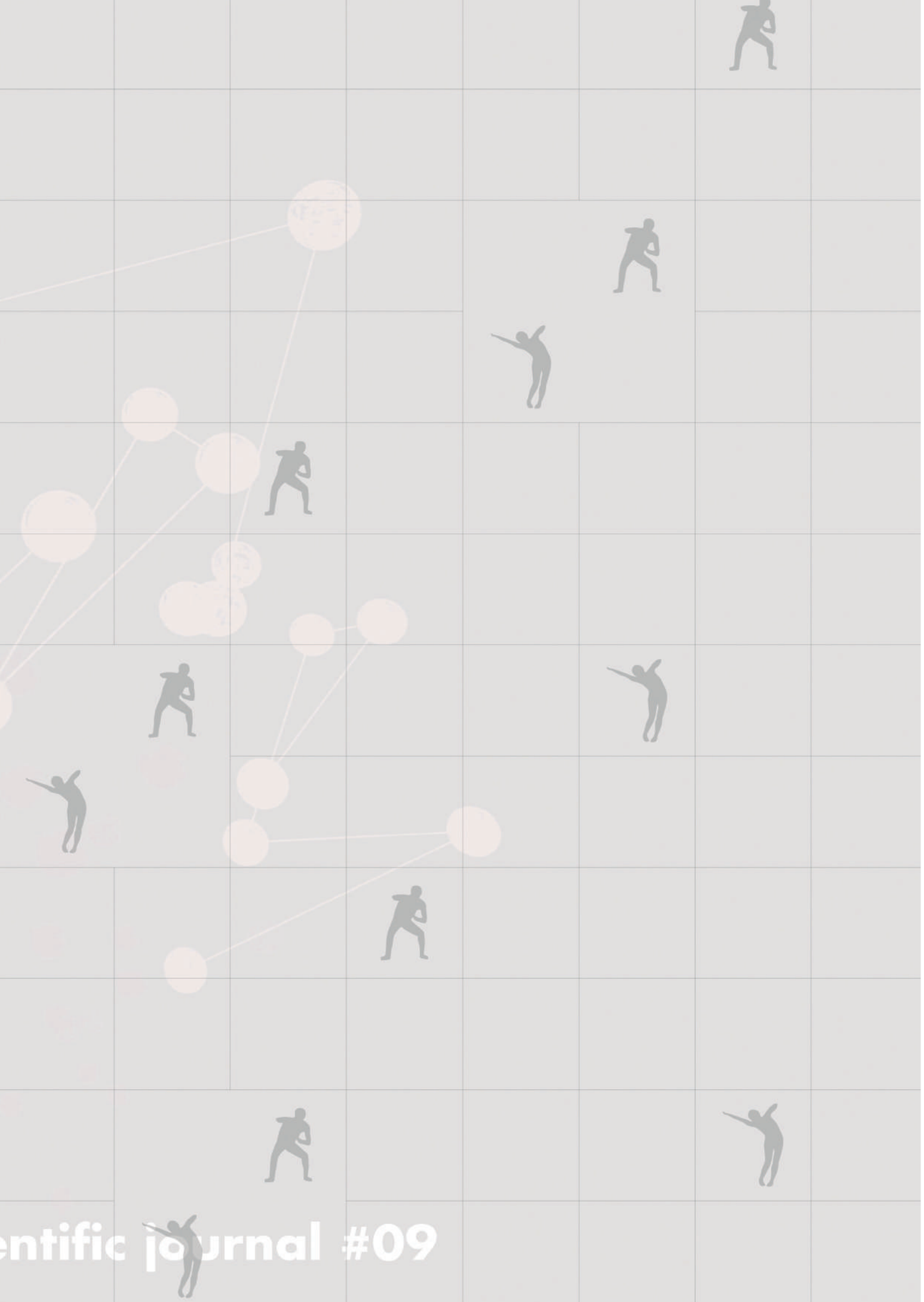

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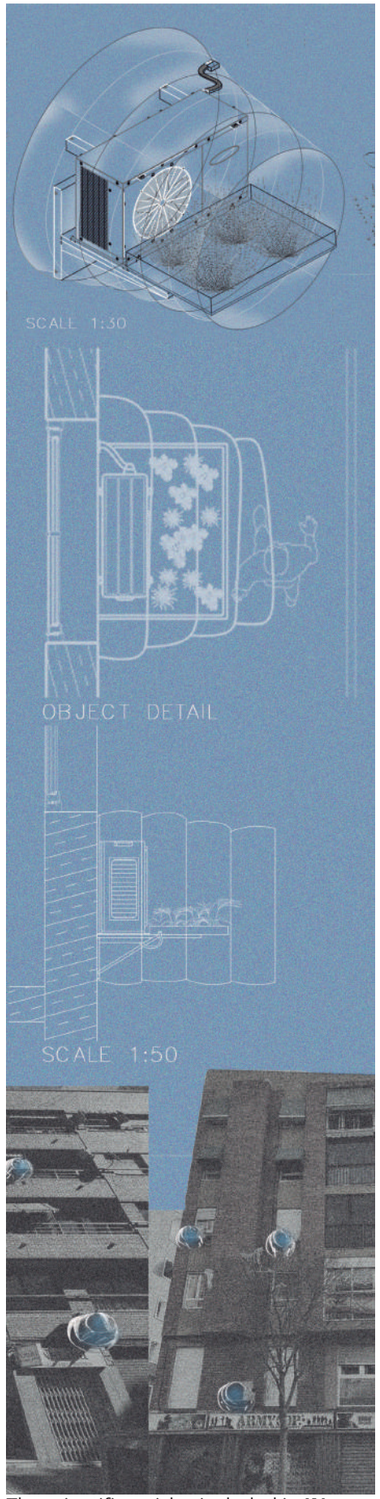

The scientific articles included in **IN PRESENCE** have been **double-blind peer-reviewed** by external evaluators, chosen by the Editorial Board from among experts in the relevant fields of study.

table of contents

IN PRESENCE

Butterflies in the Stomach

Letter from the director

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As *UOU* is an open network of professors, many often ask how to become involved. The answer is simple: by being willing to share a workshop with our students. And the topic? The most exciting one you can propose!

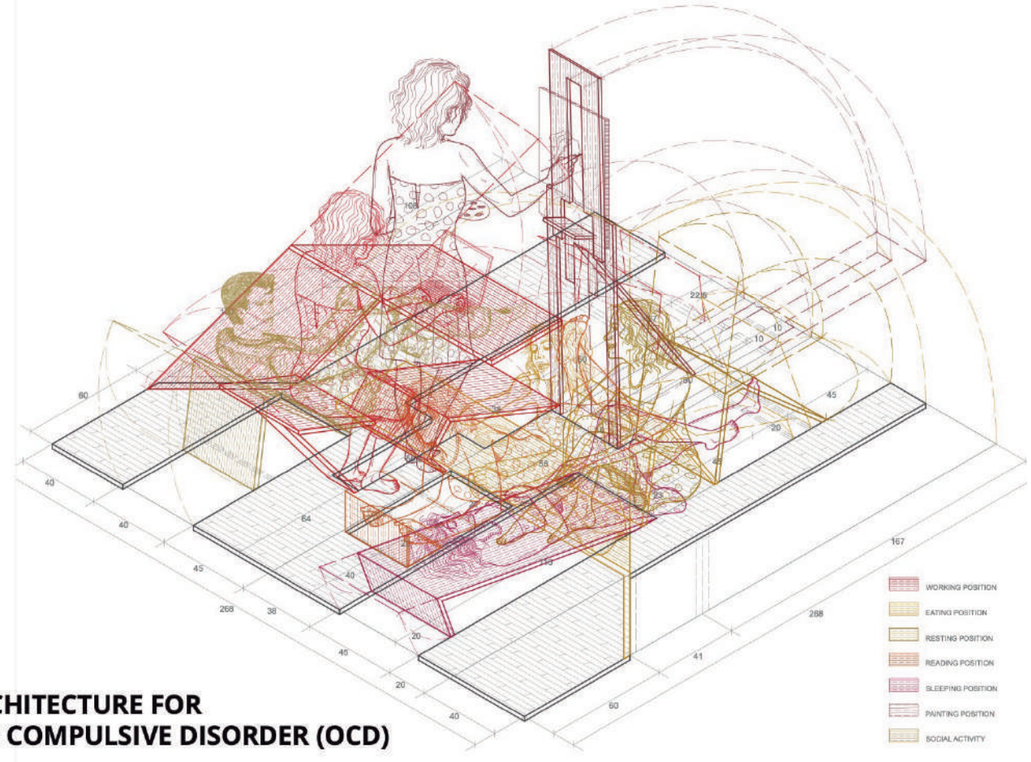
By following these two basic principles, we now count 50 international architecture schools that regularly exchange classes and introduce innovative teaching experiences.

In this letter, I wish to emphasize our particular focus on the EURAU congress – an itinerant event we organize with a special dedication to doctoral students. Every two years, one of our partner universities proposes a topic in architectural research rooted in their specific cultural context, around which we engage in multifaceted debate. Indeed this current issue of UOU scientific journal features articles derived from the most recent EURAU Milan conference, held in June 2024.

Although, as noted, the congress primarily targets doctoral candidates, the truth is that the organizers also actively participate by presenting papers. This creates a horizontal relationship between participants and organizers - regardless of how long ago one completed their PhD, one feels the urge to return to that same mindset and condition as young researchers. It is the continuous need to feel butterflies in the stomach.

And I believe that, at the end of the day, this feeling is not just a third requirement for being part of the UOU network - it is a distinctive trait. Our teaching staff recognize that constantly testing themselves through their courses and workshops is an essential critical mechanism to remain current and relevant in the academic sphere.

Of course, I too participated in the last EURAU conference, exploring the value of drawing in relation to the body's experience of space:



MICROARCHITECTURE FOR OBSESSIVE COMPULSIVE DISORDER (OCD)

MICRO - ARCHITECTURES

EXPLORING INTIMATE CONNECTIONS BETWEEN BODY, SPACE, AND THE UNDERSTANDING OF DIVERSE REALITIES

The ongoing debate surrounding the dichotomy between the physical and the virtual has become a key subject in architectural education. The global impact of the COVID-19 pandemic has further intensified this discourse. Within this context, this article reflects on the transformative potential of architectural projects grounded in a deep relationship with the human body - projects capable of constructing perceptions of reality that differ from dominant paradigms.

Exploring Alternative Realities

This exploration centres on a series of exercises that build bridges between the physical world and what may seem to be an enigmatic virtuality. Notably, this "virtuality" is not a mere abstraction - it reflects tangible experiences for marginalized groups such as individuals with neurodegenerative diseases, those experiencing loneliness, social segregation, or irregular immigration. The research aims to illuminate how their perceptions of space, rooted in bodily experience, may offer an "alternative reality" that architecture can meaningfully address.

Unravelling the Intricacies of Therapeutic Architecture

The broader goal of this work is to articulate a notion of *Therapeutic Architecture* - a design approach that draws inspiration from non-normative realities. The emphasis lies in showing how spatial interventions, conceived through embodied experience, can redefine our engagement with the built environment.

To this end, the article redraws six architectural exercises developed by students. These projects emerged in response to a common challenge: to design spaces for individuals in conditions of social marginalization. Importantly, students were urged to approach this with empathy rather than pity - investing in understanding the worldview of those for whom the designs were intended.

This collection of exercises gives architectural voice to those often unheard.

MICRO - ARCHITECTURE FOR OBSESSIVE COMPULSIVE DISORDER (OCD)

This project aimed to help students empathize with individuals suffering from OCD. This behavioural cycle - obsession, anxiety, compulsion, relief - was adapted so that anyone could experience its logic. Within an uncomfortable space filled with stimuli, the only way to find relief is to act compulsively to restore order.

Recognizing that OCD often enhances focus and perfectionism, the students designed distinct spatial positions for:

- Working: Kneeling chairs reduce physical strain and increase concentration.

- Eating: Sitting cross-legged on the floor enhances digestion and mindfulness.

- Reading: Lying on the stomach frees the hands and facilitates prolonged focus.

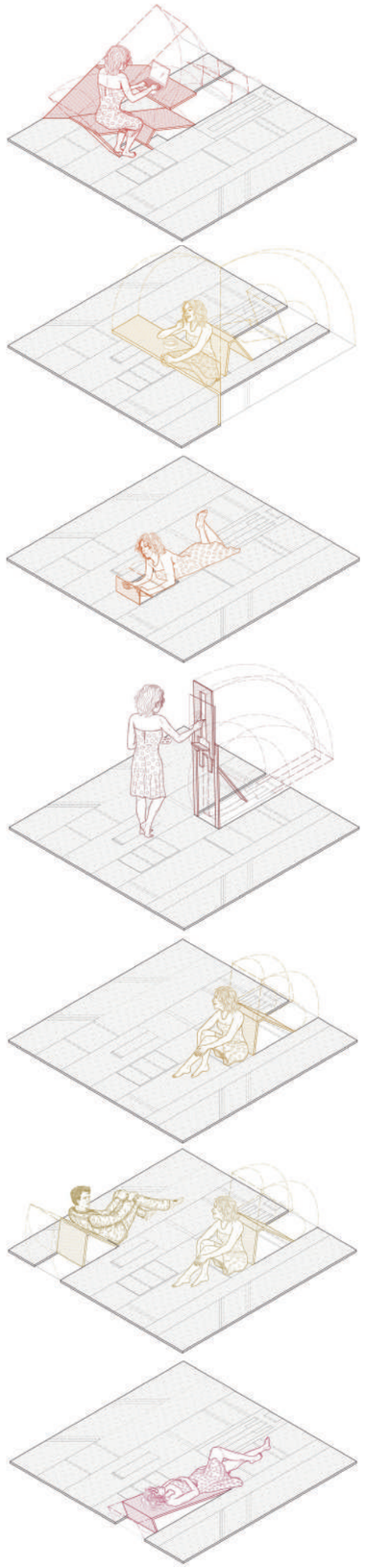
Other positions include:

- Painting.

- Resting.

- Socializing.

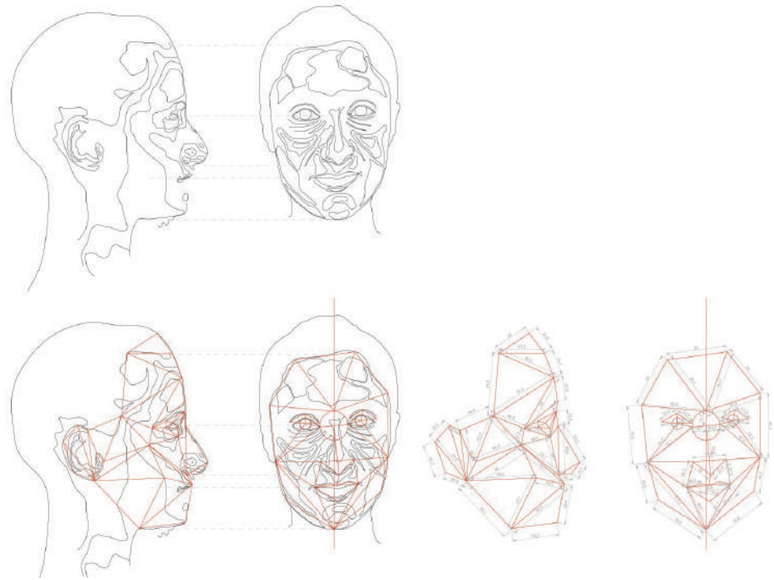
- Sleeping... each designed with sensitivity to OCD needs.

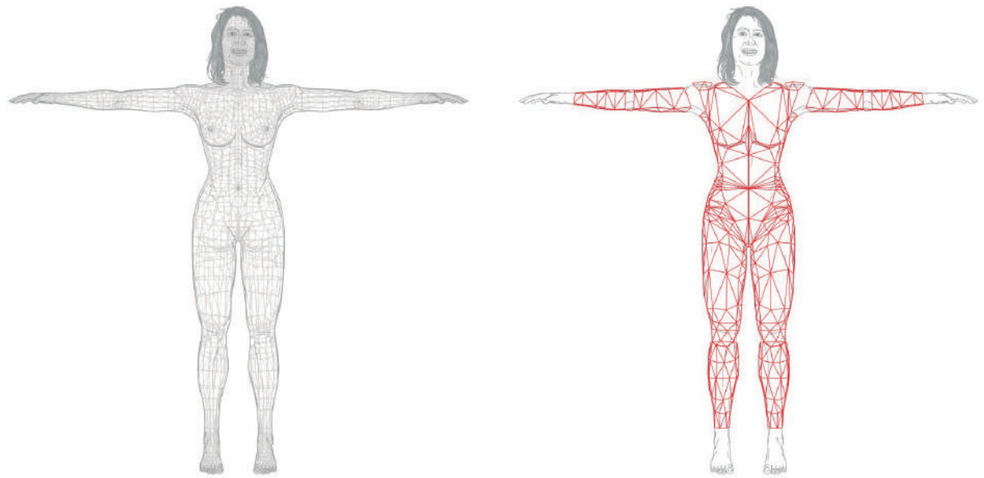


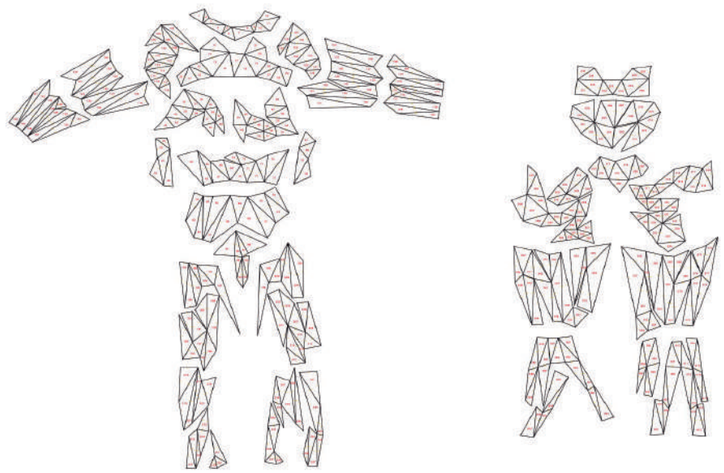
MICRO - ARCHITECTURE FOR MULTIPLE SCLEROSIS (MS)

Rooted in empathy, this project simulates the bodily awareness demanded of MS patients. A collaboration with a Multiple Sclerosis Association informed the design.

A paper suit - light, elegant, and precisely constructed using triangular modules - acts like a second skin. Inspired by Enric Miralles' croissant drawing, the suit demands bodily self-regulation. One must control even breathing movements, as the suit can tear easily - exposing the wearer, literally and symbolically.







FRONT SIDE BACK SIDE

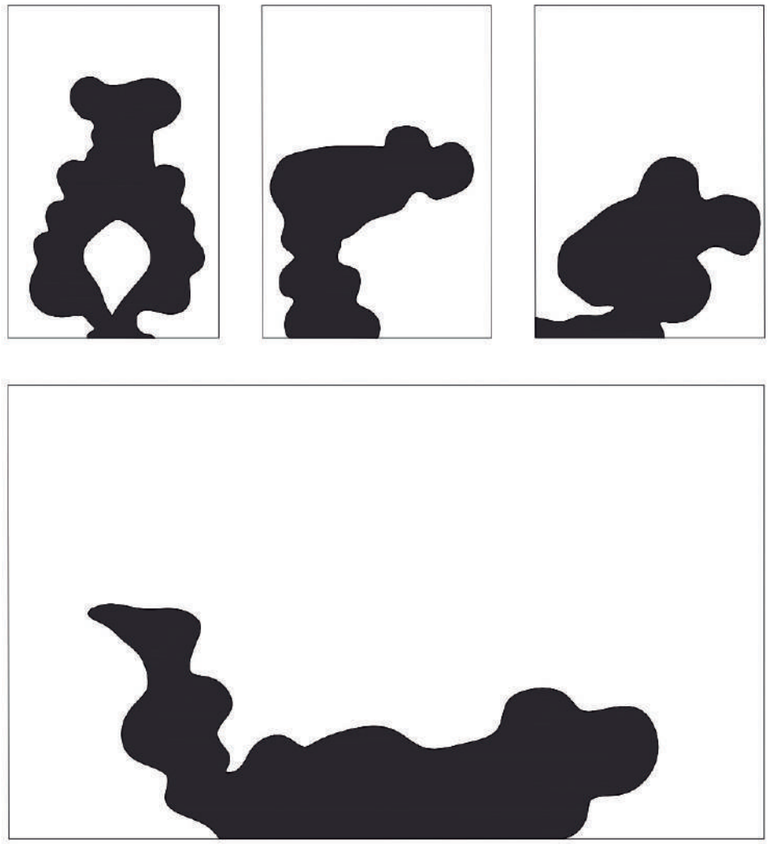
MICRO - ARCHITECTURE FOR ALZHEIMER'S DISEASE

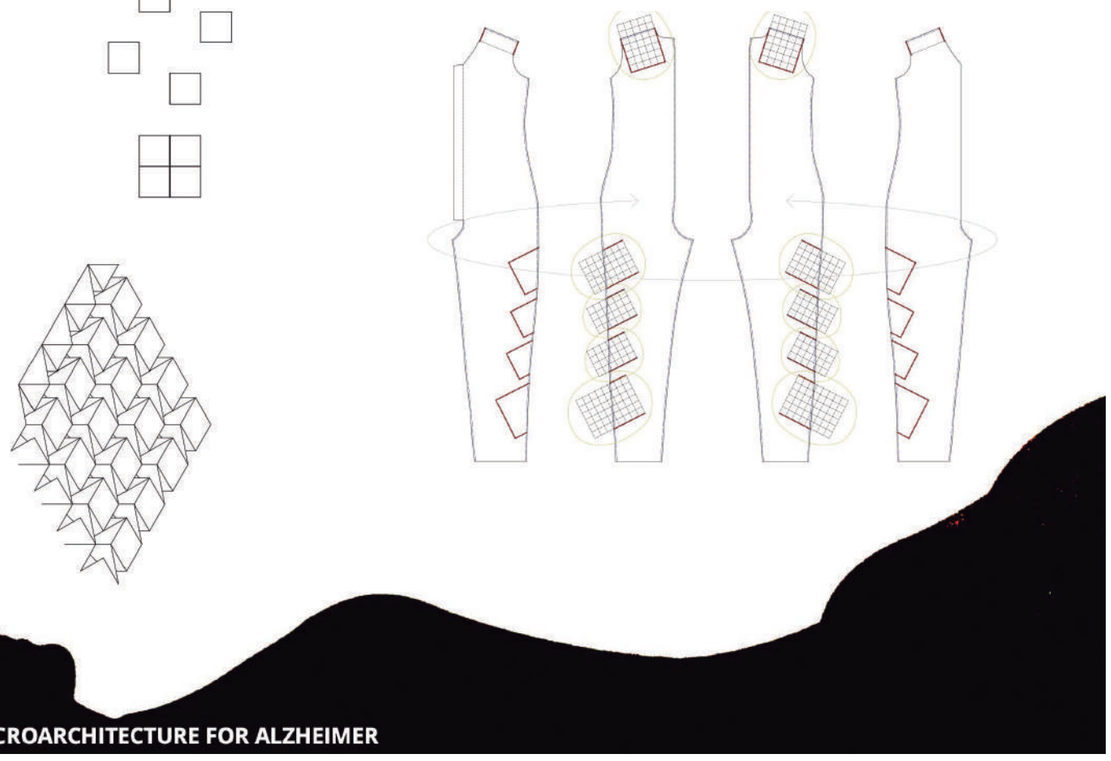
Inspired by the Rorschach test, this microarchitecture generates abstract shadows through movement and light. These shadows stimulate memory recall and imagination in individuals with Alzheimer's disease, offering moments of connection with past experiences or recognizable forms.

The exercise explores:

- Movement as a constant.

- Light as an essential medium.



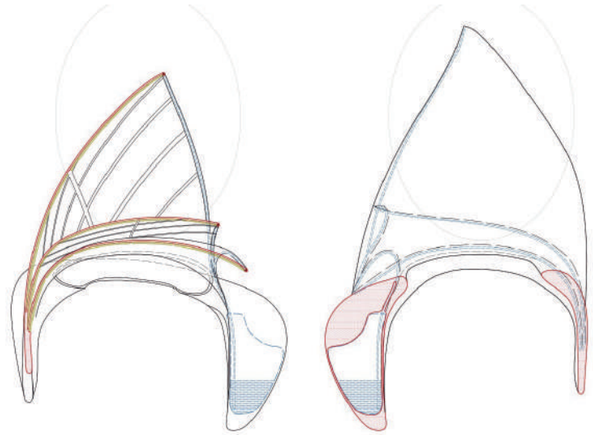


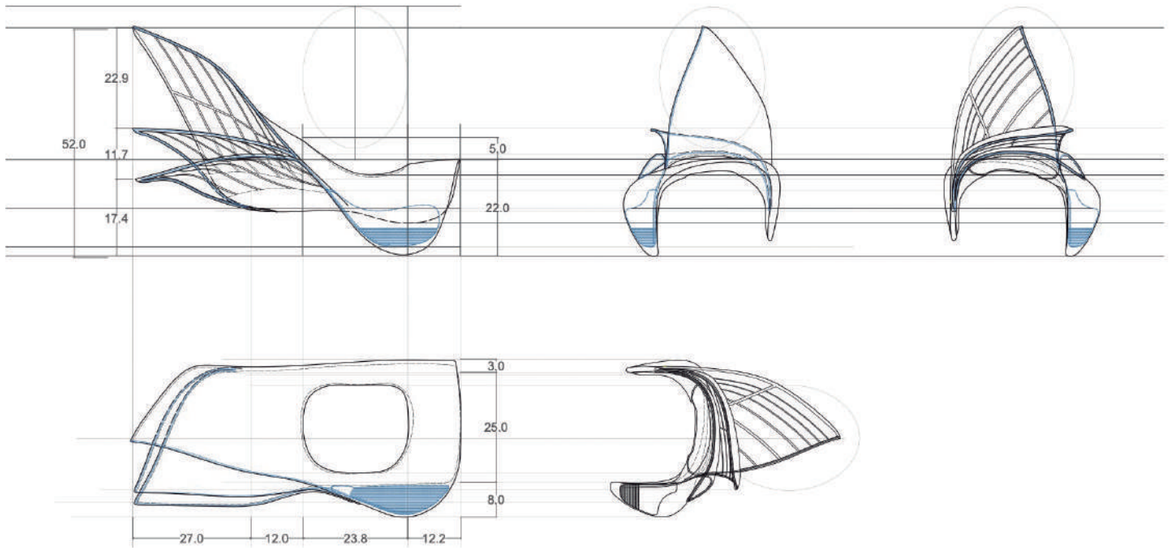
MICROARCHITECTURE FOR ALZHEIMER

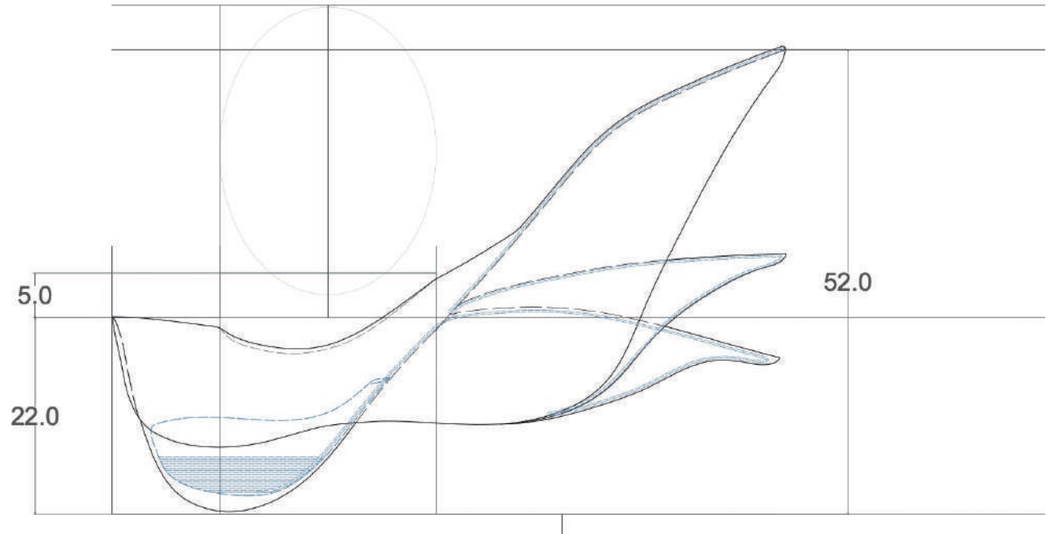
MICRO - ARCHITECTURE FOR CAPTURING AROMA

Marseille - a city rich in multicultural scents - inspired this olfactory design. A custom fiberglass mask fits the face and captures aromas through capillary action. Moisture, contained in a perimeter tube, activates pearls (like those in sanitary towel) to store the scents.

This microarchitecture treats smell as a cultural archive and sensory interface with the city.





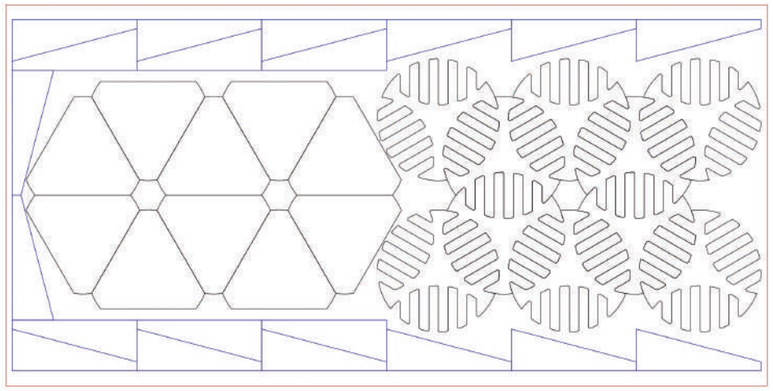


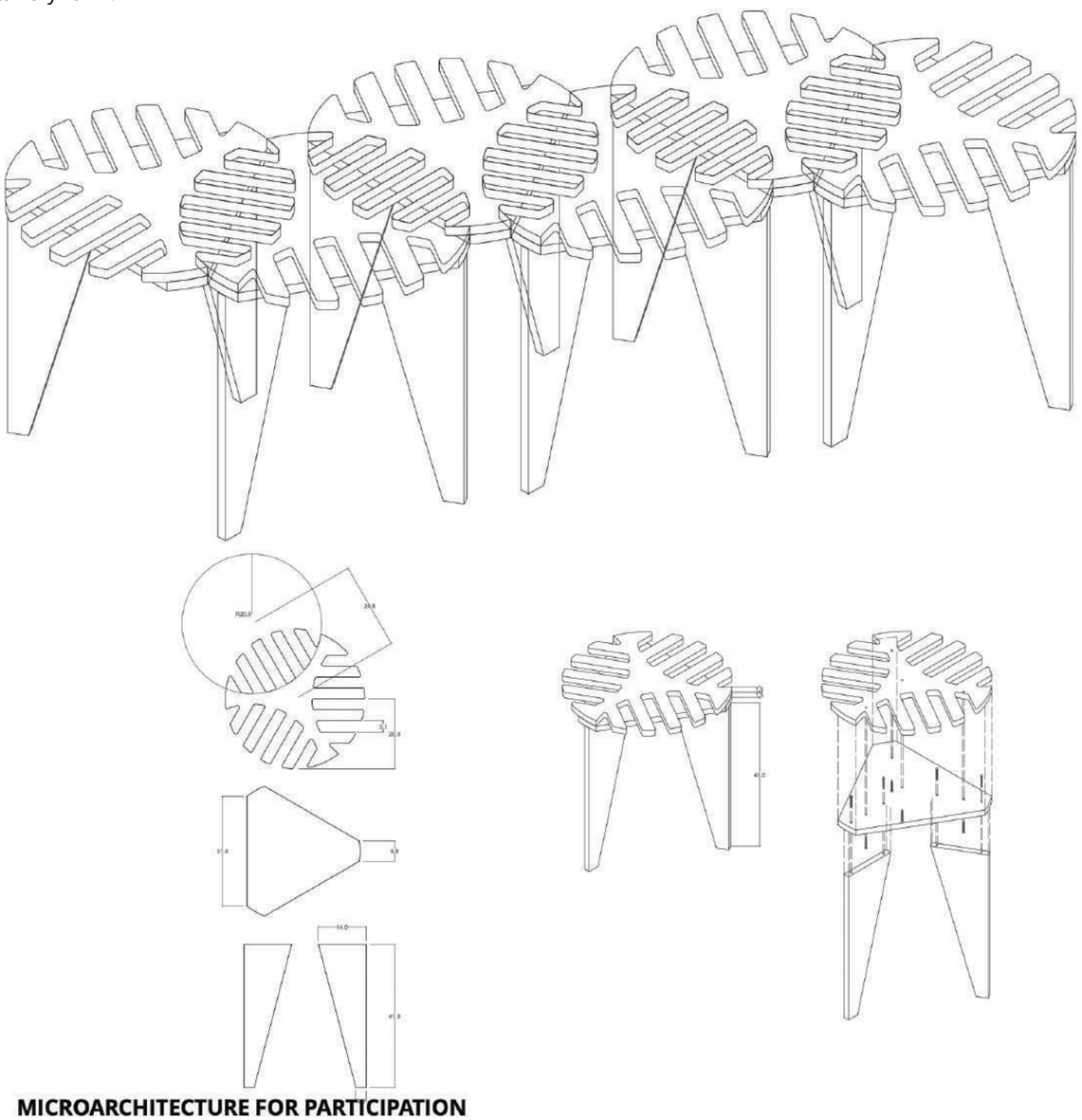
MICROARCHITECTURE FOR ORIENTATION

MICRO - ARCHITECTURE FOR PARTICIPATION

The Participatory Stool comprises two legs, a triangular base, and a serrated hexagonal top. Each stool is unstable on its own but gains stability when connected to others - symbolizing the strength of collective dialogue.

It adapts to diverse settings and encourages co-creation, embodying architectural participation through its very form.



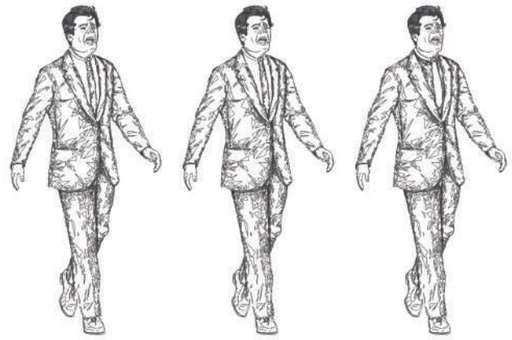


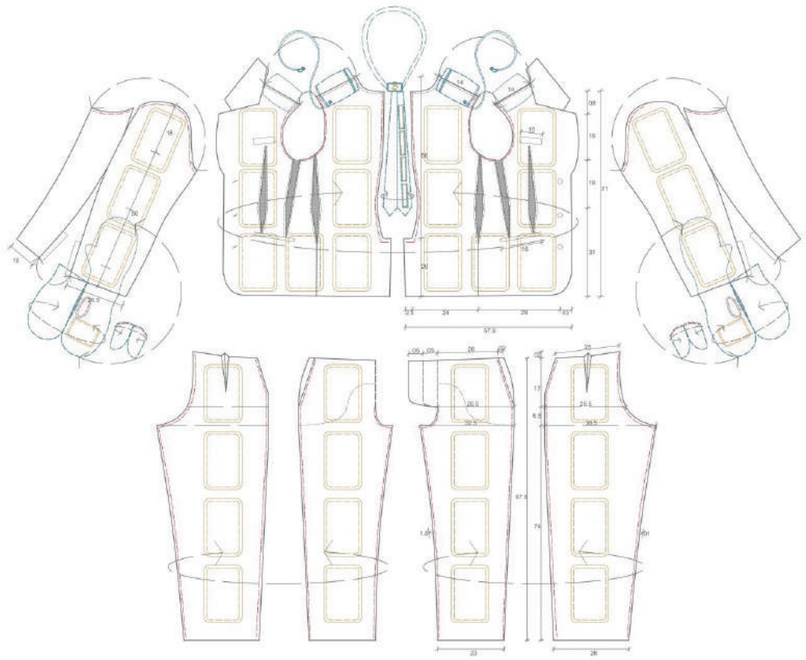
MICROARCHITECTURE FOR PARTICIPATION

MICRO - ARCHITECTURE FOR IRREGULAR IMMIGRATION

Using thermal blankets made of aluminized plastic, this wearable microarchitecture provides insulation and challenges stigmas about irregular migrants. The reflective material evokes luxury fashion while preserving bodily warmth, making a visual statement on the dignity and resilience of migrants.

The project confronts prejudices, sparking critical reflection on borders, identity, and hospitality.





MICROARCHITECTURE FOR IRREGULAR IMMIGRATION

CONCLUSION

These preliminary exercises lay the foundation for understanding and designing from alternative worldviews. Through close bodily engagement, students generate proposals that explore *Therapeutic Architecture* – not as a stylistic trend but as a socially responsive framework.

This work advocates a paradigm shift in architectural thinking, placing empathy, diversity, and inclusion at the forefront of spatial practice. The projects exemplify how architecture can address complex social challenges and expand our collective understanding of space.

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EDITORIAL

Framing the Body–Space Relationship to question Research and Practice

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GROUNDING THE BODY-SPACE RELATIONSHIP TO CONTEMPORARY INTERNATIONAL DEBATE

The relationship between bodies and space lies at the heart of spatial studies, from architecture to urban and environmental design, planning and policies, artistic disciplines and experimentation. Both ancient and persistently new, it is shaped by cultural codes, contextual conditions, social structures, and individual and collective practices (de Certeau, 1984).

In recent decades, the increasing dematerialisation of spatial experience through digital and remote technologies has destabilised this nexus, posing new ontological and operational challenges for spatial disciplines. The dialectic between corporeality and environment, once grounded in proximity, materiality, and sensory perception (Merleau-Ponty, 1945/1962; Pallasmaa, 1996), now requires a critical rethinking in the context of virtuality, hyper-mediation, and ecological crisis.

As Maurice Merleau-Ponty observed, “the body is our general medium for having a world” (1962, Phenomenology of Perception), an active interface through which space is both perceived and produced. Similarly, Henri Lefebvre (1991, The Production of Space) conceptualised space as socially constructed and performative, inseparable from the practices and bodies inhabiting it. So that the body is not merely a vessel but an active agent of perception, affect, and political meaning.

In dialogue with these positions, Gilles Deleuze’s reading of Spinoza emphasises the body as both acting and acted upon: “we do not know what a body can do” (Deleuze, 1988), highlighting the dynamic potential of corporeal agency and its susceptibility to environmental conditions (Bianchetti, 2020). The body is simultaneously shaping and shaped by its

environment, and this reciprocal dynamic persists, though its forms evolve.

In response to these transformations, the EURAU Milan 2024 Conference, held in June 2024, explicitly addressed this problem in a context marked by post-pandemic reflections, ecological urgency, and pervasive digitalization (Awan et al., 2011; Rendell, 2007). Structured around five thematic areas - conceived, interactive, affected, vulnerable, and augmented - through 185 contributors and panelists, the conference interrogated the persistence, transformation, and possible obsolescence of corporeal presence in spatial practices.

The investigation was structured around five thematic areas: conceived **opened the debate to theoretical elaborations transcending the metric-functional tradition (Tschumi, 1994), investigating bodies as affective, performative, and socio-political agents.** Inter-active **explored how embodied gestures and sensory engagements remain irreplaceable in producing spatial meaning,** affected **addressed the environmental and climatic impact on bodies, reinforcing recent scholarship on environmental vulnerability.** Vulnerable **highlighted inequalities of access and exposure within architectural and urban environments, aligning with critical studies emphasising spatial justice. Finally,** augmented **examined the interplay of corporeal bodies with digital extensions and AI-mediated environments, reflecting ongoing debates on posthuman ecologies and techno-social spatialities.**

Basically, this UOU issue, a sort of derived, expanded and deepened elaboration of EURAU Milano 2024, reaffirmed the importance of 'togetherness', the co-presence of bodies in space as both a social value and a tool for rethinking spatial practices in an age of crises and transition.

Echoing global agendas on sustainability, equality, and care, the Journal Issue positioned the corporeal not as a nostalgic attachment to the physical but as a vital locus for imagining inclusive, just, and sensorially rich spatial futures.

After a new Call, this UOU issue has identified ten outstanding articles and seven project contributions which address the complex and crucial relationship between space and the body within the fields of architecture, urbanism, environmental studies, and landscape design.

Collectively, they highlight how the relationship between space and the body is not a peripheral concern but a fundamental condition for understanding, designing, and transforming contemporary environments (Pasqui, 2018). They show how spatial practices and theories, when attentive to embodied experience, can engage with a wide range of contemporary challenges - from political to ecological, from the situated to the digital - revealing new, urgently needed trajectories for design research and practice.

The articles are organised into three thematic sections, each offering a distinct lens through which to explore this relationship and its broader implications.

The first group examines the foundational dimensions of the space-body relationship. These contributions investigate how memory, perception, and lived experience are mediated by spatial conditions, offering arguments to foreground the embodied nature of spatial experience.

The second section gathers philosophical and theoretical reflections that deepen the discussion of embodied perception.

The third group brings together applied contributions positioned at the intersections between spatial disciplines and other fields, social, artistic, technological, and political, opening new spheres for research and action.

THE FOUNDATIONAL BOBY-SPACE RELATIONSHIP LENS (I)

Elif Cemre Çelikcan and Aslıhan Şenel, in **"Wandering Virginia Woolf's Home Through Spatial Correlators of Autobiographical Memory"**, offer a compelling investigation into the reciprocal relationship between autobiographical memory and architectural space. The hypothesis is that specific architectural elements, doors, windows, and staircases, are pivotal spatial correlators in forming and retrieving autobiographical memory.Through a nuanced reading of Virginia Woolf's memoir "A Sketch of the Past," the study deconstructs Woolf's spatial narratives, seeking to reveal how embodied experiences are encoded, triggered, and represented in memory via spatial situations anchored in these architectural features.

The research methodically transcribes and categorizes the spatial situations recounted by Woolf, mapping them onto a hypothetical isometric reconstruction of her childhood home.

The analysis draws on philosophical and psychological theories of memory to examine how spatial experience is not merely a backdrop to autobiographical recollection, but an active constituent shaping the very texture of memory itself and building elements are not only as physical mediators but cognitive anchors that structure the narrative flow of personal memory.

Through this interdisciplinary approach, the paper advances the argument that spatial situations created by architectural elements not only individualise and enrich lived experience but also facilitate memory encoding and subsequent recall. The findings suggest that even everyday spaces acquire mnemonic power through the bodily actions and affective states they evoke.

By foregrounding the complex entanglement of architecture, perception, and memory, the authors provide a valuable alternative methodology for architectural research, highlighting the capacity of literary works to serve as archives of spatial experience. In doing so, the article opens new perspectives for understanding the subjectivity of spatial perception and offers critical insight into the broader discourse on the body, memory, and architectural design.

Through **"The Anatomy of Experience. A Perspective through the Body-Space Interaction", Gamze Şensoy Torun** investigates how the pervasive influence of digitalization is transforming the nature of human experience, with a particular emphasis on the interplay between body and space. The core idea is driven by the hypothesis that digitalization intensifies the disappearance of authentic experience, rendering individual life increasingly discontinuous and detached from direct engagement with the environment. The study, grounded in phenomenological traditions, employs an empirical method in which thirty university students walked an urban route and reported their perceptions, emotions, and memories. Through qualitative analysis, five central experience components emerged: establishing meaning, randomness, remembering, sense, and feeling.

The findings underscore the centrality of multisensory dimensions, particularly visual and emotional responses, in shaping spatial experience, while also demonstrating the crucial role of memory and unpredictability. The body is repositioned from an active agent of meaning-making and presence to a largely passive observer, traversing preordained spatial and experiential landscapes. Recalling Pallasmaa, the discussion reveals that the proliferation of digital interfaces and the growing dominance of vision flatten the richness of multiple sensory engagement and reduce the depth of emotional resonance.

The hybridization of the body, examined through the lens of posthumanism and cyborg theory, further complicates the distinction between organic and technological, rendering the boundaries of bodily experience ever more fragmented. While digital technologies broaden cognitive and sensory horizons, they also risk abstracting expertise to the extent that immediacy and unpredictability are diminished. The analysis thus critiques the contemporary erosion of experience and calls for an architectural and urban sensibility attuned to the complexities of bodily and spatial interaction in the digital age.

In **"Bodies in the Void. Temporary Practices in Terrain Vague Sites", Krystallia Kamvasinou and Lorenzo Stefano Iannizzotto** investigate the nature and potential of Terrain Vague. Building on de Solà-Morales' seminal reflections and subsequent theoretical developments, neglected and ambiguous urban spaces are reinterpreted as conditions rich in latent possibilities. Because of their indeterminate nature, the authors demonstrate how crucial they are in fostering an open, innovative approach to urban transformation through temporary and embodied practices.

Within a wider European context, the article examines two illustrative cases. Cody Dock in East London is a long-evolving, community-driven regeneration initiative that has been transforming a disused industrial dock into a lively space for ecology, arts, and collective wellbeing through gradual, participatory placemaking. Meanwhile, LABIC Barreiro Velho, in post-industrial Portugal, is a temporary civic innovation laboratory that activates urban voids through collaborative mapping, community mobilisation, and tactical interventions. As marginal spaces detached from conventional urban order and planning frameworks, Terrain Vague sites become fertile grounds for informal, creative, and corporeal practices.

Here, bodies move, gather, and

perform freely, tracing new routes and meanings.

This contribution draws insight related to urban design methodologies since, rather than imposing pre-designed plans, the projects evolved through incremental, collaborative actions rooted in the direct, embodied experience of the place.

In a time marked by rapid urbanisation and ecological uncertainty, these in-between spaces offer vital opportunities for experimentation, collective imagination, and reclaiming public agency, where new forms of civic engagement and social narratives are enacted through the presence and movement of bodies in space.

THE THEORETICAL BODY-SPACE RELATIONSHIP FRAMEWORK (II)

In **"Touching the Surface - Application of 'Nahsicht' theory of Alois Riegls in Architecture Composition", Yue Zhong** critically explores the relationship between visual and tactile perception in contemporary architecture, advocating for a reconsideration of space as an embodied and multisensory experience.

This theoretical reflection aims to update the concept of Nahsicht (aesthetics of proximity) developed by A. Riegl starting from 1901, while drawing on the insights from other scholars such as Pallasmaa and Crary.

The author contrasts the optical and detached mode of perception, typical of a contemporaneity characterised by a deluge of images and a 'retinal' experience of architecture, with a more intimate visual-tactile experience, rooted in proximity, material consistency and corporeal presence. In this view, architecture is repositioned not only as a visual artefact but as a medium through which the body can experience the world.

The reflection is structured around three key design parameters: Materiality, Touchable scale and Disturbance in surface recognition. Natural materials and textures evoke deep, often unconscious, bodily memories, while spatial scale modulates the intensity of tactile perception. Furthermore, spatialities that resist immediate comprehension provoke heightened sensory awareness, breaking down conventional visual cognition and reactivating haptic sensitivity.

At the root of this view is the idea that by incorporating visual-tactile strategies into the design process, architecture can foster emotional resonance and counteract the sensory impoverishment of standardised environments. Ultimately, this approach advocates for a more empathetic and neurodiverse spatiality, grounded in the phenomenological richness of lived experience.

"A Paradigm of the Contemporary City: Temperature as Embodied Perception" by **Francesca Melina**, questions the possibility of rethinking and inhabiting space through the lens of the bodily and dynamic interaction between humans and the environment. The aim is to identify spatial forms and practices capable of reversing the theoretical foundations of the idea.

Acknowledging a growing disconnect between living beings and the physical realms, the author highlights a renewed emphasis on the body and materiality, embracing the concept of the Anthropocene as a turning point capable of informing a new attitude in addressing social, political and epistemological problems of the climate crisis.

At the core of this reflection is a new paradigm centred on the body (individual, social and cultural), positioned as a valuable conceptualisation in addressing emerging urban and ecological challenges.

The exploration of the human-environment relationship through environmental temperature tool, encompassing human, non-human and material bodies dynamics, highlights the significance of residual spaces and art-architectural practices as starting points for developing new ways of inhabiting the world. Reactivating "unseen" spaces through performance installation and transitory architectures is proposed to foster attunement and an ethic of care, helping to reshape our collective spatial imaginaries.

In **"Exponential Space as a Fifth Urban Figure", Roberto Podda** advances a broad reflective theoretical inquiry into the evolving relationship between corporeality, architecture, and urban space in the context of technological transformation. Drawing upon Wittgenstein's ontology of reality, Kantian spatial categories reframed by Husserlian phenomenology, and the contemporary discourse of embodied cognition, the article situates the body as the primary mediator of spatial intentionality.

The author offers a single-minded synthesis of classical architectural theory, from Geoffrey Scott's "enclosed void" and Henri Focillon's spatial masses to Bruno Zevi's interiority, juxtaposed with neuroscientific perspectives on perception and movement. Central here is a critical engagement with Françoise Choay's influential typology of urban figures: contact, scenic, circulation, and connection spaces.

Podda argues that the emergence of exponential technologies and digital-physical hybridization necessitates a paradigmatic expansion of Choay's system. He proposes the concept of "exponential space" as a fifth, qualitatively distinct urban figure characterised by a fundamental mutation in the ontological conditions of urban experience: the increasing mediation and fragmentation of spatial experience, the displacement of embodied proximity, and the rise of networked and dematerialised environments. While remaining finite and sensuous, the body is now extended and challenged by technological prostheses, requiring an updated theory of dwelling and interaction

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The focus is then on diagnosing of "decanonization" and "dis-belonging," where the loss of traditional contact spaces gives way to fragmented, often commodified, urban realities. In this light, exponential space emerges as both a symptom and a theoretical response to the acceleration of technological change, calling for a rethinking of architecture's role in mediating and producing meaningful urban environments.

THE OPERATIONAL BODY-SPACE RELATIONSHIP EXPERIMENTAL ENVIRONMENT (III)

Building on the relationship between artificial light, spatiality and corporeality, **"Products, atmospheres and interactions. Relationship between the physical and phenomenological bodies and Light Art" by María Redondo Pérez,** proposes a reflection on the relationship between the virtual world and physiological space.

Drawing on Merleau-Ponty's assertion that reality is what we perceive, the author believes that Light-Art works are paradigmatic in this regard, as they are not merely to be observed but actively engage the viewer, whose body and perception become an integral component of the work itself.

Such installations function as perceptual experiments, altering bodily behaviour through a separation between the physical body and the phenomenological body; in doing so, they effectively "prescribe" specific behaviour. The audience's experience is thus choreographed, moving beyond cognitive interpretation to active embodied experience.

To investigate the dynamics between light, space and body, the article identifies three categories of installations: products (absent interaction, passive viewer), atmospheres (the body is immersed and co-participates in meaning), and interactions (the work exists only through the physical action of the visitor). This categorisation serves to reflect on how these different types interact with the viewer's body

immersed in phenomenological space.

"Beyond confinement. Bodies, Spaces and the Challenge of Social Reintegration" offers an insightful reinterpretation of prisons, where bodies, placed in deprived and suspended, relationships with their environment, generate the conditions for exploring extreme contexts for design as a dialogic, situated, and gradual practice.

The article presents an urgent and conceptually rich reflection on the socio-spatial implications of incarceration, particularly in contexts like Italy where outdated infrastructural models endure and examines how design can mediate between control and rehabilitation. Through the Laboratorio Carcere's decade-long work at Politecnico di Milano, **Gianfranco Orsenigo** describes a series of "transition prototypes" - experimental, participatory devices capable of incrementally transforming detention spaces into places fostering dignity, relationships, and social reintegration.

Through the experimental San Vittore Off-Campus initiative at Politecnico di Milano, the author addresses anonymity in prison spaces, shaped by neglect, emergency-driven maintenance, and outdated punitive models. A new space within the prison is conceived as a distinctive time/place, reimagining detention as living time through interventions attuned to bodily presence, movement, and affect

The proposed methodological stance of the research suggests that even within total institutions, space can be gradually reclaimed as a site of negotiation, creativity, and relational care. By focusing on the relationship between bodies and spaces, the research rejects both abstract, top-down planning and purely functionalist maintenance, advocating instead for incremental, embodied, and context-sensitive practices.

"Essenburg Park Between Physical Experience and Digital Representation" offers an on-site reflection intersecting contemporary debates on body-space relations and the role of technology in generating new narratives and practices for transforming urban and natural environments. **Sara Anna Sapone** presents Essenburg Park as a case study within the broader research framework, investigating how physical spaces, citizen-led actions, and digital tools can together shape new urban ecologies.

The essay reconstructs the site's layered history - from polder to railway yard, to informal occupation by residents (notably the Turkish Dutch community), and finally to a public park in 2018, enabled by civic activism and the recognition of its ecological and hydrological value. The park's design adopted a principle of minimal intervention, preserving spontaneous biodiversity and combining formal and informal paths to enhance diverse spatial experiences.

The park became a field to test digital tools - including Lidar mapping, terrestrial 3D scans, and participatory biodiversity databases - exploring their potential to inform more dynamic, situated design processes.

Through experiments combining digital data and embodied site experience, the study advocates for iterative, community-driven, data-informed approaches to urban nature design and care, capable of registering ecological processes and socio-cultural meanings over time.

"Paxton after Paxton - Form as Formlessness from Dance to Architecture" by Antônio Frederico Lasalvia, proposes an interesting and bold parallel between architecture and dance through a critical analysis of Joseph Paxton's Work and Steve Paxton's 'Contact Improvisation'. The terms of the comparison call into question the concept of open and recursive formal structure in relation to informality and flexibility of use. The reflection is conducted by implying a generative and non-prescriptive idea of form, within which architecture and dance become fields of possibilities rather than pre-constituted conformations.

In architecture, the examples cited - Lacaton & Vassal, Georges Descombes, and Carla Juaçaba - aim to support an idea of design as a renunciation of closed form in favor of adaptive systems capable of accommodating the unexpected; this at the different scales and temporalities implied by such works (permanent and temporary architecture, landscape design).

The contribution opens toward a research perspective on architectural 'form as formlessness', capable of absorbing the modifications implied by changing social needs: a feedback-based approach that implies a non-fixed form that is and can adapt to evolving needs, where the formal is understood in perpetual metamorphosis.

EMERGING REFLECTIONS

Through this collective research, some reflection emerges.

Starting from architecture per se, we see the possibility of reaffirming the capacity of architectural elements to act as spatial correlations of autobiographical memory and active agents, which involve the body, in structuring personal and collective memory, mediating transitions and emotions. This perspective extends from the phenomenological tradition (Casey, 2000; Pallasmaa, 1996) towards the need for design practices that acknowledge memory-encoded spaces, for any transformation and especially in contexts of displacement and vulnerability.

Design strategies should embrace tactile scales, material consistency, and perceptual ambiguity, also to counteract the sensory impoverishment of commodified spaces, offering empathetic and neurodiverse environments capable of eliciting multisensory engagement.

In parallel, contemporary urban contexts, especially residual and marginal spaces, continue to reveal their potential as vital settings for informal, experimental, and bodily practices. Such spaces enable spontaneous, collective forms of placemaking and spatial agency (de Solà-Morales, 1995; Lydon & Garcia, 2015). Here, corporeality emerges as a vital medium for spatial interaction and knowledge production. Experimental, situated design practices rooted in relational and embodied perspectives - from action-research and participatory, performative urban actions to immersive, sensory explorations - reaffirm the centrality of the body in shaping the meaning and experience of space.

This resurgence of embodied practices unfolds in parallel with an era of intense technological mediation, where hybrid tools, digital platforms, and immersive environments it is hoped to multiply modes of presence and interaction, rather than simply displacing them.

On the other hand, the intensification of digital mediation within urban and architectural environments is a risk for diminishing the multisensory, affective nature of bodily experience in space. Phenomenological critiques highlighted how over-reliance on visuality, and standardised spatial production tends to flatten the spatial experiences where bodies are repositioned as spectators rather than agents.

These reflections suggest a potential disciplinary shift towards more-than-human and post-anthropocentric frameworks, where bodies, human, animal, and machinic, are understood as interdependent agents (Amin, Thrift, 2000) within complex, layered urban ecologies (Haraway, 1991).

RESEARCH TRAJECTORIES

While some contributions critically interrogate the risks posed by digital transformations, including the fragmentation and disembodiment of experience, others foreground the mnemonic, affective, and subjective dimensions of spatiality (Gallagher, 2005), highlighting the persistence of lived memory as an active, generative force (Merleau-Ponty, 1945/1962).

What unites them is the insistence that bodily presence, whether in public space, virtual environments, or autobiographical memory, remains central to understanding how spatial meaning, memory, and social relations are continuously produced and re-negotiated (de Certeau, 1984).

In the end, we can argue how emerging debates on body and space can open fertile ground for new, interdisciplinary research trajectories connecting architecture, urbanism, performance, ecology, and digital culture.

Promising paths lie in the combination of spatial design with neuroscience to explore how built environments affect emotions and social behaviours, especially for marginalised groups and how, conversely, bodily perceptions and sensations underlie the conception of architectural space. Parallel to this, an idea of multispecies urbanism presents shared ecologies where human and non-human bodies co-produce urban life (Braidotti, 2013).

Another relevant trajectory is related to art, where performance is seen as civic spatial agency, where public actions might be seen as capable of shaping urban space and governance. Lastly, there should also be an important effort in considering didactic practices through informed embodied pedagogies, advocating for experiential, somatic, and situated practices in urban design education.

Together, these trajectories call for a radical interdisciplinarity, amplifying spatial research from aesthetic experience to embodied, affective, and political agency, aiming for more inclusive, just, and ecologically attuned urban futures, yet consistently grounded in the human, in an understanding and respect for its corporeality and its multifaceted capacities to perceive and experience space.

NOTES

While the three authors jointly conceived and edit the text, Marco Bovati authored "Grounding the Body-Space relationship to contemporary international debate" and "The theoretical Body-Space relationship Framework (II)", Anna Moro "The operational Body-Space relationship experimental environment (III)" and "Emerging reflections", Daniele Villa "The foundational Boby-Space relationship Lens (I)" and "Research trajectories".

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The Body(ies) and the Space(s)

A conversation between the Editorial Committee members

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Invited Editorial

MB, AM, DV: The relationship between body and space in contemporary times challenges us, as architects and urban planners, on several crucial issues.

New technologies allow events and experiences to be displaced across different places and times; they connect distant people around activities that — until recently — required physical co-presence in the same space, and they enable the experience of places that were once accessible only through physical attendance.

Moreover, the lockdown experience has accelerated this virtualisation of the interaction between body, bodies, and space, pushing it to previously unimaginable limits.

The fundamental question that this scenario raises — and which seems crucial for consciously engaging with design practice today and for understanding how the complex body-space relationship currently influences our approach to studying and designing space — seems to be as follows:

Given the progressive virtualisation of human experiences, what remains fundamentally tied to the essential condition of physical co-presence within architectural and urban spaces, involving direct interactions among bodies and between bodies and their spatial environments?

In other terms, which bodily capacities remain uniquely bound to physical presence, which can be effectively transferred into virtual environments, and which inherently resist such displacement? What do we gain or lose in this shift?

JAB: I totally agree, but the body is a purely private system, one in which any decision would be valid simply because it is a decision. In this case, we would not have structural unspeakable but a total absence of structure, and the decision-making agent would make the decision under conditions of total omnipotence.

A private system is based on a decision. Since the decision is always made within a concrete context, what is decidable is not entirely free: what is considered a valid decision will have the limits of a structure that, in fact, is only particularly unstructured.

The singularity of the decision will tend toward the universality of the rule, and vice versa, because there will be a plurality of contents equally capable of assuming this function of universal representation.

In an opposite sense, the actual contexts limit structural undecidability and the spectrum of contents that can, at any given moment, play the role of universal representation. The action that develops is based on pure decision-making, without concern for the effects of our actions on others. It is a decision to propose action by and for the subject, and it is built on the accident as a context.

In this system, an instantaneous expansion of worldly experience occurs, with the consequent loss of identity and memory. There is an epochal change in the history of artistic perception. The aesthetics of simultaneity emerges a vision of reality that the reader must interpret and reformulate. The kaleidoscopic and changing vision of the city is the place to produce and modify this reality and transform it into an "intelligent" reality in a purely private space. We are confronted with a smooth, haptic, and close-up space that has a primary characteristic: the continuous variation of its orientations, references, and connections. Faced with this, we find ourselves faced with quick, somewhat thoughtless, and incontiguous decisions. These are actions and constructions made in the present, with no proposal for the future. The future is undecidable.

These systems are not defined by the volume of their envelope, nor are they measured in cubic meters. They are defined by their different densities, and their space does not depend on their envelope but on the atmosphere generated by the proposed action. The difference in density is what produces the change in the system, where the boundaries of passage are soft, and the transformations are gradual. SAME AS ARCHITECTURE nowadays. The qualification of these architectural spaces can be measured in "atmospheres," units that depend on humidity, ambient pressure, state of well-being, degree of bodily connection, heat... situations that, when ordered in some way, produce actions that are established in a non-forced and therefore natural manner. The architectural quality will depend on the adequacy of the atmosphere created and its flexibility to incorporate certain programs into sensitive entities. A contemporary architectural response in a private system can be established from these programmatic "wet macaroni" wrapped in flexible atmospheres. Light and heat intensity meshes, ambient humidity sprinklers, damp or extremely dry soils, the feel of disintegrated materials or a reflective opacity, porous organic matter, or heavy, imperishable metals. Layers that provide function and qualify spaces with new units of measurement.

The reality of the private system as the body is a unique and exclusive condition for the future. Being a condition of the future, we cannot approach its resolution through the transformation of its entity; rather, we must make it real through successive contributions to the idea of a "program," contributions from architectural, social, political, economic, and cultural aspects that work toward this condition of the future.

The underlying idea is always the reinvention of our own language..

AKP Taking into consideration the transformative power of our discipline, the significant question about the value of presence is about being present for change. Change and transformations take place through encounters; these encounters can be physical and situated, or they can be virtual encounters; the significance is that co-presence creates a forum for dialogue and action. Perhaps we need to redefine or recognise different instances and tools through which bodies can be attendant, invent new boundaries, design new forms of collectivity and improvise on alternative mechanisms of agency through such expanded modes of interaction.

MD I think you're right. Encounters are the opportunity to put into practice and apply our understanding of space and place. This journal and all involved with it are interested in education. And education alone, for its own sake, is no bad thing, but in architecture and urbanism, we develop our understanding of it by taking it beyond our mind and applying what we know. To simply rely on the virtual space (such as a virtual classroom) to do this is to deny our minds the richness of the experience we gain from interacting in real space and place. Here, I am not arguing that 'real' is better than 'virtual' (although I tend to think it is because it is more complex and intriguing) but rather that these days we need both. They are complementary, not mutually exclusive. MB, AM and DV ask at the top of this discussion: 'which bodily capacities remain uniquely bound to physical presence?' In reply to that, I say physical human-to-human contact does. That is what makes it unique. It requires space and place in which to flourish, and it is the role of architecture to provide such places. That then creates a special importance for architecture. The better the architecture, the better and richer the encounter that takes place is. The more potential that then has to develop our understanding and experience.

MLN The body/space relationship is defined and decoded through the use of our mind. A body in the space acts in different ways by consciously making decisions. The space defines the boundaries. The body understands those boundaries and decides how to make use of them. In their wonderful piece "How to Sit in an Uncomfortable Chair", Bruno Munari clearly reflects on the potential for our mind to interpret, decode and redefine these boundaries. And it is – as Angela is pointing out – a matter of how encounters have the power to change our interpretation of the discipline and give space to new forms of collectivity, both virtually and in the physical environment.

It is still important to admit that what remains fundamentally anchored to the discipline of architecture and urban study is the reading of the place; this could be substituted (or made differently) by the use of technology and data analysis, but will never have the same involvement, when talking about emotions, body memory, reading through senses, or through emotions. We all know what it means to fall in love with a place, to be able to walk through the sequence of rooms in Pompei houses, or just feel with closed eyes the power of the human domesticated nature of the Alhambra through the sound of the water and smell of jasmine, feel through the eyes the violence of the divided city in Nicosia, or just feel the contact with pure nature in the extreme conditions of the Nordic latitudes. That's what we call qualitative values, and it is definitely related to the word "atmosphere" mentioned by Joaquin.

The central question is probably more about what kind of experience, instead, the virtual environment can offer for us as architects... Mike, we never met in person; what would you answer?

MD Maria Luna, I look forward to meeting you in person. While Teams and Zoom, Google Drive, and OneDrive are tools that help us exchange ideas and thereby create new knowledge through, for example, this journal, they lack the immediacy of personal encounters. These technologies are intermediaries, so they themselves influence the encounter. Instead, I want to sit with you and compare our virtual meetings with the personal encounter. The formality of technology deprives us of the anecdotal and idiosyncratic; it diminishes the relaxed and casual yet informed discussion and the spontaneity of action that is possible when a space and place and all the characteristics that you mention are shared. With the virtual, we are constrained. Emotion is suppressed. You are Italian, so I imagine you are full of expressive emotion, but Teams and Zoom lose that in transmission, and Google and OneDrive lose it in translation. Of course, they have their place – the UoU journey is a great example of their benefit – they allow what would be otherwise impossible encounters to occur. Many of us and many of our students appreciate all the opportunities the UoU experience brings, but it becomes a full experience when it encounters space and place and when it acts upon their human experience through architectural intervention.

IN PRESENCE

Wandering Virginia Woolf's Home through Spatial Correlators of Autobiographical Memory

A Sketch of the Past

otobiyografik bellek
mekânsal deneyim
mekânsal algı
autobiographical memory
spatial experience
spatial perception

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Bu araştırma, mimarlığın, özellikle de bazı yapı elemanlarının mekânsal belleğin oluşmasında farklı niteliklerde etkileri olduğu görüşüne dayanmaktadır. Bu makalede, kapılar, pencereler ve merdivenler gibi bazı yapı elemanları aracılığıyla mekânların hareketleri nasıl teşvik ettiği ve mekânsal durumlar yarattığı araştırılmaktadır. Bellek ve algı kuramlarından yola çıkılarak, yapı elemanlarının sağladığı mekânsal durumların otobiyografide mekânların hatırlanmasında önemli bir rol oynadığı öne sürülmektedir. Bu yapı elemanlarının edebiyattaki anlatılarının bellek ve mekân arasındaki ilişkilere nasıl ışık tutabileceğini araştırmak için, Virginia Woolf'un 1939'da yazdığı 'Geçmişin dair bir taslak' (1985) adlı otobiyografik anı kitabına bir vaka çalışması olarak başvurulmuştur. Örnek olay incelemesi, bellek, algı ve deneyimin birlikte işleyişi üzerine bir tartışma çerçevesi çizerek otobiyografik belleğin mekânsal bağıntılarını aramaktadır. Metin, mekânın kurulmasının mekânsal durumlar aracılığıyla nasıl gerçekleştiğini keşfetmek için yapısöküme uğratılmıştır. Bulgular daha sonra otobiyografik bellek üzerine felsefe ve psikoloji kuramları aracılığıyla değerlendirilmektedir. Woolf'un çocukluğundaki evi Hyde Park Gate 22, Londra'nın varsayımsal olarak inşa edilmiş izometrik çizimi üzerine kaydedilmiş mekânsal durumlar ve hatırlanan deneyimler ile eylem halindeki mekânsal bağdaştırıcıların nitelikleri değerlendirilmektedir.

This research is based on the argument that architecture, specifically some building elements, have effects of different qualities on the establishment of spatial memory. This article searches for the ways in which spaces urge movements and create spatial situations through certain building elements such as doors, windows, and staircases. Drawing on theories of memory and perception, it is suggested that the spatial situations provided by building elements play a significant role in the recollection of spaces in the autobiography. For exploring how the narratives of these building elements in literature may provide insights into the relations between memory and space, as a case study, it refers to an autobiographical memoir, named 'A sketch of the past' (1985) by Virginia Woolf written in 1939. The case study seeks the spatial correlators of autobiographical memory by framing a discussion on the co-functioning of memory, perception and experience. The text is deconstructed to explore how the establishment of space occurs through spatial situations. The findings are then evaluated through philosophy and theories of psychology on autobiographical memory. The transcribed spatial situations and remembered experiences engraved on the hypothetically constructed isometric drawing of Woolf's childhood home, Hyde Park Gate 22, London and the qualities of spatial correlators in action are evaluated.

HOW TO RESEARCH SPATIAL MEMORY?

This research aims to discover autobiographical memory in relation to space and architecture. As the discussion exposes the role of spatial inputs in the functioning of memory, we aim to seek the spatial correlators of this functioning through thresholds of physical space. As a case study, we resort to a literary work, an autobiographical memoir, named 'A sketch of the past' (1985) by Virginia Woolf written in 1939.

As a writer known for experimenting on how she remembers, Virginia Woolf's works catch the spotlight when it comes to autobiographical memoir writing. It is possible to see the traces of Woolf's past and her attempts to convey it not only in her autobiographical essays but also in her novels and other productions. Woolf states that the past is very much influenced by the present, that the past she writes today would be written differently a year later. For this reason, she includes the present while writing her memoirs (Woolf, 1985). As comparative literature scholar Evelyn Ender (2005) states, it is possible that her literary images reveal certain structural paradigms, general features of a mental architecture that defines the activity of remembering.

According to Ender (2005), to have a better perspective on autobiographical memory, it is necessary to look at a diary-like text, a text that emphasises observations and presents raw facts rather than interpretations. It is likely that an author's experiment of writing her past, who is particularly interested in memory and memoir writing, may provide data that will enrich a discussion on memory. Being an autobiographical literary production, the examination will allow us to overcome the difficulties of a discussion grounded on a knowledge of subjective and non-fixed nature. The text is deconstructed to explore how space is producteur through literary methods. The findings are then evaluated through philosophy and theories of psychology on autobiographical memory.

This research is based on the argument that architecture, specifically some building elements, have effects of different qualities on the establishment of spatial memory. Research at the intersection of architecture and memory often examines the collective memory from urban and historical perspective (Boyer, 1994; Connerton, 1989). In contrast, phenomenological approaches take a highly individualized perspective on memory, emphasizing the unique experiences of individuals and the distinctive architectures that reflect them (Zumthor, 1999; Malpas, 2012). Our research does not align with either of these approaches; rather, it focuses on the memory of everyday and the nondescript spaces and architectures in the context of cognitive theories.

Woolf's text unfolds for us the relationship between memory and architecture from this perspective. We construct this text using spatial mapping as a visual research method. The mapping process involves the transcription of the spaces that are narrated in the text, followed by their subsequent mapping onto spatial drawings.

The method of examination is framed to reveal the occurrences of spatial correlators and consists of the following stages: A transcription is obtained by extracting all the spatial situations mentioned by Woolf in the text and the elements that may have been caused by spatial situations. The data in this transcript were first classified according to their times and spaces (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.

CO-FUNCTIONING OF THE TRIAD OF MEMORY, PERCEPTION AND EXPERIENCE

The perception and the experience of space have been a frequent interest for architectural design studies which try to discover the relationships of space with time and people. Laying emphasis on subjectivity and temporality (praising the 'moment', the 'movement', the 'event'), a wide range of these researches tend to exclude the past phenomenal experiences, that which excludes the 'self'. Memory is the whole of one's past experiences, gained knowledge, habits and skills. This whole is known to be stored in the form of active and dynamic patterns they compose with each other, rather than static, isolated images; "when we remember, we complete a pattern with the best match available in memory; we do not shine a spotlight on a stored picture." (Schacter, 1996, 71)

In the functioning of memory, the act of remembering past experiences is not locating but rather constructing (Rosenfield, 1992). This points out the dynamic nature of human memory. Memories are not stored as frozen fragments of reality; instead, they are constantly 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. Architectural historian Eleni Bastea argues that "we revisit our earlier experiences, adjust them, edit them, alter them, or erase them. We might experience architecture through our body but we remember it in our mind and heart" (2004, 10). By this she means that our corporal experiences are encoded in our memory, neither the act of encoding nor the act of remembering would be independent of who we are.

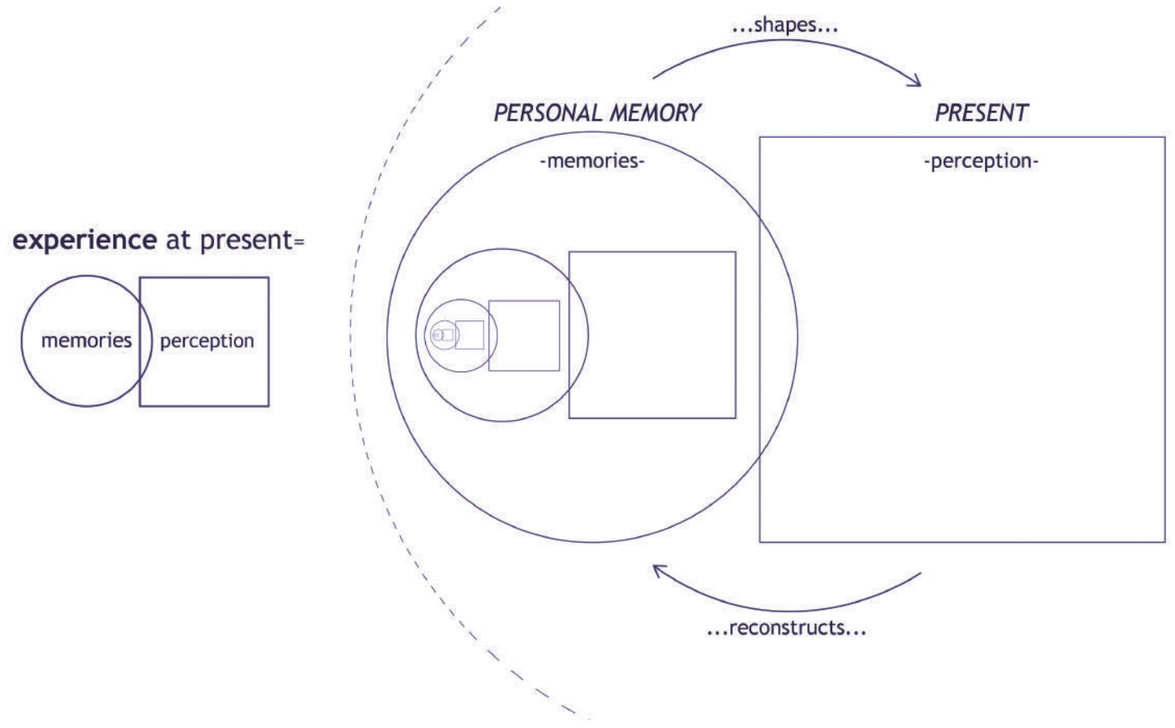

Fig.1 - The intricate co-functioning of experience, perception and memory, by E.C. Çelikcan.

Hence, memory does not seem to belong simply to or to be about one's past, but more about the whole of past, present and future. The experiences continue to exist with us as part of the whole by being encoded into memory through a mental reproduction. Experience of space is corporeal. Perception shapes this experience by what has already accumulated in our personal memory and reveals the key aspect of memory-space interrelation. Since perception and experience point directly to an individual's memory, each experience is unique to the moment and the person experiencing it. In fact, this is a bidirectional construction as the past shapes the experience in the present through perception. In the 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. According to Bergson (1896), the boundary between what we perceive and what we remember cannot be drawn, because these two are not separate things. Perception and recollection are two intricately intertwined actions that cannot be considered independently from each other. 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 Fig.1, we visualise the intricate co-functioning of experience, perception and memory. Here, the totality of the memories shapes the perception in the present. Hence conditioning the present experience. In other words, an experience blossoms through the perceptions shaped by the memories of the past. By the ties formed through the commonalities with past memories, the experience is now encoded in the memory as a new entry as well.

In his book Searching for Memory, Schacter (1996, 52) states the following about the working principle of memory: "We remember only what we have encoded, and what we encode depends on who we are – our past experiences, knowledge, and needs all have a powerful influence on what we retain. This is one reason why two different people can sometimes have radically divergent recollections of the same event." Beside the inseparable and two-way relationship between memory and perception, another aspect Schacter draws attention to is that this process does not always occur consciously. For example, 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 (1930, 73) 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 we will refer to as *the crust over the experience*. This leads us to a memory type through which we may enhance our discussion on the contribution of phenomenal experiences in autobiographical memory.

AUTOBIOGRAPHICAL MEMORY AND SPATIAL EXPERIENCE

William Brewer (1986), a psychologist who studies human memory, briefly defines personal memory as the memory of a specific autobiographical time period. 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). Autobiographical memory refers to the type of memory that comprises a person's phenomenal experiences relevant to the 'self'.

An autobiographical memoir consists of the unique and distinctive experience, which is molded by sensations and by perception shaped through our memory, and the thematic information surrounding the knowledge of this experience (Conway, 1992). As the psychologist William James stated: "The sound of the brook near which I write, the odor of the cedars, the comfort with which my breakfast has fined me, and my interest in/this paragraph, all lie distinct in my consciousness, but in no sense outside or alongside of each other. Their spaces are interfused and at most fin the same vaguely objective world" (1890, 101). Similar to James' example that emphasizes the holistic and integrated nature of sensations, we can see in Merleau-Ponty's example that through an activated mental chemistry, perception works in a similar way to combine various elements into a compact whole: "If I walk along a shore towards a ship which has run aground, and the funnel or masts merge into the forest bordering on the sand dune, there will be a moment when these details suddenly become part of the ship, and indissolubly fused with it" (1962, 17).

Spatial and other information from experiences are bound together and they build the structure of memory in the form of complex patterns. In this process, space is an important component of the equation. It is thought that space, which is known to have a strong effect on remembering, is also effective in relating the information in memory with each other. Space was the focus of mnemonic studies and everyday use techniques also in ancient history, as the early discoveries of the encoding of an experience in memory occurred in relation to time and space, moreover, spatial knowledge has positive effects on remembering. Therefore, we consider it explicitly pivotal to have a deep understanding of human memory and its engagement with perception to discuss the spatial experience.

The concept that the information to be stored in memory is coded in relation to space is found even in the oldest sources related to memory. The oldest known source is the story of Simonides of Ceos, a Greek poet who lived in the 5th century BC. Simonides was assigned to identify the people under the rubble of the building that collapsed sometime after his departure. However, the bodies were unrecognisable; Simonides was only able to identify the people by remembering where they were seated in the dinner hall (Cicero, cited in Yates, 1966). Inferring that the relationship established between the information and the space facilitates the act of remembering. Cicero also addressed spatial mnemonic techniques that use spaces to enhance recalling, known as 'method of loci' (Yates, 1966). It

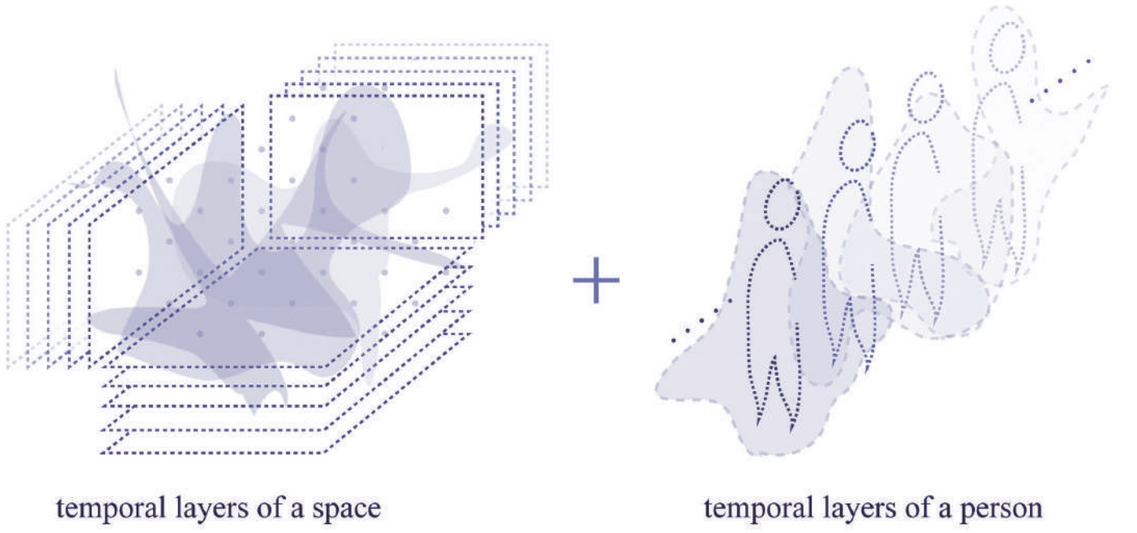

Fig.2 - A spatial experience is unique in that both temporal layers of a person and of a space are moment-specific and difficult to emulate, by E.C. Çelikcan.

Fig.3 - A window may enhance the uniqueness of any experience by enriching the myriad inputs of temporal layers through movement and connection, by E.C. Çelikcan.

is suggested walking through a building and embedding the images of the things to be remembered in certain distinguished places of a building such as a wide door, between two columns, a niche in the corridor. Regarding, on the one hand, these distinguished places differentiate an experience by acting as anchors, and on the other hand, as they are quite familiar and common elements of spaces, they facilitate engagement in memory patterns by strengthening the possibility of stronger and more numerous associations with existing knowledge in memory.

When we contemplate the subjective experience of space, individuals' experiences of a space share commonalities although they can never be identical. 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 doors, windows, staircases – present the commonalities we seek for examining the spatial correlators in the functioning of autobiographical memory.

The striking aspect for us in this functioning is that there may be elements in the experience that strengthen the association of spatial knowledge in memory with each other. The characterisation of each experience may come through objects, people, actions, and some building elements. In particular, since it is known that knowledge 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 knowledge in memory.

BUILDING ELEMENTS AS SPATIAL CORRELATORS IN THE FUNCTIONING OF AUTOBIOGRAPHICAL MEMORY

"A window cuts out a new frame for looking. Walls put up barriers, but their borders easily crack. The perimeters of the room change into boundaries to be crossed. Doors open up new access, morphing into portals. An entranceway becomes gateway to an inner world. [...] A staircase takes us up to a whole new level of intimate encounter, and we rise and fall along with it" (Bruno, 2009, 37).

Drawing on Bergson's approach to perception and memory, each spatial experience, the encounter of a person and space is unique. The countless elements in one single moment and duration make the experience non-recurrent. We may regard the different times of a place as temporal layers, which have variables such as senses, feelings and actions that are shaped by the re-established memories. Hence, the experience of space could be seen as the encounter of a temporal layer of a person's life with a temporal layer of space (Fig.2). Space relates with time through changes in material and movements of air, light, sound, bodies, objects and so on.

In this article, we search for the ways in which spaces can urge movements and create spatial situations through certain building elements such as doors, windows, and staircases. Through these building elements, we argue that memory is established in unique and subjective ways. We try to understand how the narratives of these building elements described in literature may provide insights into the relations between memory and space. We suggest that these specific building elements have the potential of connection and transition (Fig.3). While connection refers to the physical relationship between two places, transition refers to the action itself that transpires through physicality. Connection and transition have a bidirectional effect on each other; connection is the physicality that enables transition, while the physicalisation of the act of transition is what constitutes connection. Therefore, it is important that these elements which provide spatial situations are the elements that embody the concepts of connection and transition in the sense that these concepts involve both physicality and an action.

Another significance of these building elements is the fact that they are commonly encountered, even habitual spatial elements. This quality contains a potential for being 'the crust over the experience'.

A SKETCH OF THE PAST: WANDERING WOOLF'S HOME

Virginia Woolf, who writes about her childhood years starting from the first thing she can remember, considers it important to present who she is in the past together with 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, and emotions.

As Ender points out, Virginia Woolf's autobiographical essay is a text that may have something to say about the functioning of autobiographical memory, which includes our phenomenal experiences: "This is why Woolf's literary experiment can provide

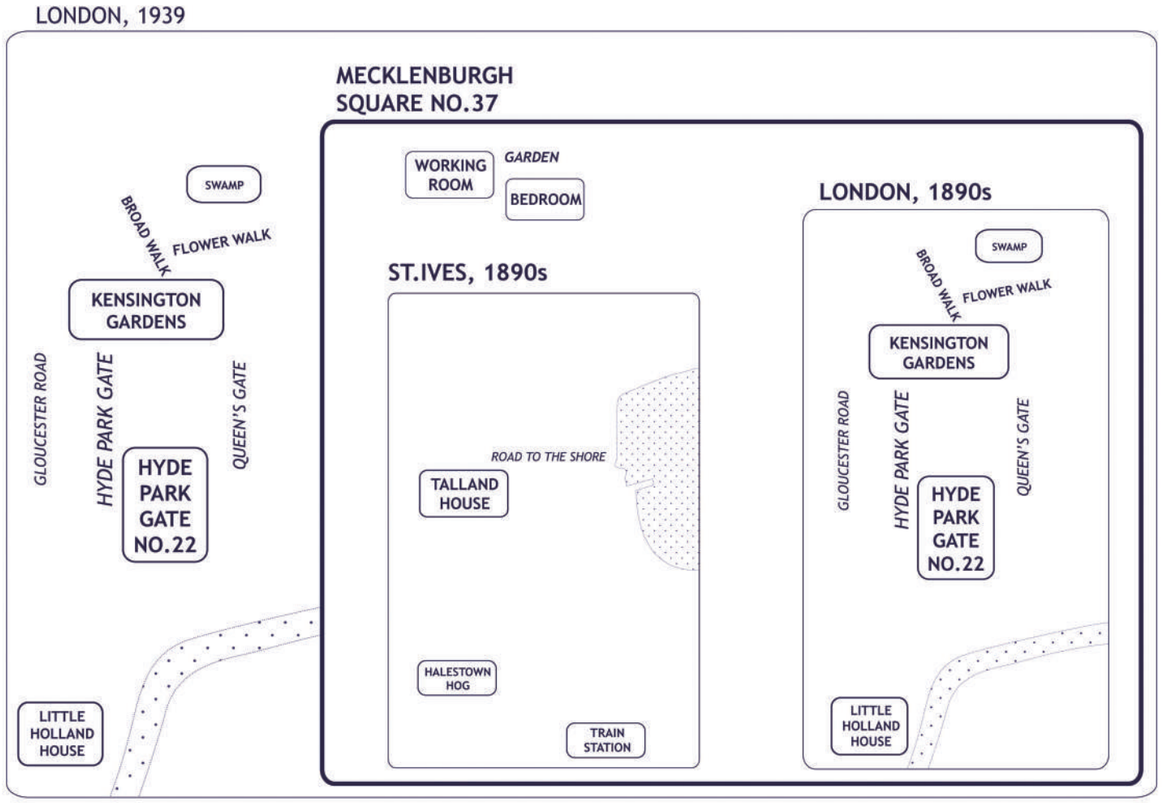

Fig.4 - The memory-space map of Woolf showing the narrated places of two different time: recalled places from 1890s grown within her home at Mecklenburgh Square in 1939 as Woolf writes 'A sketch of the past', by E.C. Çelikcan.

a particularly apt analogy for the phenomenon of remembering: it foregrounds the verbal, textual medium through which mnemonic images are known intersubjectively, as well as, possibly, intrasubjectively. Far from constituting an idiosyncratic mode of remembering, her literary images may well reveal certain paradigms of structure, the general features of a mental architecture that defines the activity of remembering. With Woolf, we can chart some of the first elements and principles of the construction of memory." (Ender, 2005, 48)

A Sketch of the Past is an autobiographical essay, written in a free-flowing and unrevised manner, without a specific structure, a definite beginning or end. As the text contains occasional recollections of personal experiences, almost every recollection is accompanied by spatial depictions. Woolf generally remembers and writes her memories in relation to the place where they happen (Fig.4), with details from that place (Fig.5) and often in relation to building elements such as doors, windows, and stairs. We will try to find out further the relationships between space and autobiographical memory in Woolf's text.

The method used to analyse the 130-page autobiographical essay briefly consists of the following stages:

1. Transcription of spatial situations: An inventory is obtained by extracting all the spatial situations mentioned in the text and the building elements that may have caused such spatial situations.

2. Categorisation: The data in this inventory are first organised according to the location and date (e.g. London, 1890), then according to the space of which they are a part of (e.g. children's room, entrance hall) and then according to the building elements they include (door, window, staircase). With this categorisation, it was possible to evaluate the data in the inventory according to the qualities of spatial correlators.

3. Representations of the spatial correlators: The graphic representations of the spatial correlators inventory are produced and grouped according to the common qualities while recollecting the experiences (Fig.6). Each image is coded by the building element (e.g. D1, W1, S1), which can be followed in figures and text.

4. Transcription of spaces: The spaces encountered in the text and the physical or temporal relationships between them are transcribed to hypothetically construct Woolf's home as an isometric drawing (Fig.7).

5. Spatial situations in memory-spaces: In the light of the data obtained from the transcription of the spatial situations and the transcription of the spaces, the spatial situations and remembered

Fig.5 - A representation of Woolf's home from 1890s, Hyde Park Gate, 22, and its near surroundings that narrated in 'A sketch of the past', by E.C. Çelikcan.

experiences were engraved on a drawing of Woolf's childhood home.

While remembering her childhood, the author refers to her experiences characterised by the existence of spatial situations quite frequently. Apart from these spatial situations, other elements related to the physical structure of space are rarely encountered throughout the text. We suggest that the spatial situations provided by building elements play a significant role in the recollection of spaces in the autobiography. The qualities of spatial correlators in action are presented below with exampled excerpts. The graphic representations of the spatial situations can also be viewed as an inventory in Fig.6, grouped according to common effects on recollecting the experiences. The codes of all excerpts are displayed in Fig.6 and Fig.7.

S1 "Now society exerted its full pressure, about 11 o'clock say, on a June night in 1900. I remember the dazed, elated, frozen feeling: as the lights beat on me, going upstairs; the unreality; the excitement; the paralysis. Can I recover anything further?" (Woolf, 1985, 133)

D2 "Everything to do with dress – to be fitted, to come into a room wearing a new dress – still frightens me; at least makes me shy, self conscious, uncomfortable." (Woolf, 1985, 68)

S2 "The grown-up world into which I would dash for a moment and pick off some joke or little scene and dash back again upstairs to the nursery was ended." (Woolf, 1985, 94)

The state of being a physical and psychological threshold involves situations such as being at the threshold, crossing the threshold, where the psychological boundaries of the spaces are felt beyond the physical. It can be inferred that the intensity of emotion that comes with the feeling of moving from the current space to a space with a different quality has strong effects on the encoding and recalling of the experience in memory. As seen in the excerpt above, the feelings of excitement, enthusiasm, pride, anxiety, astonishment and curiosity felt when about to change the place seem to be a strong factor that makes the experience permanent in memory.

S3 " 'How did father ask you to marry him?' I once asked her, with my arm slipped in hers as we went down the twisted stairs into the dining room. She gave her little laugh, half surprised, half shocked. She did not answer." (Woolf, 1985, 91)

D3 "And there is my last sight of her; she was dying; I came to kiss her and as I crept out of the room she said: 'Hold yourself straight, my little Goat.'" (Woolf, 1985, 84)

Association of thought, sensation and speech with bodily movement groups the excerpts about a person's recollection of what was spoken, heard, felt, or thought in the process of an action. An example is the moment of passing through the doorway; Woolf recalls the memory of saying goodbye to her dying mother and hearing her last words addressed to her. Another excerpt involves the staircase. As the movement of the body during ascending or descending the stairs is specific to this action, the movement of our body in space becomes unique on the staircase. At the same time, since it allows our body to be constantly re-positioned in the horizontal and vertical planes, our relationship with space is differentiated. In these excerpts, the act of climbing or descending the stairs reinforces the encoding of the speech, thinking, feeling and sensations that occur during the action.

S7 "I can see him taking a lady downstairs on his arm; and laughing. He cannot have been as severe and melancholy and morose as I make him out." (Woolf, 1985, 113)

S5 "I see him peering up at me on the broad staircase at St Ives with his drawn yellow face and a tie made of a yellow cord with two plush balls on it;..." (Woolf, 1985, 83-84)

Recalling people's images or actions on the staircase shows Woolf's remembrance of Symonds, her mother, and her brother George with images of them on the staircase; her memories contain images of these people standing, sitting or descending the stairs. It seems that as the staircase enables the movement of the body vertically and horizontally, the author imagines people on the staircase from new angles.

Differing from the height and angle we normally see, the spatial situation suggested by a staircase creates unusual images of these people and thus enables us to remember these differentiated images through their relationship with the space.

D5 "That great figure with the deep voice and the wild eyes would come to the house looking for her, with his madness on him; and would burst into the nursery and spear the bread on his swordstick and at one time we were told to go out by the back door and if we met Jim we were to say that Stella was away." (Woolf, 1985, 98)

The state of being a physical and psychological obstacle or limitation shows the excerpts that accompany the recollection of situations in which the door is an obstacle and/or a boundary. In both cases, the door of the house/garden in Woolf's memoir is a threshold of transition from the public to the private. A door becomes a means of making the house inaccessible for a person other than the household and memories of trying to keep someone out are remembered both physically in relation to the door and what it represents.

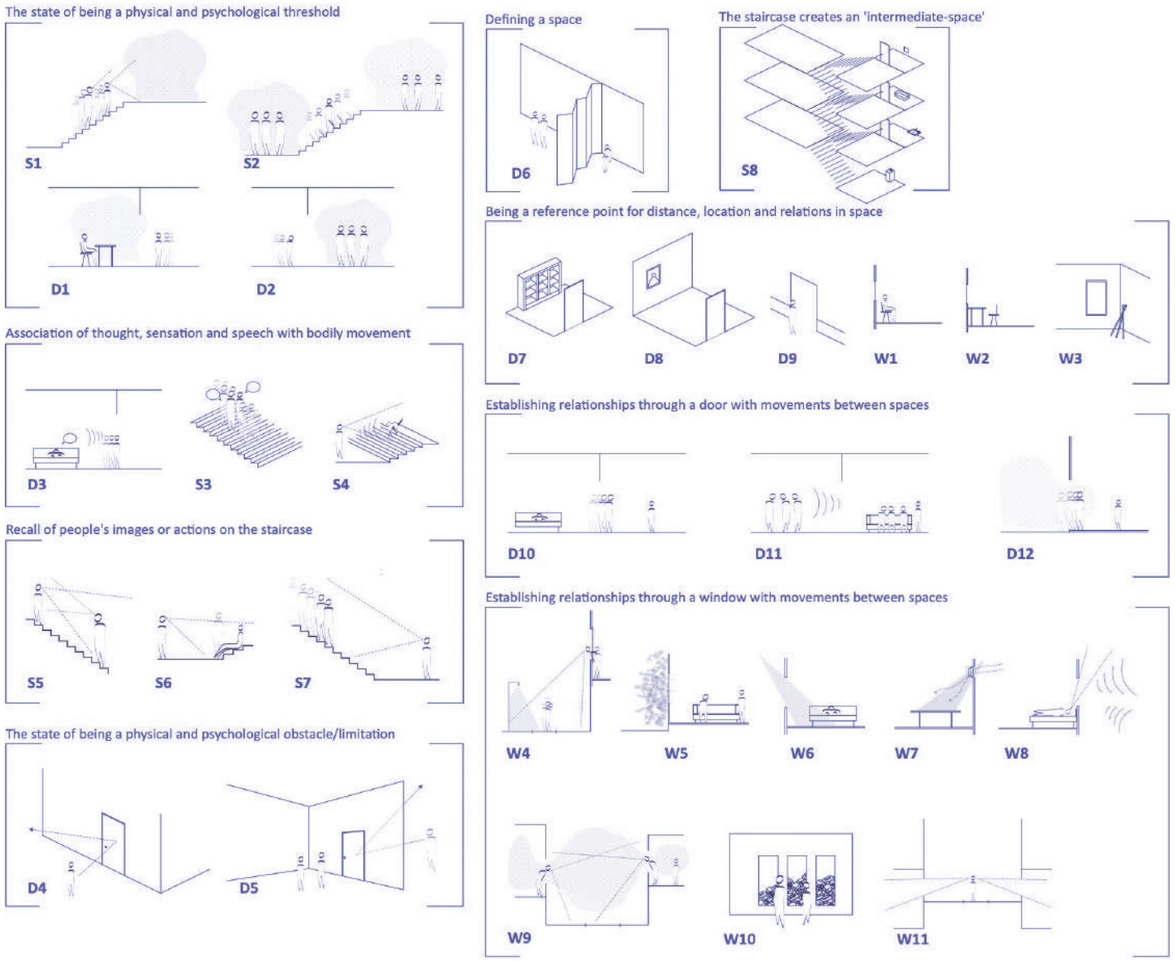

Fig.6 - The graphic representations of the spatial correlators inventory, grouped according to common effects on recollecting the experiences, by E.C. Çelikcan.

D6 "It derives from Stella and Jack. It springs from the ecstasy I felt, in my covert, behind the folding doors of the Hyde Park Gate drawing room. I sat there, shielded, being half insane with shyness and nervousness; reading Fanny Burney's diary; and feeling come over me intermittent waves of very strong emotion – rage sometimes; how often I was enraged by father then! – love, or the reflection of love, too. It was bodiless; a light; an ecstasy. But also extraordinarily enduring." (Woolf, 1985, 105)

The above excerpt shows where we see that the door defines a separate space within a space and that Woolf, who hides behind the door, associates the emotions aroused by what is happening in the living room with this defined space.

S8 "There were different smells on different landings of that tall dark house. One landing smelt perpetually of candle grease; for on a high cupboard stood all the bedroom candles. On another half landing was the water closet; with all the brass hot water cans standing by a sink. On another half landing was the solitary family bath. (My father all his life washed in a yellow tin bath with flat ears on which the soap stood.) Further up, was a brown filter from which once the drinking water presumably was supplied: in our day it only dripped a little. At that height-it was on the study half landing-carpets and pictures had given out, and the top landing of all was a little pinched and bare. Once when a pipe burst and some young man visitor – Peter Studd? – volunteered help and rushed upstairs with a bucket, he penetrated to the servants' bedrooms, and my mother, I noted, seemed a little 'provoked', a little perhaps ashamed, that he had seen what must have been their rather shabby rooms." (Woolf, 1985, 118-119)

The situation where the staircase creates an 'intermediate-space' may be exemplified by the excerpts where Woolf constructs a narrative of their house number 22 Hyde Park Gate through the staircase from the ground floor to the top floor. While narrating this staircase, she reveals many details about the house and their life. We see that the staircase and landings are effective in transferring to memory the situations that have many variables of time layers and thus

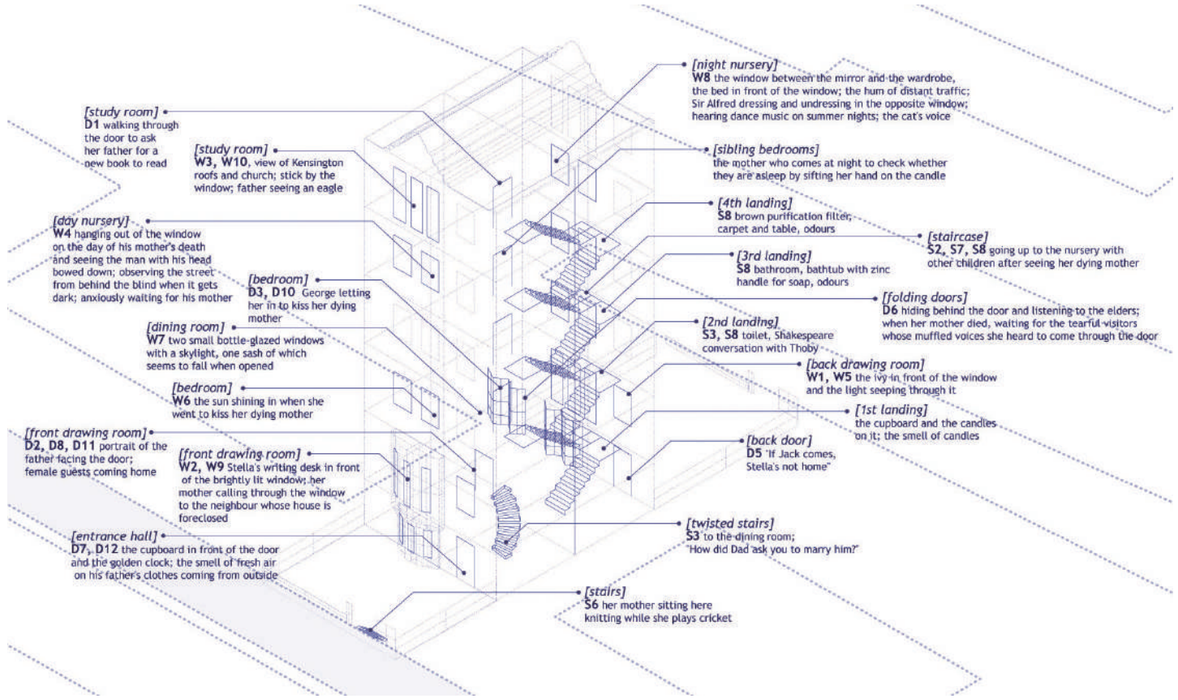

Fig.7 - The transcribed spatial situations and remembered experiences engraved on the drawing of Woolf's childhood home, Hyde Park Gate 22, London, by E.C. Çelikcan.

enrich the experience by being an intermediate space between different spaces on different floors of the house, which is connected to and is an extension of each of them.

W1 "Gerald, who sat beneath the window, sneered later: 'Well, how did the Sunday prayer meeting go off?' (Woolf, 1985, 103)

D7 "In the hall facing the front door stood a cabinet with blue china; and on it a gold faced clock." (Woolf, 1985, 117)

Being a reference point for distance, location and relations in space may be exemplified with the excerpts in which the selected building elements are the reference points for distance, location, orientation, and relations within space. When Woolf remembers a place, she usually first recalls and writes about how it was reached, passed through, entered, and the thresholds through which the boundaries of the space dissolve and allow passage. The spatial situations they create indicate that the desire to position oneself and other objects and actions in three-dimensional space is often realised through these building elements, which act as correlators of memory.

D10 "My father staggered from the bedroom as we came. I stretched out my arms to stop him, but he brushed past me, crying out something I could not catch; distraught. And George led me in to kiss my mother, who had just died." (Woolf, 1985, 91)

D11 "We in the front room sat crouched, hearing muffled voices, ready for the visitor to emerge with tears on tear-stained cheeks." (Woolf, 1985, 94)

In the above excerpts, we may see examples of situations of establishing relationships through a door with movements between spaces. Here, the components of the time layer of one space are included in the time layer of another space through the door. The emotion in the bedroom is carried outside by Woolf's father stepping out of the door. One gets an impression of what is going on inside. The events in one room are included in Woolf's experience in another room through the door ajar, and this experience is established and remembered through the 'overflowing' sounds. We see certain qualities of the outside enhancing the experience of Woolf, such as her father's clothes smelling of fresh air being carried into the house. The experiences inside the house establish a relationship with the outside world and enables the positioning of space and time as well.

W10 "From the three long windows one looked out over the roofs of Kensington, to the presiding Church of St Mary Abbots, the church where our conventional marriages were celebrated – and one day standing there father saw an eagle." (Woolf, 1985, 119)

W5 "They were admitted to the back drawing room, where father sat like the Queen in Shakespeare – "here I and sorrow sit" – with the Virginia Creeper hanging a curtain of green over the window, so that the room was like a green cave." (Woolf, 1985, 94)

W4 "This was proved on May 5th 1895. For after that day there was nothing left of it. I leant out of the nursery window the morning she

died. It was about six, I suppose. I saw Dr Seton walk away up the street with his head bent and his hands clasped behind his back. I saw the pigeons floating and settling. I got a feeling of calm, sadness, and finality." (Woolf, 1985, 84)

W9 "I see her stretching her arms out to Mrs Williams when the bailiffs took possession of their house and the Captain stood at the window bawling and shying jugs, basins, chamber pots onto the gravel – 'Come to us, Mrs Williams'; ..." (Woolf, 1985, 84)

In the above excerpt we observe the situation of establishing relations through the window with movements between spaces. Certain sounds or changes in light create a sense of time while the author is inside the house. Woolf associates the intense emotions in her memory with the physical features of space as the window enables visual or audio interaction. She also remembers some of the activities or bodily movements in relation to the light and wind coming in through the window. Seeing the city from the window, she remembers the experiences in other places of the city and associates them with the current experience, which expand and merge into each other. Other actions, people, events in other places in the city, on the street, are included in Woolf's room through the opening of the window. Woolf's room expands through the window to the street, the barn, the main streets, the roof of the neighbouring building, another bedroom. Woolf's experiences in interior spaces are differentiated by the many elements that enter the room from the outside and even though she was not aware of it at the time, they became a part of her unconscious coding.

SPATIAL SITUATIONS SET BY STAIRCASES, DOORS, AND WINDOWS

Through the transcription of the spatial situations in this autobiographical text and the analysis of the excerpts in the transcription, we aimed to explore whether building elements have effects on the establishment of space in autobiographical memory, and if so, what kind of effects they have.

The findings favour that experiences are encoded in memory in relation to spatial information. Almost every recollection is accompanied by spatial knowledge. We observe that this spatial knowledge often consists of different spatial situations created by building elements. Although they are included in the recollections, the building elements themselves are rarely depicted. Just as the spatial mnemonics technique which enhances recalling by pairing the information to be remembered with a distinguishable spatiality, this study has shown that building elements as spatial correlators are effective in the establishment of memory and the recalling of experiences even without a conscious focus on space itself.

Spatial situations differentiate, enrich and customize the experience of the person and the place of experience is remembered through this knowledge. With the inferences made from the excerpts analysed in the context of the subject, spatial situations created by doors, windows and staircases act as spatial correlators with some common and some divergent qualities. For example, a staircase acts as a spatial correlator through its half landing, by being an intersection where life in both levels coexist ([S8] in Fig.7). Stairs, being located in-between spaces such as hallways, enable uses and their memories that are not originally accommodated by these spaces, such as sitting and pausing [S6] on a transition space. Almost all the memories related to the act of ascending or descending the stairs are moments when these actions are shared with other people [S1, S3]. When an interaction or a conversation is accompanied by the particular movement of the body exclusive to stairs, the experience is differentiated. Thus, bodily experience is instrumental in the construction of memory. Due to its positioning within the building, a staircase acts as a threshold between individual and public spaces [S1, S2]. It can be said that these experiences of transition from individual to common, from discrete to exposed or vice versa affect and strengthen the establishment of the space in memory.

The spatial situations encountered in the memories related to the door are related with certain rituals and the emotions associated with entering. The movement that the door allows between inside and outside distinguishes the experience. With the traces brought by the people entering the space from outside, like mud, dust, cool air, and the smell of fresh air on clothes [D12], a new element enters the temporal layer of that space and enriches its experience. A door serves as a reference point for the events and objects in the space [D7, D8, D9]. Standing in front of a door that opens to another space allows one to see both spaces and associate them [D1, D2]. Being partially involved with another space through the door opening, such as by hearing the sounds from another room [D11], enriches the experiences and contributes to the multiple and multi-faceted association with existing information in memory.

The spatial situations related to the window are, like a door, about being a reference point in space, allowing in sounds, lights, images from the outside, making the movement continuous, enriching the experience inside by including variable elements of the temporal layers of the outside. A window makes us conscious of time through the darkening of the sky and the rising of the sun, it can serve to create temporal, rather than spatial anchors, such as the arrival of the garbage cart [W8], the sun breaking through the window of the building across same time every day and shining on the working desk [W7], the smell of food coming from the neighbour who has started preparing dinner. Windows establish a relationship between two physically separate spaces, two people communicating through the windows of the houses on both sides of the street [W9] or an event that takes place in the room upstairs is included in this space with the sounds coming from the open window [W8].

CONCLUSION

The research question of this study is essentially characterised by curiosity about the interaction between humans and space. The research wanted to find answers to how we experience a space and how we remember the spaces we experience. We aimed to discuss the perception and experience of space in the context of the relationship between space and memory, through the question of how space is constructed in autobiographical memory. The indications of what this co-functioning tells about space may create new basis for the discussion of the perception and experience of space.

The dynamics of interaction between space and people has always been an important concept for architectural design. What methods for investigating subjective interactions such as spatial experience and perception are problematic in themselves. As biologist Gerald Edelman points out in his book on consciousness, Wider Than the Sky (2005), accessing an individual's experiences and the memory formed from them is quite difficult, but not impossible.

"Since consciousness arrives as a result of each individual's brain and bodily functions, there can be no direct or collective sharing of that individual's unique and historical conscious experience. But this does not mean that it is impossible to isolate the salient features of that experience by observation, experiment, and report." (Edelman, 2005, 6).

This research can also be seen as an attempt to experiment with the obstacles that arise in research methods, as it explores the relationship between memory and space in a very subjective context. By investigating the contribution of building elements as spatial correlators of memory through the analysis of a literary work, we propose an alternative research method to overcome the difficulties arising from the subjectivity and impermanence of the triad of experience, perception and memory, emphasizing the possible contribution of literary works as representations of memory. Literary works are often characterized by being a text produced by an individual, a representation of memory with a strong autobiographical aspect and containing knowledge of spatial experience, not only through the physical space itself, but also through many different features, tangible and intangible, that point to the unique experience of the individual. Memory, too, is an ever-changing whole with countless movements that trigger each other. So even if memory, which 'is not a whole that can be given', is captured in a particular moment, it does not seem possible to see the whole through this still section of memory. For this reason, the question of how spaces are established in autobiographical memory was discussed through the relationships and connections between experiences, rather than the fixed and frozen images of the individual spaces that are transferred into memory.

Our exploration of the selected building elements can be carried forward in further studies by extending the scope to multiple works by a given individual to grasp the integrity of memory and its functioning, or by including a wider variety of spatial situations, which would allow us to capture the role of spatial correlators in memory. Bearing in mind the functioning of memory, discussing the perception and experience of space without detaching it from its autobiographical context can pave the way for new discussions on the subjectivity of architectural design processes and new approaches to architectural productions when they are considered as autobiographical works.

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NOTES

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Anatomy of Experience

A Perspective through the Body-Space Interaction

beden
mekan
deneyim
dijitalleşme
body
space
experience
digitalization

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Günümüzde ekonomi ve siyasetin toplumsal yaşamı biçimlendiren temel unsurlara dönüşmesi, teknolojik gelişmelerin ve küreselleşmenin etkilerinin yaşamın her alanına entegre olması, modern yaşamı oldukça parçalı bir süreç haline getirmiştir. Araştırmanın hipotezi, dijitalleşmeyle birlikte deneyimin ortadan kalkması ve bu çok parçalı sürecin artma eğiliminde olmasıdır. Çalışmanın amacı, deneyim kavramını derinlemesine anlamak ve kayboluşunu değişen beden-mekan ilişkisi bağlamında tartışmaktır. İki temel araştırma sorusu bulunmaktadır: "Deneyimi oluşturan değerler nelerdir?", "Dijitalleşen dünyada deneyimin kaybolması beden-mekan ilişkisi bağlamında analiz edilebilir mi?" Öncelikle, deneyimin bileşenleri 29 öğrenciden edinilen yazılı veriler doğrultusunda çözümlenmiştir. Deneyimi oluşturan beş temel bileşen keşfedilmiştir: Anlam arayışı, rastlantısallık, hatırlama, duyumsama ve hissetme. Keşfedilen bu bileşenler, dijitalleşmeyle birlikte değişen beden ve mekan anlayışları bağlamında değerlendirilmiştir. Dijitalleşmenin dünyayla etkileşimimizi genişletme potansiyeline sahip olduğu, ancak aynı zamanda deneyimlemenin özünü değiştirme riski de taşıdığı sonucuna varılmıştır.

Today, the transformation of the economy and politics into fundamental factors shaping social life, the integration of technological advancements and the effects of globalization into every aspect of life, have made modern living a highly fragmented process. The hypothesis of the research is that the disappearance of experience and the highly fragmented process in question tend to increase with digitalization. The aim of the study is to deeply understand the concept of experience and discuss its disappearance through transformed body-space relationship. Two main research questions are posed: "What are the values that constitute experience?", "Can the disappearance of experience be analyzed in the context of the body-space relationship in the digitalizing world?" Initially, the components of experience were analyzed based on written data obtained from 29 students. Five main components that make up the experience have been discovered: establishing meaning, randomness, remembering, sense and feeling. These discovered components were evaluated in the context of the evolving notions of body and space with digitalization. It was concluded that digitalization has the potential to expand how we interact with the world, but it also poses a risk of altering the very essence of what it means to experience.

INTRODUCTION

Today, the transformation of the economy and politics into fundamental factors shaping social life, and the integration of technological advancements and the effects of globalization into every aspect of life, have made modern living a highly fragmented process. "The modern process, as defined by Bruno Latour as the separation of hybrids into components such as subject and object, culture or society and nature, mind and matter; has come to signify a tendency toward purification and boundary creation. The feeling of a cohesive life is gradually disappearing." (Jay, 2005) In the modern world, everyone does more or less the same thing at roughly the same times each day, but everyone is becoming isolated while doing so. Hence, "Benjamin grieves the misery of human experience, Adorno warns that the possibility of experience itself is endangered, and Bürger regrets the loss of opportunities for authentic experience. In this context, it can be said that the experience of the modern individual, deprived of life stories, is also being confiscated." (Jay, 2005) The hypothesis of the research is that: The disappearance of experience and the highly fragmented process in question tend to increase with digitalization. In this sense, the aim of the study is to deeply understand the concept of experience and discuss its disappearance through digitalization, which is prevalent today. The analysis was made in the context of the body-space relationship. Two main research questions are posed:

- What are the values that constitute experience?
- Can the disappearance of experience be analyzed in the context of the body-space relationship in the digitized world?

Initially, the components of experience were analyzed based on the written data obtained from 29 participants. Five main components that make up the experience have been discovered: establishing meaning, randomness, remembering, sense and feeling. Then, these discovered components were evaluated in the context of the evolving conceptions of body and space with digitalization.

ANATOMY OF EXPERIENCE

The discovery and practice that the body gathers from the communication it establishes through abstract or concrete contact with its environment, produces experience. The concept of experience, as Jay (2005) states, originates from the Latin word *experientia*, meaning 'trial, proof or experiment.' A trial is interpreted as an action of seeking or questioning, while its opposite is often described as mandatorily repetitive, limited, and devoid of content. In this sense, experience is a concept derived from the multifaceted discoveries of the body, which serves as a point of connection in spatial relations.

Merleau-Ponty (2013), who embraces Heidegger's understanding of being in the world, describes the body as an intersection and states that the body is the center of the world of experience. Based on Merleau-Ponty's conceptualization of the body, Morris (1997) also argues that the experience of the world exists at the intersection of body and space. It is the body that establishes life. As long as the body, which is the foundation of experience, keeps perceiving it can keep shaping spatial experience. The living space is a place of discovery for the body that moves freely within it, determining its movements and therefore its relationships. Through constantly changing, collapsing, and reflourishing relationships, the body forms its perception of the world and reproduces its experience. In this context, if space is defined as a place where the body holds on to and is centered in, it is possible to say that the body is a transition for the space for experiences to occur.

The body cannot detach itself from the world, just as the world cannot exist as a reality independent of the mind. "Body is the 'hexis' of all of perceptions, in addition to a 'place' where meaning and significance originate in terms of perceptions." (Viljoen, 2010, p.325) Husserl suggests that the analysis of how people perceive the world can be made in the context of experiencing life. The actual reality is that which forms in the subject's mind through experience. The actions of the body cannot be explained by general laws, and space exists as long as it can be perceived and experienced by the body. How the space is perceived changes based on a body's emotions, thoughts, sense of self, relationships with others, and cultural influences (Low, 2003). Borrowing from Merleau-Ponty, if perception is accepted as a fracture within the vitality of the world and the universe is considered a continuum where time and space meet, perception continuously updates this layered state (Marks, 2002). With the fracture in perception, the body that steps outside of ordinary actions begins to experience space differently. The new relationships established through the increase of layers from the body to the space bring about the integration of body and space. Space has now changed. There is only so much space as there is experience.

Just as the perception of space and body has changed from the past to the present, the form of experience also undergoes transformation. The tendency towards globalization rather than regionalization and the increase in the scale of homogenization require a questioning of space and experience with more diverse inputs. While the issue of experience is now a phenomenon that needs to be examined in the context of contacts in many social, cultural and sociological fields, the emergence of experience becomes more complex with digitalization. In order to trace the change in process, it is first necessary to analyze the components within the content of experience and then to seek these components within the context.

RESEARCH METHOD

In order to deeply examine the components of experience and the types of relationships through which it arises, a study was conducted with 29 students as part of the "Body, Space, Experience" course at the Department of Architecture, Eskişehir Technical University, during the 2023-2024 academic year. The students were asked to walk along an axis connecting two points located in the city center of Eskişehir, Turkey, and to convey this experience in a text of 200-300 words.

The students carried out discoveries related to space while being aware of their senses and perceptions. The text produced as a result of the experience was expected to answer the following questions:

- What kinds of experiences related to space did you discover?
- What types of sensory relationships occurred with the space?
- Are there spaces that evoked positive and/or negative emotions in you? If so, describe them; if no emotional change has occurred, discuss why.

Additionally, since stops and the amount of time spent are important along the route, they were advised to walk several times at different times. Afterwards, raw data texts were collected to examine the points and components where the experience pattern became more frequent or diverged.

The methodology of the study involves analyzing the data through content analysis of the texts using the "MAXQDA" software. Creswell (2013) emphasizes that content analysis is a flexible data analysis method that combines inductive and deductive approaches. The coding system used in content analysis is an effective tool for revealing both superficial and deeper meanings. The systematic revelation of hidden meanings within the text produces the conceptual framework. In this regard, the data/texts collected from the students were first read, and specific meaning clusters related to the experience were found and thus codes were defined. The coding process involves identifying common points within the data. These codes were categorized based on their relationships with each other. Through these inductive stages, the components and frequencies related to experience were discovered. Thus, a data set was obtained to interpret which concepts stood out within the text and the potential existence of relationships between the concepts.

FINDINGS

When the texts were divided into codes and analyzed, the findings were as follows:

Establishing meaning: the texts describe the students' experiences and perceptions of the urban environment, highlighting the complexities and nuances of establishing meaning within the city. Key themes include the interplay between order and chaos, the sensory impressions that shape one's understanding, the search for identity and connection, and the tension between the familiar and the unfamiliar. While the students walk the layered and ever-changing nature of the city, they also seek to find meaning and a sense of belonging. Some of the contents encountered in the texts on establishing meaning can be listed as follows:

- Experiencing a sense of detachment or dissociation from the surrounding reality.
- Perceiving a sense of exhaustion or withdrawal from the intense atmosphere.
- Feeling a heavy, oppressive presence or weight in the environment.
- Perceiving a lack of identity or individuality in the built environment.
- Evoking associations or memories of familiar places or experiences.
- Feeling a sense of connection or resonance with the urban environment.
- Feeling a heightened awareness or connection to the physical environment.
- Reflecting on the nature of human existence or the individual's place within the urban context.
- Evoking a sense of introspection or philosophical questioning.
- Experiencing a sense of ambiguity or paradox in the urban environment.

Randomness: it is a central theme in the texts, as the students describe a journey through the city characterized by spontaneous decisions, unexpected encounters, and a sense of being drawn in unpredictable directions. The students follow impulses, take unplanned routes, and stumble upon diverse sights and experiences, from encountering buildings to discovering hidden alleyways. Overall, the texts highlight the role of chance, intuition, and the unplanned in shaping one's urban exploration and experience. Some traces of randomness in the texts are listed below:

- Wandering aimlessly.
- Impulsive decision-making.
- Coincidental encounters.
- Following inner instincts.
- Discovering new paths.
- Stumbling upon unique sights.
- Unplanned interactions.
- Feeling drawn to certain locations.
- Surrendering to the flow of the moment.
- Discovering hidden corners of the city.

- Shifting between different routes.

Remembering: it evokes a range of personal experiences and emotions. Certain scents, tastes, and sounds can also transport individuals back to the past, evoking feelings of nostalgia and connection. The act of remembering can elicit a sense of belonging, as well as a deeper understanding of one's personal history and growth. Ultimately, the texts highlight the powerful role that memory plays in shaping our perceptions, emotions, and sense of self. Data regarding the act of remembering in the texts are as follows:

- Recalling a favorite meeting spot with old friends.
- Remembering a book that evoked a specific place.
- Feeling guided by a familiar, pleasant scent from the past.
- Remembering family outings and picnics.
- Recalling the now-defunct building and its history
- Remembering the taste of a specific dish or food item.
- Recalling the fear and risk of encountering the tram when first arriving in the city.
- Remembering exploring the city for the first time with a roommate.
- Reminiscing about the first arrival in the city with family.

Sense: the texts describe the multisensory experience of exploring an urban environment, with a focus on the diverse sounds, smells, textures, and visual elements encountered. Key aspects include human voices, traffic noises, and various environmental sounds like water, wind, and birdsong. The awareness of silence is also part of the experience of hearing. The texts highlight the scents ranging from coffee and pastries to spices and fish. Human perfumes and the smell of the river can be added to these. Visually, the environment is characterized by light, colours, buildings and street characteristics. Expressions like "reflections on surfaces and water, structural continuity and movement, diverse crowd, shadows on facades, people's hasty movements, low-rise buildings, rhythmic green trees, narrow and wide streets" are indications that the experience takes place with visual awareness. Varied textures, tram vibrations, rainy weather effects, sunny day impacts, cobblestone walkways are expressions that represent the sense of touch. Taste has been the sense least associated with space. Generally, the expressions are those that describe direct experience, such as tasting a food in a place, or the transfer of sensations, such as feeling the taste of a color seen. Overall, the texts paint a vivid picture of the sensory richness and dynamism of the urban setting.

In the texts, sight is quite dominant compared to the other senses. As seen in Fig.1, 28 students included the act of seeing in their experiences. 3 students in particular experienced this sense intensely. 8 students produced their texts in relation to sight at an average level. The second most exposed sense is hearing. However, the number of students who experienced hearing intensively was 1, and the others had this experience at the lowest levels. Touch and smell were the senses that most students came into contact with. It seems possible to claim that tasting remains quite in the background in spatial experience.

Feeling: feeling was described through a range of sensations and emotions in the texts. Some experiences evoked feelings of relaxation, harmony, and peacefulness, such as pleasant aromas, serene environments, and soothing music. In contrast, other situations triggered discomfort, anxiety, and a sense of being overwhelmed, like crowded and impersonal spaces.

The texts highlighted how the interplay of different elements, from architectural design to ambient sounds, could elicit both positive and negative emotional responses. A total of 59 emotional states

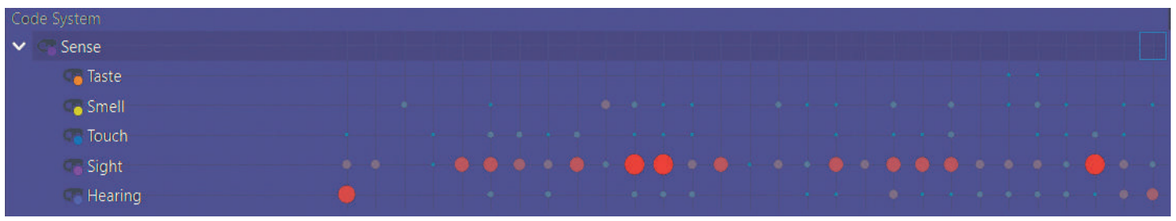

Fig.1 – Frequency of use of senses in students' texts (Produced by MAXQDA).

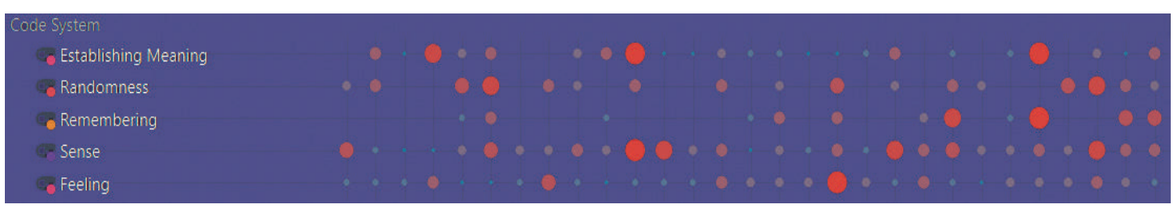

Fig.2 – Frequency of use of explored categories in students' texts (Produced by MAXQDA).

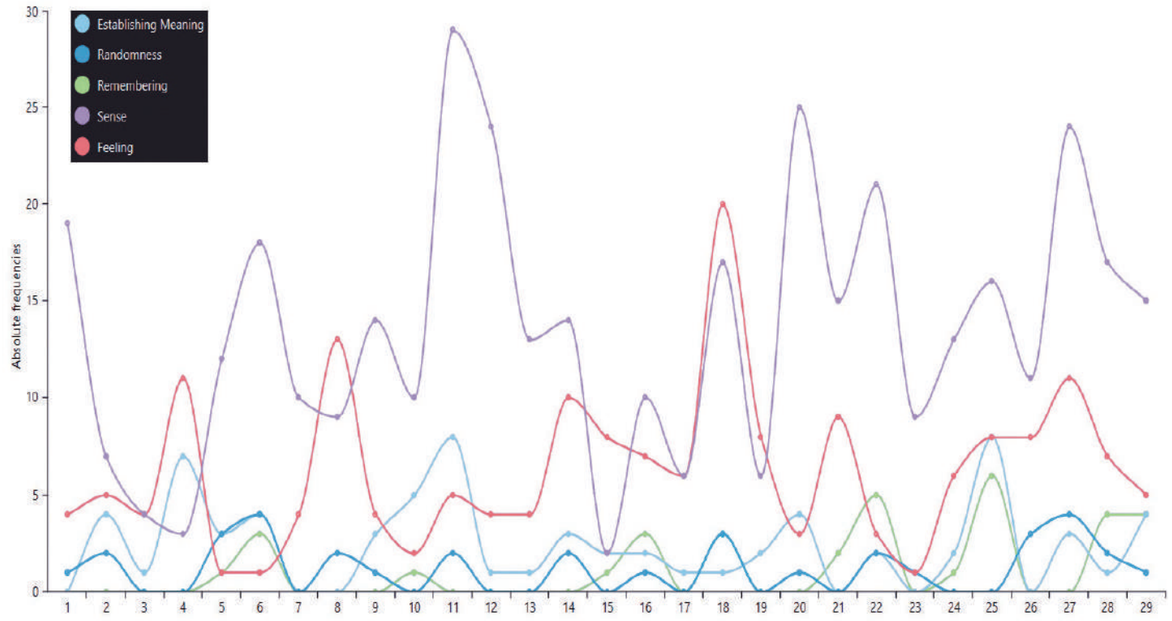

Fig.3 – Comparison of categories according to students (Produced by MAXQDA).

were discovered in all of the texts and they were treated as a single category called 'feeling'. Overall, the texts explored the nuanced and subjective nature of human feelings in relation to one's surroundings.

The frequency of the categories used in texts can be examined in Fig.2.

Students were intensely oriented towards the senses and conveyed their various feelings. 12 students provided data on how they remembered their previous experiences while experiencing the city. 17 students included unexpected encounters and sudden changes of route in their experiences. 23 students provided data indicating that they questioned their relationship with space during their urban experiences.

Fig.3 represents fluctuations in the frequencies of five categories. In the context of the body-space-experience relationship, this visualization highlights the dynamic interplay of cognitive, emotional and sensory processes as individuals interact with spatial environments. The dominance of 'feeling' and 'sense' in their frequencies suggests that sensory perception and emotional resonance play a critical role in mediating the human experience of space. Peaks in 'feeling' could indicate moments of heightened emotional response, possibly linked to unique spatial configurations, environmental stimuli or personal meaning attached to the location. Similarly, the constant but striking presence of 'sense' could reflect the body's ongoing sensory engagement with its environment.

The less frequent but notable occurrences of 'making sense of' and 'remembering' underline the temporal layers of spatial experience. "Remembering" peaks may correlate with spaces that evoke personal or collective memory, linking past experiences to present perceptions. Randomness, on the other hand, may indicate moments of unpredictability or chaotic spatial conditions in which the body struggles to assign coherence or order.

Brought together, the fluctuating patterns across these dimensions illustrate how bodily engagement with space transcends static perception to encompass an ever-changing matrix of feelings, memories and interpretations. The graph seen in Fig.3 could inform architectural or spatial design by highlighting the importance of creating environments that balance sensory stimulation with emotional and cognitive coherence, fostering meaningful and memorable experiences. In this context, experience is a dynamic interplay of sensory perception, emotional resonance, memory, and attribution within a spatial or temporal context. It emerges from the body's continuous engagement with its surroundings, where sensations and feelings dominate immediate responses, while memories and randomness introduce depth and unpredictability.

Peaks in sensory and emotional dimensions highlight the intensity of moments, while fluctuations reflect the constantly evolving nature of experience. Defined through these interactions, experience becomes a holistic process, integrating physical, emotional, and cognitive layers into meaningful encounters with space and time.

In this context, the relationship between change in a category and loss of experience today should be discussed.

DISCUSSION

Everyday life is a phenomenon where the act of consumption occurs merely by seeing. Pallasmaa (2024) argues that vision is the only sense capable of adapting to the increased speed of the technological world. The world of the eye leads individuals to live in a constant "now," where speed and simultaneity flatten everything. As consumer products try to adapt to the pressure of ever-increasing speed, a kind of alienation effect emerges. Now, it is not how things happen that matters, but only the outcome. When success is achieved, the path taken, i.e., the experience, is erased, leaving only the action (Connerton, 2009).

Robins believes there is a connection between the dominance of the visual sense and the impulse toward immateriality and the avoidance of experience, asserting that the key issue is the matter of experience itself. The denial and rejection of experiences in modern culture, and the adaptation of image technologies to modern life in order to lighten the experience of living, occupy the minds (Robins, 2002). The city, too, has been restructured as a postmodern center of consumption, turning into a spectacle, a "dreamlike landscape of visual consumption" (Urry, 2002). The spectacle focuses on form, and form is independent of content, i.e. experience.

In the city, a routine everyday existence results in the destruction of experience. Modern society, like a television viewer, experiences the world in a narcotic manner; the body, having lost its sensitivity within space, passively moves towards targets placed within a fragmented and discontinuous urban geography (Sennett, 1996).

In this context, what makes everyday life today more unbearable than ever is its inability to be transformed into experience? Berke (2017) discusses the necessity for everyday architecture to reject dictating to be looked at, thereby allowing the user to produce their own meaning. However, the criteria of taste that have entered the architectural environment reject bodily existence. This does not actually mean that experience is absent today. Experiences still exist, but they happen outside of the human. The body is only a spectator of this experience. The body is not within the urban experience. Spatial awareness is gradually becoming more superficial. As Debord (2021) points out, the more the viewer watches, the less they live; the more they accept finding themselves in the images of dominant needs, the less they understand their own existence and desires.

Daily life has evolved from being a pattern in which new possibilities of space and action are organized, to a state where the content is made up of "passive bodily experiences" (Sennett, 1996). In this process, the sense of an integrated life is disappearing (Jay, 2005), and the process can be characterized by the concepts of rupture, alienation, or fragmentation. Although the perception that modernity tries to discipline gives way to a libertarian discourse, the body continues to occupy a similar position within the framework of different entities of power (Demir, 2019; Kılınç, 2016). Thus, while the body is promised freedom in the postmodern era, the body is actually under control. In fact, although a paradigm shift is being discussed, the issue of being under control is a phenomenon that has been going on since the process, Modernism began. In that period, society had already begun to experience a new, discontinuous modern experience.

In everyday life where the "new" emerges from different perspectives, experiences that constantly create themselves in the "now" are produced. Experience is not a value passed from the past to the present, but knowledge that emerges and disappears in the ordinariness of daily life. The body, trying to experience the new urban life, is under the control of the central authority that presents and desires the production of everyday, homogenized experiences. The obsession with the ideal body, especially revealed through the Modulor, suggests that space should also be of ideal measurement and form. In this bodily proposition, influenced by Cartesian thinking, it is clear that objectification and the sole relationship with space are established through scale. Functional and hierarchical spaces are organized within the context of analytical standards. Space is perceived by the volume of geometric composition and measurable values. The space, reflecting the metaphor of the machine, on the other hand; is a prosthetic that complements the fixed structure of the body. The body does not leak through the openings of space; the openings are for observing the outside from the interior.

In a space depicted as "completed", the body is in a position where it cannot foresee any experience. The body, which acquires experiences determined by rules, repeats the designed relationships. Architecture intends to move away from chaos and maintain order. In this sense, the city is an important tool in organizing the body, controlling its habits, and defining its ideals. The body, in turn, is a structured order that should not be disrupted. Therefore, in both time periods, during Modernism and after digitalization, the body continues to be under control in different contexts.

Loss of experience can be discussed regarding the parameters obtained in the findings section as follows:

Establishing meaning: experience no longer enables personal meaning-making but instead serves as a mechanism for control, where the body functions within a predefined urban system that dictates its movements and interactions. The body no longer accumulates meaning through time and space but instead moves through disconnected, regulated experiences.

Randomness: the organic formation of meaning is deformed by controlling bodily movement, standardizing space, and enforcing efficiency and order. The shift from spontaneity to predictability transforms experience from a rich, layered process into a structured, mechanized routine. The body follows rigid, structured paths, mirroring an industrialized system of efficiency.

Remembering: the continuity of memory is disrupted by imposing a fragmented and discontinuous urban experience. The city becomes a tool of control rather than a space of lived history and personal associations.

Feeling: the structured nature of modern urban life minimizes the emotional intensity of experience. The body moves through a systematized cityscape that does not allow for emotional depth or unpredictability, replacing personal resonance with designed, expected responses. Spaces and bodily actions become uniform, reducing the diversity of individual interpretations.

Sense: spatial design, driven by Cartesian logic and functionalist ideals, reduces sensory engagement. Spaces are measured, standardized, and designed to regulate movement rather than stimulate unpredictable sensory encounters. All sensory experience is based on vision and is temporary.

With the addition of digitalization to this context, the process becomes more hybrid.

HYBRIDIZED EXPERIENCES

In the current moment, where communication has increased and accelerated, virtual environments and identities are discussed, and debates on reality take place. With the production of portable communication devices, the body can access many things simultaneously on a global scale. This situation has also led to the leakage of economic and social relationships, along with the act of tracking these relationships by the authorities, into the technological context (Castells, 2000).

The body is considered an organism intertwined with technology and described as a cyborg. While the body is idealized and purified, the difference between the body and the machine has disappeared. Cyborgs, being both natural and artificial, ironically represent a body that is restricted and controlled by the dominant mechanism (Haraway, 2013).

The body practices the order of the dominant power in daily life. An existential state is present where the distinction between the living and the non-living becomes blurred, and where boundaries disappear (Teyssot, 2005). Considering organ transplants, pacemakers, contact lenses, and dental fillings, the body is hybrid and no longer purely biological. Even the widely used mobile phones in daily life are part of the cyborg body. Now, instead of binary states like virtual-real, inorganic-organic, or natural-artificial; hybridization, integration, and unity are dominant. However, this integration is not a merging.

Everything represented through codes becomes an adjuct of the body. McLuhan (2003) argues that, in every era, the objects people use are already extensions of the body. Hacking (2006) on the other hand, discusses how practices such as corneal implants, organ transplants, and pacemakers have made the body even more Cartesian. The body, which previously had immaterial souls, was Cartesian, but now, as it begins to consist of interchangeable parts, it becomes Cartesian once again. Moreover, replacing a part of the body makes it into a machine and thereby reduces it to the "other", leading to the alienation of the body (Bäckström, 2020). The body in question is installed certain cultural codes and behaviors, and the passive body, which must act within these norms, remains an object still.

Hayles (1999) states that consciousness is reduced to a secondary position, the body becomes a manipulable prosthesis, and the boundaries between simulations and physically existing in the body become blurred. Just as a prosthesis can be altered, the body can also be easily renewed. In fact, the biological body is seen as insufficient in the technological age, and the idea of disembodiment is even proposed. Thoughts predicting that consciousness can be uploaded into a computer reject the necessity of having a body to exist.

New forms of experience are being sought by exploring the possibilities of being in two different places at once and the probabilities of living in two separate bodies (Şentürk, 2017). Zizek claims that the experience occurring in cyberspace is not about completely getting rid of the body, but about having a virtual body. The body is being recoded and recreated. The body, a living organism, and the digital data attached to it display a hybrid character. Although hybridization is discussed, each part of the body is individually accessible, meaning the body is fragmented (Breton, 2016). In fact, as technology advances, the body continues to fragment and be reduced into smaller details.

The digitization of space is an inevitable result of the technological developments that are being experienced. However, in this process, the mind takes precedence over the body, and the body remains in the background among the values that come into contact with space. Although these technologies provide an active experience for the body, the interaction occurs between the screen and the body, while physical space maintains its existence separately with its material reality.

In this context, the sense of sight remains privileged. In this new dimension, which is dimensionless, the body perceives the entire environment through the relationship it forms solely by sight. Between the physical body and space, vision serves as the sole means of communication, enabling the experience to take place in the mind. While sound may sometimes accompany this experience, the Cartesian relationship between the body and space continues. What changes is the representation of this dialectic becoming encoded.

In this regard, the equivalents of the experience parameters accessed in the findings section in the context of digitalization can be discussed as follows:

Establishing meaning: this ability of the body, an intrinsic part of human existence, is disrupted by the overwhelming flow of information, where coded environments often prioritize functionality over depth. This shift risks rendering spaces devoid of narrative or personal resonance, undermining the connection between body and environment.

Randomness: this vital element of experience, is often suppressed in digital spaces, which favor algorithmically generated predictability over organic, unplanned moments. While digital tools expand cognitive and sensory reach, they limit spontaneity, bodily movement, and immediate engagement with space.

Remembering: memories, once deeply tied to physical spaces and personal encounters, are now stored as data, and detached from their original sensory and emotional contexts.

The body can still remember, but it may have a limited memory to keep up with a world where information and data are changing rapidly. Remembering now almost coexists with forgetting.

Feeling: emotion is still a sustainable process as far as controlled mechanisms allow; but it too, falls apart in a highly fragmented context. Specifically, a sense of alienation arises as the body is fragmented into replaceable parts. Disembodiment occurs as bodily presence is questioned.

Sense: direct bodily engagement with the physical world, is now often mediated by screens and virtual environments, reducing tactile and spatial interactions to pixelated stimuli. This detachment challenges the directness of sensory perception, leading to a diminished sense of embodiment. Sensory experience is flattened, with vision becoming dominant while other senses diminish.

When the process is observed, the loss of experience can be represented in Fig.4.

Parameter	Experience	Period of Modernity	Period of Digitalization
Establishing Meaning	Every body produces new meaning in its interaction with space	Meaning is eroded by visual dominance and consumer culture	Meaning is coded and restructured through digital interfaces
Randomnes	The movements of the body are uncertain, and this uncertainty enriches the experience	The space spectacle limits randomness, enforcing structured experiences	Randomnes exist within the digital realm, but is still controlled by coded systems
Remembering	The body relates space to past experiences	Breaking away from the past also weakens the relationship with past experiences	Memory is externalized and stored digitally, fragmenting experiences
Feeling	Feelings emerge from sensory and bodily engagements with space	Feelings are numbed by passive urban experiences and visual saturation	Feelings are mediated through digital interfaces, separating the body from direct experience
Sense	All senses contribute to spatial perception and experience	The dominance of sight suppresses other senses	The digital word prioritizes vision, with limited engagement of other senses

LOSS OF EXPERIENCE

Fig.4 – The representation of loss of the experience (Produced by the authors).

The process results in a paradox. While technology expands the scope of experience, it simultaneously abstracts and codifies it, potentially leading to a diminished connection to the sensory, emotional, and unpredictable dimensions that define the richness of bodily experience.

CONCLUSION

Experience is a dynamic and holistic process shaped by sensory perception, emotional resonance, memory, and spatial-temporal engagement. Experience emerges from the body's continuous interaction with its surroundings, where randomness and fluctuation contribute to its richness and depth.

The experience is lost in the shift from an organic, fluctuating, and individually shaped process to a predetermined, homogenized, and controlled structure. The transformation brought by modernity limits the body's spontaneous interaction with space, replacing it with repetitive, rule-based experiences.

The loss of experience with digitalization stems from the abstraction and mediation of human interactions with the world. As sensory perceptions, emotions, and memories are increasingly filtered through screens and algorithms, the immediacy and authenticity of direct, embodied experiences are diminished. The digital realm often suppresses randomness and coincidental encounters that enrich human life. In essence, the connection between body, space, and meaning weakens, creating a fragmented and often superficial engagement with reality.

The outcome is that while digitalization offers unprecedented possibilities for expanding the scope of human interaction, it also risks eroding the fundamental elements of experience.

Experience is still possible, but it is no longer deeply rooted in bodily perception; instead, it is mediated, controlled, and structured through digital interfaces.

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NOTES

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Bodies in the Void

Temporary practices in *Terrain Vague* sites

terrain vague
temporary urbanism
community engagement
artistic practices
experimental placemaking

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This paper explores the potential of temporary urbanism practices in *Terrain Vague* sites – abandoned or undeveloped urban spaces. Drawing on de Sola-Morales' concept of *Terrain Vague*, Merleau-Ponty's phenomenology of perception, and De Certeau's everyday practices, the paper examines how bodies engage with these undefined spaces through movement, events, and temporary activities. Through case studies in London and Lisbon, the research examines how these spaces can address socioecological challenges in cities. We introduce the concept of "Vague Catalyst" projects, which employ minimal, temporary interventions rather than permanent structures to enable diverse community uses and activities.

The research analyses two representative cases: Cody Dock in London, a community-led regeneration project of a post-industrial site initiated in 2009, and LABIC in Barreiro Velho, Lisbon, a laboratory of community innovation that ran in 2022. Both projects demonstrate how temporary practices create opportunities for environmental learning and citizenship while illustrating how different users reimagine *vague terrain* through bodily presence and activities.

The study identifies five key characteristics of successful Vague Catalyst projects: 1) implementation in previously abandoned or degraded spaces; 2) adoption of temporal and tactical urbanism approaches; 3) gradual spatial transformation based on evolving community needs; 4) community-driven management that evolves from individual custodians to communities of care; and 5) function as catalysts for adaptive urbanism that respond dynamically to immediate needs and opportunities.

The paper demonstrates how community-led temporary practices can reimagine and regenerate urban voids, transforming them into valuable social spaces, maintaining ecological benefits and contributing to experimental placemaking and community strengthening.

TERRAIN VAGUE: AN INTRODUCTION

We live in an era of cities or *planetary urbanisation* (Brenner and Schmid 2011). 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 urbanisation coupled with economic restructuring generates *Terrain Vague spaces*, also known as *Urban Voids* (Lopez-Pineiro 2020) or *Vacant Lots* (Bowman and Pagano 2004). 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). Precisely because of their nature and condition, urban voids are open to be occupied with spontaneous appropriations or informal uses, by diverse groups. They often become the locus for bottom-up projects, and alternative spatial and social practices, which highlight not what is there but what *happens*: movements, bodies, events.

The definition of *Terrain Vague* (de Solà-Morales 1995) does not focus so much on the physical, morphological characteristics, origin or legal or economic aspects of these spaces, neither is it concerned with providing a representative image or aesthetic. On the contrary, all attention is focused on: i) the passage of time and events that happen in these spaces – "empty, abandoned space in which a series of occurrences have taken place" (de Solà-Morales 1995, p. 119); ii) those who inhabit or use these spaces, i.e. the people who care about and fight to preserve them – "filmmakers, sculptors of instantaneous performances, and photographers seek refuge in the margins of the city" (p. 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" (p.120). It is no coincidence that the first to take an interest in these spaces, to use them and to fight for their preservation were artists and performers, along with photographers and filmmakers. In fact, such 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, created in 2013 and active mainly in 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 public space" (Pirri 2019). The installations or performances in these spaces are never indifferent to the context, they do not use the space as a mere support or *tabula rasa*, but on the contrary, they are research and investigation projects, exploring the relations between the body and the site, seeking to reveal hidden aspects or to bring to light memories and traces of the past, such as the project *Lichtgrenze* (border of light) in Berlin (Gandy 2022).

Temporarily cut off from the city's economic production circuit and in a fragile and uncertain condition, subject to change, the *Terrain Vague* has often 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). The desire to make art without producing a physical object that could be sold, and thus fit into capitalist logic, has driven artists to meet in these desolate places on the edge of the city, where they would carry out an ephemeral action, happening or performance, with no physical trace remaining afterwards, other than the evidence of a few photographs. Moreover, the uncertain future and the impossibility of building makes such spaces available for temporary uses not permitted or tolerated elsewhere, for spontaneous, artistic, self-managed, experimental design or alternative economic practices stimulating creativity (Zetti and Rossi 2018).

TEMPORARY URBANISM

"Temporary Urbanism" is an approach that challenges traditional urban development by embracing short-term, flexible, and often experimental uses of space in cities. Bishop and Williams (2012) highlight how vacant lots, underused buildings, and other urban spaces can be temporarily repurposed for a variety of uses, ranging from pop-up shops and art installations to community gardens and event spaces, involving diverse users. Some of the actions involved in temporary urbanism come under the banner of "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. This form of urbanism is characterised 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). It represents a shift in urban planning, focusing on immediacy and the potential to quickly adapt 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. Temporary urbanism encourages innovation and creativity in urban design (Kamvasinou and Roberts 2014), allowing for a diverse range of stakeholders, including artists, entrepreneurs, and community groups, to contribute to the urban fabric.

Temporary urbanism also addresses sustainability in urban development. Reusing and repurposing spaces minimises waste and environmental impact, contributes to addressing the climate crisis, and provides opportunities for social equity and economic regeneration. 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 is a strategic approach shaping the way cities evolve over time (Bishop and Williams 2012).

THE CORPOREAL EXPERIENCE OF TERRAIN VAGUE

The absence of prescribed function in *Terrain Vague* spaces creates unique conditions for bodily exploration and activation, and vice versa, the material and temporal qualities of *Terrain Vague* spaces shape bodily experience (Merleau-Ponty 1945; De Certeau 1984; de Solà-Morales1995).

Merleau-Ponty in *The Phenomenology of Perception* (1945) argues that embodied perception is fundamental to our being. We can't separate our understanding from our physical presence. The body is both subject and object – "one's own body": we both are a body and have a body (Merleau-Ponty 2012 [1945], p.127, 168-175). Hence the body is not just an object in space but our primary means of "being-in-the-world" (p. 440, 504). Further, our bodily awareness isn't just about knowing where we are, our orientation in space or potential for movement, but also about understanding our possibilities for action in space. Hence, space is not just geometric but experiential. We explore and understand *Terrain Vague* spaces that don't have clear functions or boundaries through movement and physical engagement, in other words through direct bodily experience and embodied perception rather than just visual or conceptual understanding.

The undefined nature of *Terrain Vague* allows for more creative spatial scripts as bodies 'write' new meanings through their spatial and temporal movements and activities. For de Certeau (1984), walking creates a unique spatial story; his concept of tactical spatial practices contrasts the top-down view of planners and institutions with the everyday lived experience of people. Planners might see 'vacant' land from above, but bodies on the ground experience these spaces differently through direct engagement – often as places of memories, nature, informal play and activities. While institutional power operates from a place of strategic control and creates prescribed spaces, everyday practices are tactics that operate in, and rewrite spaces designed by others. As *Terrain Vague* spaces have lost their original designation or meaning and are outside strategic control, they become perfect grounds for tactical practices where bodies can improvise more freely and creatively in time and space away from formal structures of control. Artists creating temporary installations, community groups establishing gardens, and informal gatherings and events are just a few examples of such corporeal appropriations and experiences that the *Terrain Vague* enables. Movement patterns create new meanings in these spaces, with bodies tracing desire lines and informal paths. *Terrain Vague* becomes the vessel for temporary marks and traces left by bodies, ranging from graffiti art and impromptu adventure playgrounds to less acceptable behaviours such as homeless sheds or downright illegal activities such as drug use. Perceptions of the *Terrain Vague* will hence vary from open space or wildscape (Jorgensen and Keenan 2012) to a precarious no-go zone.

De Solà-Morales (1995) describes *Terrain Vague* spaces as "Void, absence, yet also promise, the space of the possible, of expectation" (de Solà-Morales 1995, 120). The promise/expectation suggests both the opportunity for exploration and a bodily anticipation or readiness. De Solà-Morales emphasises these are spaces "in which a series of occurrences have taken place" (p. 119) which suggests a layering of bodily experiences over time, where past occurrences inform present bodily engagement and creates a temporal dimension to corporeal experience. Temporal uncertainty affects how bodies occupy space and can allow new forms of spatial engagement on the margins of possibility: physical encounters with decay and dereliction can lead to sensory engagement with emerging ecologies.

In this liberation from function, bodies, human and non-human, can define their own relationships with space in experimental and unscripted ways. For example, when nature reclaims such spaces, biodiversity and wildlife are bound to thrive compared to their prior scripted existence. Artists and performers have used bodily presence to document and explore the *Terrain Vague*; physical presence becomes a way of understanding these spaces while performance can be a means of revealing spatial potential. Through individual experiences a collective corporeality can be developed and built into collective practices, with shared physical activities that create community, performance and artistic intervention, and collective memory through bodily presence.

BODY AND EMERGING PRACTICES

LaFond (2010) and Kamvasinou and 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 revitalising neglected areas.

Over the past two decades, a variety of formal projects and emerging practices have capitalised on the opportunities presented by these spaces, designing and

implementing experimental initiatives characterised by their ephemeral nature, though often with variable durations. These efforts have highlighted the remarkable flexibility of such spaces and their capacity to accommodate diverse activities and communities based on evolving needs.

Some initiatives in London, UK, for example Canning Town Caravanserai, Cody Dock, Cultivate London Brentford Lock, have leveraged the opportunities created by the 2008 global economic crisis, such as the temporary suspension of large construction sites and planned projects, along with the legacy of extensive spaces left out of the 2012 Olympic Games regeneration, to propose and implement temporary projects with diverse functions and activities (Kamvasinou 2017a and 2017b). These initiatives have often demonstrated the potential for long-term sustainability and impact, challenging traditional dichotomies in urban planning.

In Tokyo, Japan, small-scale *Terrain Vague* sites, typically rented out as a parking space, have been made available for a variety of neighbourhood cultural events, such as, for example, in the case of Kasu Harappa ONDI (2006), a small privately-owned vacant lot. Through a simple agreement outlining usage rules and assuming responsibility for event organisation, the space has been utilised for diverse activities, including performances (such as a Butoh performance in 2006), demonstrations, art exhibitions, cultural gatherings, markets, and student workshops. Given the small size of the lot and to facilitate the diversity of events, the space has remained unbuilt, maximising its flexibility for different uses (Rahmann and Jonas 2014).

In Paris, France, the architectural studio *Atelier Architecture Autogérée* (Petrescu and Petcou 2023) has designed and implemented two notable projects in collaboration with the local community and associations: Passage 56 (2006) and Eco-Urban Network/Ecobox (2001-2005). Passage 56 was developed in a small interstitial space deemed unbuildable under French law due to its limited size. This constraint initiated a collaborative effort among the local community, associations, professionals, and local authorities, leading to a participatory consultation process to determine the future of the space. Through these meetings, the concept emerged to maximise the potential of the site while ensuring flexibility, creating a space that could host meetings, screenings, workshops, celebrations, markets, and even small-scale urban farming. The project, led by professionals but constructed with the involvement of residents, featured a suspended wooden structure serving as a threshold to the site. Additional structures were designed for cultivation purposes, while the rest of the space was intentionally left open to accommodate various other functions.

In Berlin, Germany, eXperimentcity (2003) showcases a series of cultural and ecological initiatives and experiences within Berlin's vacant open spaces, which emerged in the aftermath of the East-West conflict. Initiated by the non-profit organization id22: Institute for Creative Sustainability, eXperimentcity has fostered the reuse and regeneration of these spaces through diverse temporary activities and practices. These initiatives range from ecological housing projects and cultural and creative hubs to urban gardens, highlighting and demonstrating the potential of such spaces for innovative and sustainable urban development (LaFond 2010).

In Lecce, Italy, a series of events and activities (2012) known as Incontri del Terzo Luogo (Encounters of the Third Place) were designed and implemented to activate abandoned spaces within the city (Capasso and Georgieff 2016). This informal group, based at Manifatture Knos – an abandoned building repurposed as an independent cultural and creative centre – promoted a new awareness of these spaces. They organised meetings, activities, workshops, and projects inspired by a novel concept of the garden of the third landscape (Clément 2004), often in collaboration with Gilles Clément, who frequently contributed to their initiatives.

Similar examples from Ljubljana, Slovenia, include a multidisciplinary collective that discovered and later secured the management of Krater (2020), a large, abandoned site located in the heart of the city (Sretenović and Osole 2022). Originally used as a quarry for the construction of a nearby district, the site had remained unused for thirty years due to a series of unfulfilled proposals and projects. Drawn by the feral landscape and the site's rich and complex biodiversity, the Krater collective organised workshops to experiment with the site's invasive plant species, cultural and creative events, educational activities focusing on biodiversity and the value of spontaneous nature, and even a major cultural event and workshop to propose an alternative project to that of the local authorities, who had planned the complete destruction of the site. Temporary and flexible structures, constructed from repurposed materials, were installed on only a small portion of the site, leaving the remainder to evolve naturally under the forces of spontaneous ecological succession.

In conclusion, because of its characteristics and status, the *Terrain Vague* does not highlight physical space, or objects. Rather the space is a container that foregrounds and allows the presence and emergence of bodies, both through movement and the act of walking, and through the temporary actions and practices that are carried out; relationships, material and immaterial, which, through events and activities, can contribute to the strengthening of the community.

METHODOLOGY: TEMPORARY PRACTICES IN TERRAIN VAGUE SITES

Our research 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 social and ecological benefits (Nunes, Björner, and Hilding-Hamann 2021; Petrescu et al. 2021) and recalibrating the role of the architect (Petrescu and Petcou 2023). We present indicative examples of a certain type of project in *Terrain Vague* sites, realised by applying temporary urbanism, which we call *Vague Catalyst*. This concept refers to projects addressing uncertain and fragile site prospects by avoiding permanent structures or functions. Instead, these projects focus on temporary activities, situations, and actions, using minimal and light interventions like installations, events, artistic works, or sometimes no physical changes, allowing the everyday occupation of space and the movement of bodies to emphasise their presence. The emphasis is on community involvement and maintaining the site's inherent ambiguity and unpredictability, thereby making these spaces catalysts for change and adaptable to fluctuations in community needs (Kamvasinou and Roberts 2014).

Methodologically, while our analysis is broad, covering a wide range of such projects, we focus in more detail on two representative 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: Cody Dock, a community-led regeneration, river revitalisation and social enterprise project on a post-industrial site in Newham, East London, initiated in 2009, and LABIC (2022), a laboratory of community innovation, based in Barreiro Velho, a city part of the Great Metropolitan Area of Lisbon.

Cody Dock, located in a socioeconomically deprived yet diverse area within the London Royal Docks regeneration zone, and south of the Olympic sites, has a rich history from pre-industrial times to post-industrial decline and recent regeneration. Historically significant for its strategic position in coal transportation, it became derelict after 1967 due to industrial shifts. Since 2009, the Gasworks Dock Partnership (GDP), led by Simon Myers, has been transforming it into a community marina for live-in boats and an arts hub (Kamvasinou 2017a). 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 (Kamvasinou et al 2023).

LABIC (2022) operates in an area that has undergone a recent shrinking process due to de-industrialisation, partial abandonment and neglect. In this area, they identified and photographed 25 urban voids, totalling 4,250 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 (LABIC 2022). 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.

BODIES IN THE VOID: OBSERVED EXPERIENCES

BODIES IN THE VOID: CODY DOCK

Cody Dock is south of the Olympic park, in the Borough of Newham, East London, sitting on the river Lea which leads to the river Thames (Fig.1, 3). It is located within a very large regeneration zone. The

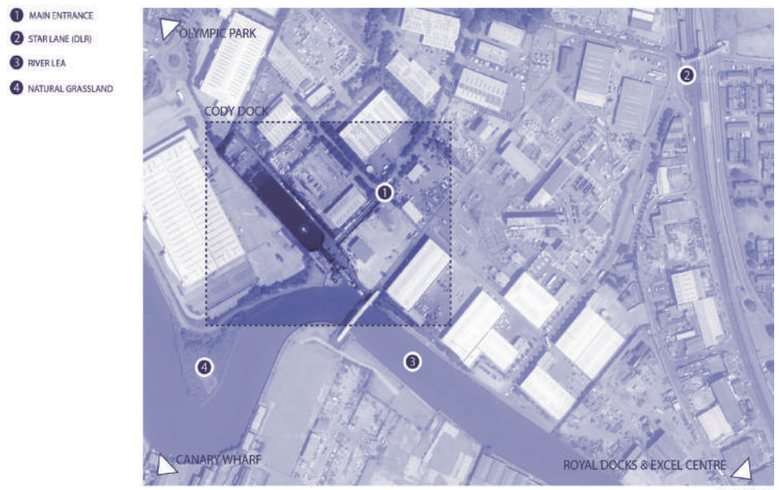

Fig.1 – Cody Dock aerial view, July 2013. Author's own, adapted from Google Maps.

Fig.2a and b – Cormorants at the River Lea, March 2024. Author's own.

Fig.3 – The River Lea at Cody Dock, with new and old developments on the opposite riverbank and London's Canary Wharf financial district in the background, March 2024. Author's own.

Fig.4 – Cody Dock, the rolling bridge and the floating riverbeds. Author's own.

area is ethnically very diverse and socioeconomically deprived. Cody Dock's history spans pre-industrial, industrial, and post-industrial periods, decommissioned as a port in the early 1980s (Kamvasinou et al 2023). The landscape combines active industrial development – including warehouses, business parks, and cement facilities – with derelict industrial sites that have over time become crucial habitats where endangered species find sanctuary (Kamvasinou et al 2023) (Fig.1, 2a and b).

The repurposing of Cody Dock, led by Gasworks Dock Partnership (GDP), aims to create a sense of place and ownership for locals through community-led development. The timeline of the project involves Simon Myers (Founder, Gasworks Dock Partnership - GDP) discovering the site while living in his boat in 2001. In 2005 he enters a dialogue with key stakeholders and is offered 5-year lease which he rejects as it was not enough time to do anything significant with the site (Myers 2013). With the global financial crisis at full swing, more opportunities for alternative governance open: in 2009 GDP is set up as a social enterprise, and a 999-year lease on site is set up with Thames Water and Newham Council (Myers 2013). In 2011 GDP becomes a charity as a vehicle to regenerate the site. It aims to transform the site into a working marina and arts hub through provision for moorings for live-in boats, renting artist studios, and restoring footpath access to River Lea. By 2015, several organisations and individuals are engaged so that the place is shaped in partnership, from social enterprises, charities such as Mind and Groundwork, corporates, small businesses, to local volunteers from communities, and artists (Myers 2013; Kamvasinou 2017a). During Covid19 the place becomes popular with locals and others who discover it during a time when access to other places is restricted. By 2022, GDP has completed site specific works for an exhibition space, a Therapeutic Horticultural classroom in collaboration with the University of Westminster, and a 'Rolling Bridge' in anticipation of the dry dock boat moorings, as well as ecology surveys on the River Lea and small-scale projects in collaboration with London-based universities (Kamvasinou et al 2023; see also https://codydock.org.uk/) (Figs 4, 5a and b, 6a and b).

Connecting people to the ecology of the river Lea and introducing lighting installations, floating riverbeds (Fig.4) and community gardens and spaces has been an important part of the activity and mission of the Gasworks Dock Partnership, that are primarily a community and artist-led collective that manage and safeguard the site so that it is not developed for housing, as has happened in the surrounding area, and remains open to access the river Lea. For example, the Therapeutic Horticultural Centre (Fig.6a and b), led by University of Westminster school of architecture staff Maria Kramer and Corinna Dean and co-designed and produced by their students, is for propagating plants as well as a space for learning for patients from the National Health Service (NHS) Social Prescribing programme (Kamvasinou et al 2023; see also https://codydock.org.uk/

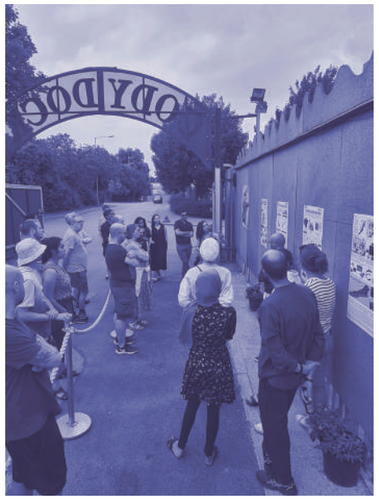

Fig.5a and b – Student Exhibitions, Workshops and Field Visits at Cody Dock. Author's own.

Fig.6a and b – The Therapeutic Horticultural Centre, March 2024. Author's own.

Fig.7 – 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 in 2022 featuring newly installed artists' workspaces. Author's own.

therapeutic-gardening/). As the scope of Cody Dock has expanded to educational repurposing beyond the environmental and artistic, so have the corporeal experiences in time and space. The appropriation of the site by different users – bodies in the void – includes student visits and guided tours (Fig.5a and b), workshops, organised events, and film nights, while sensory installations allow visitors to experience the sounds of the river. The project now employs a permanent ecologist leading the ecological and biodiversity surveys (see https://codydock.org.uk/ecology/).

Temporary structures still dominate the landscape as a working site but they gradually multiply, providing space for diverse people – artists, ecologists, boat moorers, local businesses, community – to work on the site (Fig.7). The *Terrain Vague* therefore embodies different temporary practices, exemplifying Cody Dock's philosophy and repurposing approach that emphasises slow place-making.

The site's regeneration unfolds organically over time, allowing for unexpected events like the COVID-19 pandemic to be accommodated. Collaborating with various actors, such as corporate, public, and third-sector organisations, local councils, residents, and schools, helps educate and create awareness about socioecological place-making while generating income and support for the project's longevity. Over the past 15 years, the project has opened the *Terrain Vague* to be experienced by tens of thousands of visitors and engaged with thousands of volunteers, and, through that corporeal experience of the river environment, gradually growing a community of care for the Dock and the river Lea.

BODIES IN THE VOID: LABIC

Barreiro Velho represents the historic centre of Barreiro, a town located south of Lisbon and part of the Lisbon Metropolitan Area. Due to its geographical position and distinct characteristics, Barreiro historically served as a significant industrial hub and a strategic railway junction in Portugal. These factors drove the town's rapid growth, transforming it from a relatively small fishing village into a comparatively large city within the Portuguese context. However, beginning in the 1990s, the city faced a decline due to rapid deindustrialisation processes, leading to demographic reductions and the abandonment of vast areas, including industrial zones and residential neighbourhoods. This decline created challenges in integrating new waves of residents, bringing different habits and often unfamiliar with the town's heritage and history, with the longstanding residents, who often perceived the current situation negatively.

LABIC BARREIRO VELHO is a community innovation laboratory in Barreiro's historic centre funded by the Bairros Saudáveis, a public call for financing projects presented by local entities (Cardoso et al. 2022). Bairros Saudáveis is a public project, with a participative nature, with the objective of implementing small interventions financing projects presented by associations, collectives, civic movements, and resident organisations.

LABIC emerged as a network to bring together various organisations and actors active in the region, particularly in the social, cultural, and artistic sectors, while fostering new connections with institutions in the surrounding area, such as the University of Lisbon (ISCTE-IUL). The primary objectives of the project, as outlined during its proposal and presentation, encompass several interconnected goals. First, the project seeks to conduct surveys aimed at mapping and identifying key locations and individuals within the area. Second, it aims to foster and strengthen relationships, contributing to the development of a robust sense of community. Third, the project intends to design and implement initiatives in collaboration with local citizens, ensuring active participation and engagement. Finally, it strives to reinforce the connections between the community and relevant institutions, creating a network of mutual support and cooperation (Iannizzotto and Paio 2022; 2023).

The activity plan presented during the project proposal phase and subsequently implemented – published and accessible on the LABIC website (LABIC 2022) – outlined a one-year duration for the laboratory (aligned with the funding period), along with a preliminary diagnostic phase and a post-funding phase to ensure continuity and sustainability of certain activities beyond the funded timeframe. Following an initial diagnostic phase, which identified key challenges and the existing conditions through participatory activities with the local community, the project was structured into five phases:

I. *Mapping and Identification, 1 month*: This phase focused on mapping and identifying the local population, community, associations, and other stakeholders within the area. Collaborative activities were conducted to create a comprehensive network of local actors (Fig.8). Additionally, vacant urban spaces were mapped, having already been recognised during the diagnostic phase as potential areas for territorial regeneration due to their significant presence in the region.

II. *Connecting, Motivating, and Mobilising, 3 months:* During this phase, a series of activities, meetings, and workshops aimed to activate local communities, strengthen neighbourhood relationships, and enhance interactions between the network of local actors, associations, and institutional support structures.

III. Capacity Building and Empowerment, 4 months: This phase aimed to empower the community and enhance both individual and collective technical skills. Support was provided for the implementation of projects proposed by the community, selected through an open public call.

Fig.8 – LABIC, Mapping of the Commons, Barreiro Velho, 2022. Source: LABIC.

IV. Enhancing Governance, 2 months: The project sought to improve the community's direct participation in governance and shared management by revitalizing the historic community association Grupo dos Amigos do Barreiro Velho (GABV), which had been weakened by the loss of its meeting space and limited engagement from younger generations. Efforts were made to reactivate and strengthen the association, as well as to secure a new headquarters (Os Franceses building).

V. Consolidating and celebrating, 2 months: The final phase focused on designing and preparing for the temporal sustainability of the project. This included establishing a community group, reactivating the association, maintaining some of the projects and activities initiated during the previous phase, expanding the network of local and institutional support, and connecting with other citizen laboratories across the country. The goal was to ensure continuity beyond the project's completion and the cessation of funding.

During the initial phase, as outlined in the project proposal, a collaborative mapping of urban vacant spaces in Barreiro Velho was planned. The preliminary diagnostic phase identified the significant presence of these spaces as a particularly relevant issue. These areas, often neglected, unclean, and used as informal dumping sites, contributed to a negative community perception but also represented potential opportunities for regeneration as community spaces, given their temporary state of disuse.

To address this, a photographic exploration and mapping walk was organized for residents and the community on March 20, 2021. This event, conducted in collaboration with the local photographers' group (Clube de Fotógrafos do Barreiro), aimed to identify, map, and photograph the urban vacant lots of Barreiro Velho (Fig.9).

In this mapping exercise – as in others, such as the mapping of land uses, common goods, and the cultural-historical itinerary – while the results were consolidated in collaboration with researchers and professionals, the data, decisions, and observations were primarily gathered through community walks. This approach transformed the act of data collection and mapping into a collective journey. Residents and community members moved as a group through the streets of Barreiro Velho, exploring, discovering, and making decisions together.

As part of the mapping process – published and accessible online – a total of 25 urban vacant plots were identified and documented. Their total area, amounting to 4,250 square meters, was calculated and compared to the size of a football field to highlight their collective potential. Subsequently, LABIC initiated a process, involving both local institutions and neighbourhood actors, to identify and establish contact with the owners of these plots.

In one case, "Void number 12", LABIC successfully contacted the owner of this small buildable space (likely the result of a prior demolition). An agreement was reached for the temporary use of the site, coinciding with the duration of LABIC, to host community

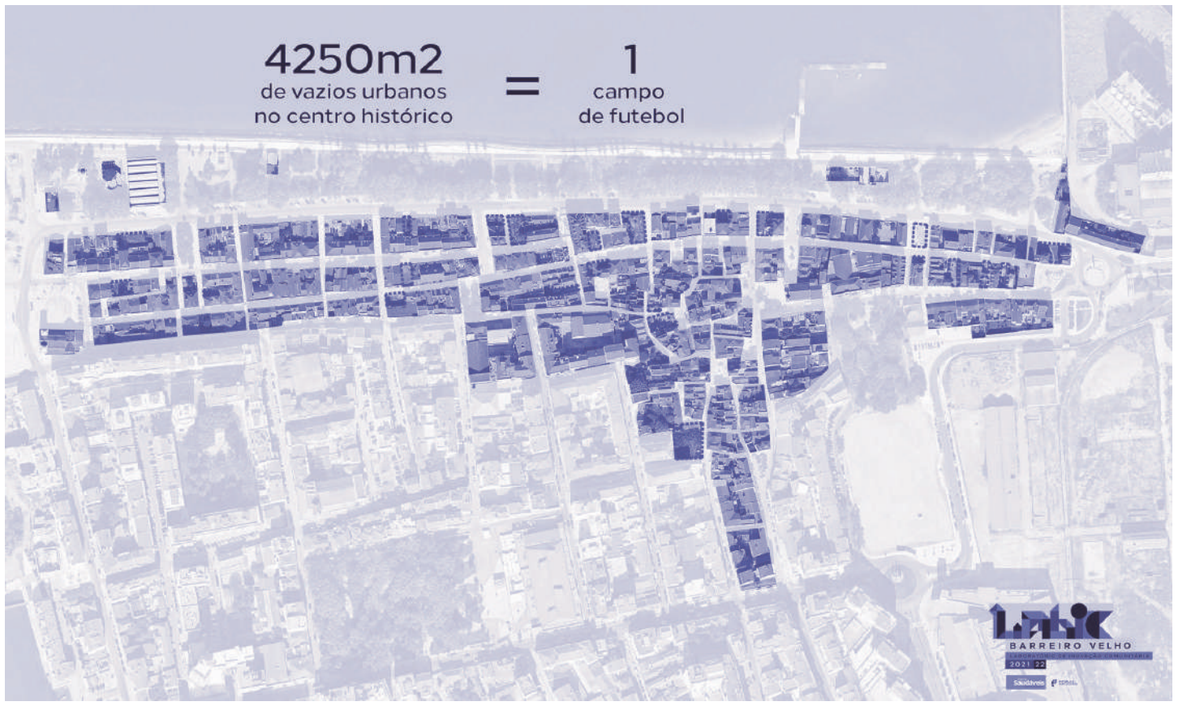

Fig.9 – LABIC, Walking Photographic Mapping, Barreiro Velho, 2022. Source: LABIC.

meetings and events. Together with residents and volunteers, a series of collaborative sessions were held to clean and prepare the space, which had previously been used as an illegal dumping site and was otherwise inaccessible. Once rehabilitated, the space was employed for meetings (notably during the COVID-19 pandemic), workshops, and community events. Additionally, it became one of the primary venues for the urban festival "A Rua é Nossa" ("The Street is Ours"), a weekend-long event featuring a dense program of sports, cultural activities, music, markets, city tours, and performances that traversed various streets and squares in the city (Fig.10a and b).

AFFECTED TERRAINS: REFLECTIONS ON TEMPORARY PRACTICES IN TERRAIN VAGUE SITES

The two case studies exemplify how temporary practices create opportunities for embodied environmental learning and citizenship and illustrate how different user groups physically engage with, affect and reimagine urban voids. *Terrain Vague* spaces, due to their abandonment and their openness to alternative experiences, have been places-opportunities for corporeal artistic experiments and occupations, and environmental stewardship, highlighting the relationship between bodies and landscapes.

In LABIC, the decision to repurpose a small urban vacant plot – emphasising its potential and immediate availability – and to organise a mobile and itinerant festival that moved across different streets and squares in the city resulted in flows and movements of people through otherwise unused streets and abandoned spaces, such as "Void number 12". Despite the ephemeral nature of the event, this initiative generated material and physical transformations with long-lasting impacts.

Fig.10a and b – LABIC, Void number 12 before and after intervention, during the LABIC Festival A Rua è Nossa, Barreiro Velho, 2022. Source: Homero Silva, Clube de Fotógrafos do Barreiro and LABIC.

The movement and flow of bodies through the seldom-used streets of Barreiro Velho's historic centre and its abandoned spaces – rhythmed by time, schedules, and the presence or absence of events – transforms how residents and the community perceive urban spaces. This dynamic also reshapes the perceptions of external visitors. Moreover, it leaves lasting physical traces, such as the cleaning and maintenance of "Void number 12", the creation of urban furniture specifically designed and self-built for the occasion, the cleaning of public areas, and the installation of posters, drawings, and urban decorations. Such actions have the potential to initiate processes of care and stewardship of public spaces by the community.

Cody Dock in London demonstrates how urban voids are best placed to creatively address

challenges in cities, such as post-industrial abandonment, the global financial crisis and the COVID19 pandemic, increasing social benefits such as community bonds, care for the local environment, accessibility and safety. A "light touch" intervention practice like in Cody Dock is more likely to preserve local site biodiversity and ecology and symbiotically link "bodies in the void" and the environment of the void.

Crucially, the *Terrain Vague* is never really "void" but always full of potential. Even small interventions like in LABIC that temporarily reimagine a site can promote innovation that can be scaled up or replicated and mainstreamed for social benefit. The act of walking through the partially abandoned streets of Barreiro Velho not only constituted a form of spatial transformation, albeit temporary, but also activated processes with significant and potentially long-term implications.

By engaging directly with the environment, residents could experience the space firsthand, potentially altering their perception of public areas. This experience may challenge or reshape existing fears and preconceived notions while fostering processes of urban care and strengthening community identity.

It is noteworthy that, for example, the results of the mapping exercises were consistently displayed publicly, utilising streets and building walls as supports. This practice not only disseminated the findings but also induced spatial transformations, signalling the presence of the events and leaving a visible trace of the working group and the broader community.

In essence then, temporary urbanism practices and strategies in *Terrain Vague* sites contribute to reimagining and regenerating the sites through embodied practices of making, moving, training, or events and redefine them as public spaces or urban commons – vessels for diversity and uncertainty, adaptable to changing community needs.

CONCLUSION: TOWARDS A DEFINITION OF VAGUE CATALYST. FROM CUSTODIANS TO COMMUNITIES OF CARE

To conclude, from the intersection of the concepts and theoretical lenses outlined in the first section, combined with detailed direct observation and analysis of the two presented experiences, the authors propose an initial attempt to define a series of emerging and innovative practices that share common characteristics.

We believe that collecting, analysing, and classifying this type of experience is both timely and important. Over the past twenty years, several emerging and innovative projects have been observed in *Terrain Vague* spaces across various European cities. These projects are diverse in nature, approach, and outcomes.

However, we argue that there is room for improvement in the systematic organisation, analysis, and classification of such practices, aiming toward a structured categorisation of their methods, approaches, and actors. Recognising common characteristics in these practices – initiated and implemented as exploratory and innovative efforts in specific contexts – may contribute to transforming these isolated niches of innovation into more widespread and integrated practices within institutional planning frameworks.

From the comparison of the two observed experiences and the theoretical framework introduced in the first part, certain shared characteristics emerge:

1. Context of Implementation: Both projects were carried out in *Terrain Vague* spaces that were previously abandoned, polluted, and degraded. However, the two projects differ significantly in terms of their environment, ecological context, scale, and duration.

2. Temporal and Tactical Urbanism Approach: Despite the opposing durations of the two cases – one involving a 999-year lease and the other a one-year project – their approaches, methodologies, and strategies align with the principles of temporary and tactical urbanism. Instead of designing abstract plans on paper for future implementation, these projects began with physical occupation and exploration of the spaces. They progressed through targeted actions and activities developed collaboratively with local communities, building the spaces incrementally while maintaining clear objectives.

3. Gradual Spatial Transformation: This approach results in spatial modifications that are not abrupt or fixed. Instead, they involve a gradual, day-by-day transformation of the space based on evolving needs, opportunities, and community input. These spaces lack a singular function or a predefined spatial form. Instead, they remain open and flexible to accommodate diverse activities, ephemeral structures, and temporary constructions that change over time. This flexibility allows the spaces to adapt to various uses and functions.

4. Community-Driven Management: Although these spaces are often located on private land, they are directly managed by local associations, communities, and residents. In these projects and within this context, through daily practices and activities that transform both the space and the individuals, the local community managing these spaces evolves from a few initial enlightened custodians to a much larger community of care. The daily stewardship of these spaces becomes an essential component of their spatial transformations and management. Much like a garden cultivated in the summer, which would quickly become barren and unproductive without the care and dedication of the community inhabiting and managing it, the daily care of these spaces defines the spatial condition of these projects.

5. Catalysts for Adaptive Urbanism: As a result of these characteristics, the projects do not impose rigid, pre-designed plans on the spaces or neighbourhoods. Instead, they self-define and self-construct incrementally, hosting a wide variety of activities and functions.

The spaces evolve dynamically over time, serving as catalysts that respond to the immediate needs and opportunities of the moment and the people who inhabit and manage them. Spatial changes are highly fluid, shaped by the movements, flows, and appropriations of the spaces by the community members who engage with and care for them.

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Touching the Surface

Application of “Nahsicht” theory of Alois Riegls in Architecture Composition

近距离式的
视觉触觉性
建筑表皮
建筑现象学
nahsicht
visual Tactility
surface
architectural phenomenon

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这项研究起始于对现代建筑视觉主导性的质疑，借鉴了阿洛伊斯·李格尔（Alois Riegl）在《晚期罗马艺术工业》一书中提出的“近距离式的”（Nahsicht）概念，探讨了视觉-触觉与建筑设计参数之间可能的关系。通过考察从古埃及至古罗马时期乃至现代艺术表达中的触觉性演变，本文归纳出视觉-触觉的若干基本特征及其表现形式，并将其与建筑设计中的三个关键要素相关联：表面材质、表面尺度与表面扰动。这些因素均通过真实经验加以审视。最终，本文在对视觉-触觉研究的反思中指出，当前建筑研究中过于理性与理论化的设计方法，以及以视觉媒体为主导的知识范式存在局限性，强调了对建筑表面进行敏感的、具身化感知的必要性。

This research starts from questioning the visual dominance of modern architecture, referring to Alois Riegl’s (Late Rome Art Industry) notion of discussing aesthetics of proximity (Nahsicht), and discussing the possible relationship between visual-tactility and design parameters in architecture. By learning from tactility evolution in the visual art of antiquity from ancient Egypt to Roman times and modern expression, this research identifies some basic characteristics and appearance of visual-tactility, along with related design parameters, as stemming from three key aspects: surface materiality, surface scale, and surface disturbance, all examined through authentic experience. And in the final reflections on this visual-tactility research, the limitation of rational and theoretical design methodology, as well as visual-media dominant knowledge, in architectural study and the necessity of a sensitive embodied perception of architectural surfaces is discussed at the end of the paper.

As a consequence of the current deluge of images, architecture of our time often appears as mere retinal art of the eye, thus completing an epistemological cycle that began in Greek thought and architecture. But the change goes beyond mere visual dominance; instead of being a situational bodily encounter, architecture has become an art of the printed image fixed by the hurried eye of the camera. In our culture of pictures, the gaze itself flattens into a picture and loses its plasticity. Instead of experiencing our being in the world, we behold it from outside as spectators of images projected on the surface of the retina (Pallasmaa J. 2012, 30).

The paper explores the principles of visual-tactile experience using the concept of "Nahsicht" (proximity touch) proposed by Alois Riegl (1985) in his work "Late Rome Art Industry." It examines its existence in the language of modern architectural design and compares and supplements it with the original idea of Nahsicht. From both philosophical and phenomenological perspectives, the research focuses on perception via touch and sight. Imaginative drawing techniques are employed to convey anticipated atmospheres, using elements such as materiality, scale, and light to evoke sensory responses. Inspired by visual strategies in comics, these representations consider the viewer's perspective and proximity to surface. A comparative analysis of case studies with strong visual-tactile qualities is used to extract spatial motifs and recurring tactile effects, allowing for a deeper understanding of embodied experience in architecture beyond surface aesthetics, hoping to use this reflection as a starting point to explore design methodologies based on tactile effects in architecture.

INTRODUCTION AND BACKGROUND

Concept of proximity tactility (Nahsicht)

In the book "Late Roman Art Industry" (1901), Riegl discusses this aesthetics of proximity (Nahsicht) prompted by some natural and man-made constructions that allegedly have the ability to trigger an amplification of human perception. It revealed the trend of architectural development from tactile surfaces to three-dimensional, depth of space. The eye perceives only planes; indeed, it is through foreshortened silhouettes and through shadows that we know about alterations in depths. The dimension of depth, however, does not seem so necessary, and even more so, since it may obscure the clear impression of material individuality (Riegl 1985, 22). In Riegl's view, the plane is no longer tactile because it contains interruptions achieved through deep shadows; it is, on the contrary, optical - colorful whereby the objects appear in Fernsicht (Far-sight) to us and whereby they also blur into their environment. In this specific model of spatial construction, tactile surfaces, as the representation of material individual objects, can be perceived only on the basis of sensuous perception. Space is just a notion in human mind, and the awareness of which appeals to our subjective reflection. Hence, of the three dimensions, height, and width (outline, silhouette) as dimensions of the plane or level ground are indispensable in order to arrive at any notion of the individual material object. The dimension of depth, however, does not seem so necessary, and is suppressed, when possible. (Riegl 1985, 24)

The ancient, civilized nations intended the visual arts to be responsible for the representation of objects as individual material phenomena not in space (here after meaning always deep space). Through the development of the visual arts of antiquity, one can see the struggle and contradiction between pursuing the perception of the material individuality of objects and the gradual penetration of it by subjective idea. And Rigel divided it into three periods, Nahsicht (near-sight), Nomalsicht (normal-sight) and Fernsicht (Far-sight), and the tactility of surface weakened with the dominant of optical effect. One typical example of Nahsicht is the Egyptian Temple. There is a completely enclosed hall with solid ceilings (Fig.1 and 2). The halls are consequently filled with columns supporting the ceiling at such short intervals that all those plans which could have had a spatial effect are now cut up.

Despite the considerable physical expansion, the impression of space was thus suppressed to the point of elimination and in its place a forced impression of individual shapes (the columns) was perceived by the eye. Windows and doors are hidden and decreased to avoid disturbing the enclosed tactile shape. To some degree, space here is limited rather than created in it.

Fig.1 – Temple of Amun-R, the hall is cut off by huge solid columns with hidden windows. © Drawing by author.

Fig.2 – Hypostyle Hall, Karnak, tactile phenomena caused by strong individual materiality of columns. © Photographed by author.

Fig.3 – Minerva Medical, openings on the wall break the continuity of tactility on the enclosed surface. © Drawing by author.

Fig.4 – Wall of Karnak Temple, complete pattern stands out from the background. © 'Late Roman Art Industry' by Alois Riegl.

Fig.5 – Corinthian capital in Salona, discontinuous curves lead to the loss in materiality. © 'Late Roman Art Industry by Alois Riegl.

In late Romane times, new architectural elements in monumental architecture like the arch and the vault were created. Relevant elements in ancient Egyptian and antiquity architecture were the straight architrave and the flat ceiling. The arch is placed immediately on the column and on top of this the wall: this again was a plane, as the ancient Egyptian wall was, but no longer is an unperforated tactile, rather an optical, plane interspaced with windows casting deep shadows.

For example, in Minerva Medical (Fig.3), the abandonment of windowless architecture resulted in a disruption of the impression of an enclosed space, which could never be reversed, which leads to a contradictory result: on the one hand, decorations and paintings created a coloristic animation of the wall, on the other hand, the holes lure in the view from the material enclosure to infinite outside space (Riegl 1985, 27).

Apart from space, the decorations on the plane also affects the surface tactility of surface. Comparing patterns on the wall of Karnak Temple (Fig.4) and the marble capital from a column in Salona (Fig.5), one notioces that.

On the Corinthian capital, the individual parts (rips) of the leaf are not connected with one another in a tactile-optical manner (with the means of undulating projections of half-shadows) but they are separated from one another and isolated in a purely optical manner through incisions which cast deep shadows.

There is a definite trend towards denaturalization, which should not surprise us in art, with its explicit tendency toward isolation of all individual shapes (elimination of all causality from the sensory appearance) conclude two principle that replace earlier tactile and clear between pattern and ground: isolation of the entity of appearance by as massive as possible and inarticulate outlines and isolation of all parts, whether pattern or ground. (Riegl 1985, 45)

Tactility (Nahsicht) in modern discourse

This concept of "Nahsicht", as Riegl demonstrated, is most clearly expressed in the architecture of antiquity. 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, even to the point of the rise of semiotic and typological methodologies. Until recently, architecture was considered a visual art form, to be perceived and judged by sight. Best expressed by Le Corbusier (1923), "Architecture is the masterly, correct and magnificent play of masses brought together in light." This development was very far-reaching for visual dominance as it stimulated working in a new virtual visual world (Harsens 2004); moreover, at that time, the arts favored painting. Western culture is dominated by ocular centrism, the hegemony of the eye. The appearance of museums and zoos further elevated sight to the position of the pre-eminent sense (Bowring 2007). This visual dominance lives on to the twentieth century and peaks during Modernism (Frampton 2001).

While it was not until, Pallasmaa, The Eyes of the Skin offers significant theoretical support for the study of architectural tactility. He argues that modern architecture has become overly visual, neglecting the full range of human senses, particularly touch. For Pallasmaa, authentic architectural experience is multisensory spaces should be felt, not just seen. He emphasizes the haptic qualities of materials, surfaces, and spatial atmospheres, claiming that "the skin reads texture, weight, density and temperature" (Pallasmaa, 2005, 56). This aligns closely with a phenomenological approach to tactility, where the body's engagement with space—through touch, proximity, and material presence—becomes central to architectural meaning and memory.

Because of industrial and consumeristic cultural dominance, vision has the tendency to let us just be an outsider a bystanders, and omnidirectional accepting different types of perception: hearing, touch, smell, and taste make us participants. Alva Noë (2002) has proposed a question “Is the Visual World a Grand Illusion?” The question is what inspired the initial concern about visual tactility. With the development of self-media and visual-reality techniques, people can visit various landscapes, places and exhibitions at home without experiencing them first hand in situ. In such an era of visual dominance, how infinitely magnified visual ability interact with other perceptual sensations? Or perhaps coexist in a new perceptual composition mode?

OBJECTIVITY AND METHOD

After a detailed literature review of the concept of proximity tactility (Nahsicht), the existence of 'visual tactility' in architectural language needs re-examination, comparison, and refinement, which could be achieved through a classification analysis of representative contemporary cases. The aim is to systematically structure a methodology of visual tactility within the framework of contemporary social discourse. This approach draws on phenomenological understanding, expressed through descriptive and diagrammatic representation, and expands the potential for neurodiverse, interactive design.

Representation of Tactile Sensation

Just as vision is the psychological science of the optic input, haptic is the science of what is tangible (John M.& Juricevic, 2003). ‘Imagine your environment without ever having felt the texture of wood, the temperature of steel, the sharpness of a corner, the verticality of a wall, or without ever having moved on a ramp.’ The Critics of Pallasmaa mark out the fact that different elements in space collaborate to create the feeling of it. The mental experience of the city is more a haptic constellation than a sequence of visual images; impressions of sight are embedded in the continuum of the more unconscious haptic experience. Even as the eye touches and the gaze strokes distant outlines and contours, our vision feels the hardness, texture, weight and temperature of surfaces. Without the collaboration of touch, the eye would be unable to decipher space and depth, and we could not mold the mosaic of sensory impressions into a coherent continuum. The sense of continuity unites isolated sensory fragments in the temporal continuity of the sense of the Self. (Pallasmaa 2012)

This process from sensation to representation is a human way of perceiving and is similar to vision and haptics. However, in the perception process, the type of and way of gathering information differs between them. In haptic representation, form becomes a subject of interpretation, as it may not directly convey meaning. This is because, when both visual and haptic information are present, visual input tends to dominate and suppress haptic perception. Yet a slight difference exists between the form of movement and the purely haptic form. Movement and the successive-kinematic experience of space is still very difficult to observe visually, which is related to what Riegl called “Materiality”, as a representation of anti-space and it highlights individuality (Jasmien 2008).Tonghoon’s (1996) study of Peter Zumthor’s Thermal Bath, the composition of tactile space is first explored through two primary features: materiality and movement. The first, materiality, refers to the awareness evoked in the beholder through purely optical experiences. This includes the visual perception of folds arranged in rhythmic, schematic sequences, or deeply carved recessions that reveal shadows and spatial depth (Riegl 1985, 67–86). The second aspect, movement, represents a more dynamic form of tactility, based on shifts in position and focus that periodically engage and challenge the spectator.

In many other discussions on tactility in architecture, the notion of tactility has been closely associated with the intimacy of everyday experience. Particularly in the argument of Kenneth Frampton when touch has been paired with the notion of "nearness," whereas vision is paired with physical and emotional detachedness of the subject from the object. This opposition between the near and the distant is, however, nothing new. As early as the late 19th century, this opposition occupied a central place in aesthetic discourse. In particular, German aesthetic discourse at the turn of the 19th century provides us with various sets of different perceptual categories, such as the near view vs. the distant view, the tactile vs. the optical, and distraction vs. attention. (Tonghoon 1996)

Hence, this approach differs from much of the theory of architectural representation with certain fixed types of graphical projection. Instead, it's closely engaged with the awareness in perceptual processes of visual experience. Here, descriptive geometry and sketches are both part of the tool in representation to enable analytical comparison alongside image-based realities, which is particularly concerned with the formation of methodological aspects supporting visual-tactile and experiential modes in architectural design.

Phenomenological lens

In architecture, a work can initially be described through its objective characteristics—elements such as location, physical context, style, age, dimensions, proportions, and materiality. These characteristics include location, physical context, style, age, dimensions, proportions, and materiality (Jennifer A. E. Shields 2023). In the meantime, as occupants of a building, particularly one we inhabit regularly, our perception is greatly influenced by our interactions with and the use of the space.

'Architecture has always represented the prototype of a work of art the reception of which is consummated by a collectivity in a state of distraction... Buildings are appropriated in a twofold manner: by use and by perception – or rather, by touch and sight.'(Benjamin 1968, 339–340)

Imaginative drawings in architecture strive to convey an anticipated atmosphere or experience, examining characteristics such as form, space, materiality, scale, light, and use. This concept parallels the experience in comics, where the viewer's implicit perspective and proximity to objects can emphasize their relationship to the portrayed subjects (Fig.6). As Luis Alfonso notes, 'Looking at a scene from above it the viewer has a sense of detachment – an observer rather than a participant. However, when the reader views a scene from below it, then his position evokes a sense of smallness which stimulates a sensation of fear.'(Luis 2016)

Drawing on this imaginative way of representation, through the haptic representation of typical building, 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 subdivided to further elaboration and demonstration.

The following sections will provide some material 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 eras will be discussed. This will hopefully reveal the relative poverty of the contemporary theory of tactile perceptual model in architecture.

DESIGN PARAMETERS

For the comparison, the formation of the haptic effect is examined and presented through three aspects: materiality, touchable scale, and unreadable space. These aspects relate both to the characteristics of independent spatial features

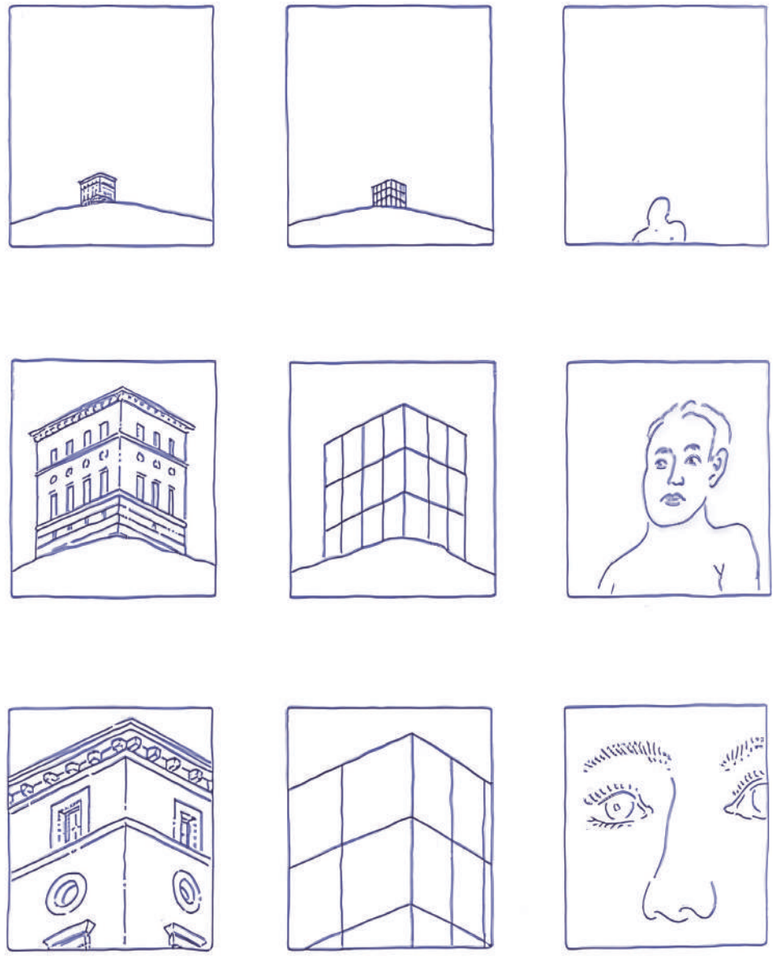


Fig.6 – Distance & Detail, León Krier. © University of Notre Dame, León Krierby Alois Riegl.

and to the combined effects of spatial sequences in movement. Each aspect will be illustrated by comparative examples and generalized conclusiongenerality conclusion, and all the cases will be re-evaluated to reconsider the interaction between different aspects. In this way, abstract spatial recognition is deconstructed, returning us to an initial, haptic understanding of space with reduced subjective interpretation. For that reason, a new combination of perceptions in the consciousness of the beholder is gained. (Riegl 1985, 23)

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. In contrast to this well-planned definition of the external material within the dimension of the plane, achieved with great acuteness here, the actual functional responsibility (the formation of space) is entirely reduced. (Riegl 1985, 27)

The pyramid was perceived as a solid, impenetrable object, offering the observer a strong sense of tangible form and physical presence. For example, taking the work of Monumentoai Martiri delle Fosse Ardeatine and KAIT

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

Table 1 - Comparison between two different boundary condition: solid and light. © Drawing by author.

Plaza as comparison (Table 1), they are similar in scale and boundary outline. Both are flat, compressing underground space with curving cover. But the solid stone roof has a higher visual tactile level by creating a sense of pressure on observers and forcing them to focus on the boundary itself, no recognition of the structure and outside. On the contrary, the light floating metal roof with different openings provides too much information, and the identity of the surface itself fades away in the complex reading of a surplus of visual information.

On top of this, the material and the texture will also affect the perception of certain surfaces and the overall atmosphere. Texture appears to be the most important information to identify objects through touch (the haptic identification of everyday life objects). The composition of wooden columns, white brick, clay tiles, wooden floor and even the wool carpet in Villa Mairea remind us of the primitive memory of the feeling of home. 'Our sensations of comfort, protection and home are rooted in the primordial experience of countless generations. Bachelard calls these 'images that bring out the primitive in us' or 'primal images'.

The house we were born in has engraved within us the hierarchy of the various functions of inhabiting. We are the diagram of the functions of inhabiting that particular house, and all the other houses are but variations on a fundamental theme. 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, 62) Pallasmaa writes of the strength of the bodily memory. And, these first impressions of texture often come into being unconsciously when we first encounter substances as infants.

This primary memory is usually evoked by materials with original natural characteristics, such as wood, rock, fur, etc., which in turn trigger a strong physical memory. This type of material has a stronger visual and tactile effect than industrially produced modern materials. Comparing the two types of concrete (Fig.7-10) used by Siza in Leça de Palmeira, the original one has a closer visual tactile effect on a natural reef by mixing a large amount of sand and gravel into the cement to imitate the color and materiality of the real reef, thus enhancing the sense of integration between the material and the context through this continuity in tactility.

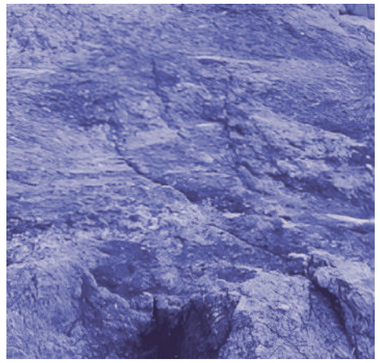


Fig.7 - Common Concrete.

Fig.8 - Concrete with stones.

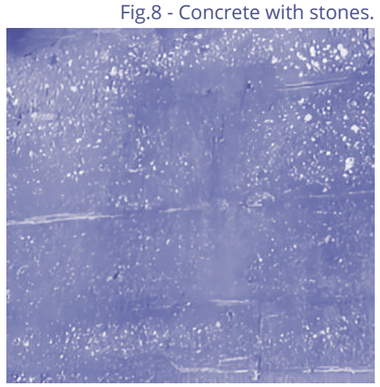


Fig.9 - Stones by shore.

Touchable Scale

Riegl defines the Nahsicht as: the plane which the eye perceives when it comes so close to the surface of an object, that all the silhouettes and, in particular, all the shadows which otherwise could disclose an alteration in depth, disappear. The perception of objects is thus tactile, and in as much as it has to be optical to a certain degree, it is

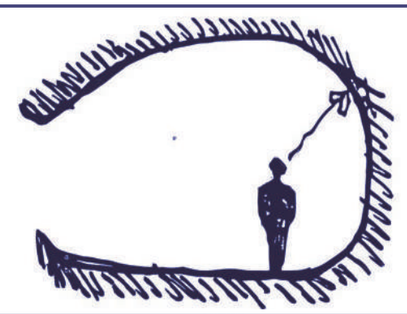
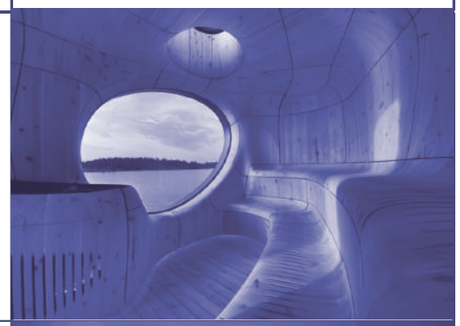
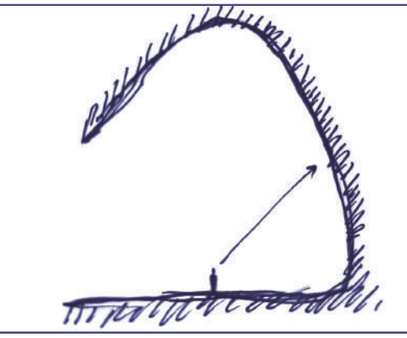
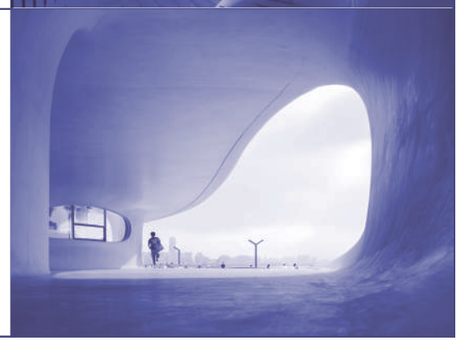
Name of Project	Boundary Condition	Images
Grotto Sunna		
Cloudscape Bookshop		

Table 2 - Comparison of two enclosure space with different scale. © Drawing by author.

nahsichtig (Araujo 2014). There is an implied 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. Conversely, in faraway vision, our optical axes are virtually parallel, implying that the pictures imprinted on each retina are in such conditions not so dissimilar and we unwarily repress in the process of seeing' (Crary 1990, 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. As the two diagrams show (Table 2). A smaller spatial scale enhances the sense of enclosure, making the observer feel physically wrapped by the surrounding surfaces. However, as the surface recedes or withdraws, the observer shifts from being a participant to a distant spectator, resulting in a loss of haptic perception of the boundary. To some degree, the exaggeration of certain dimensions will enhance the tactical feeling in a linear perspective (Table 3).

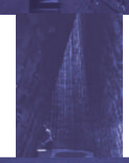
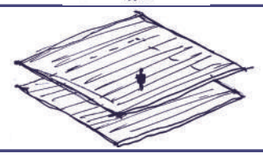
Name of Project	Boundary Condition	Images
Victoria and Albert Museum		
Bruder Klaus Kapelle		
Monumento ai Martiri delle Fosse Ardeatine		

Table 3 - Scale exaggeration in three dimensions. © Drawing by author.

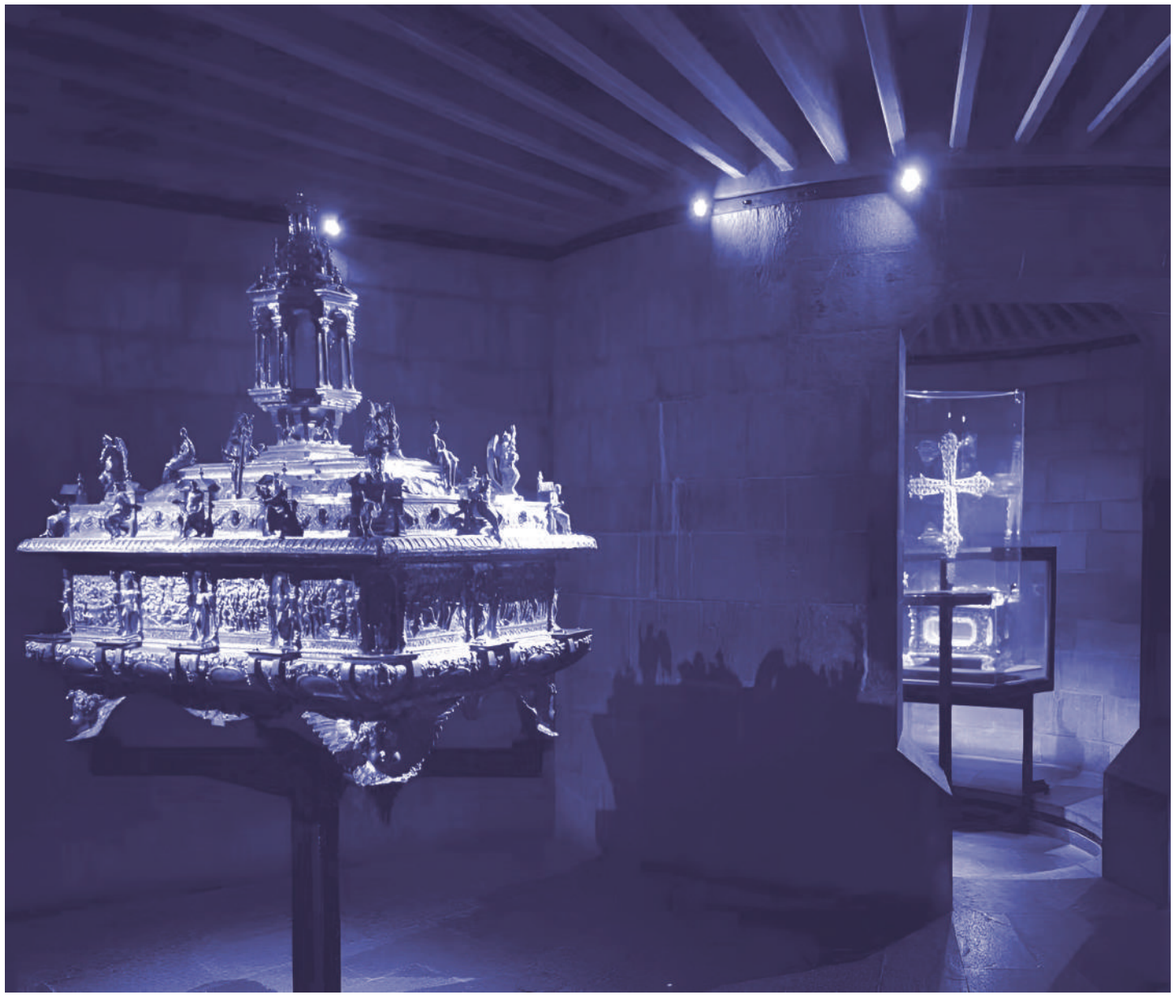


Fig.10 – Single room in Museo del Tesoro di San Lorenzo. © Photographed by author.

As Riegl explained, the eye, on its own, can take in a multitude of real bodies simultaneously, along with the space they fill; here the tactile sense is not effective. The artist must therefore remove himself by several steps from a group he means to depict until he can survey it in something close to a normal view.

This did not happen during the entire ancient era. No single relief or painting from Antiquity adhered rigorously to a unitary vantage point. Because such a space presumably contains an illogical multiplicity of focal points, it fails to provide the eye with a singular point of reference, leaving it astray, and generating a sense of elusiveness comparable to the one invoked in looking close-up. This affinity with the haptic relates to the principles of construction that rule pattern-based artefacts, which, as Graves sustains, radically oppose the ones that define linear perspective. For while the latter, reproducing the conditions of distant vision, implies that 'the vanishing point and the viewing point must be geometrically synonymous' (Araujo 2014, 7), providing the observer with a fixed, stable standpoint from where to look, the former bombards the beholder with a potentially infinite profusion of targets, providing no clue as to where to direct the eye (Araujo 2014, 8).

The obvious directivity results in the visual movement on a tactile surface and enhances the effect of tactility.

Disturbance in surface recognition

In fact, a disturbed surface is quite a comprehensive and universal effect of multi-level parameters. This essential process is the deconstruction of the existing spatial cognitive system, compressing the visual information content, and then reawakening the observer's acute tactile experience by re-observing and recognizing the boundary conditions.

For a single space, this "Disturbance " 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, and it is created by untransparent boundary conditions with a high level of materiality, which has already been discussed in previous section. However, the sense of unfamiliarity in a space is closely related to how the brain constructs and interprets three-dimensional environments. 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 (Von Hildebrand 2018). This inherent lack of clarity in our perceptual process legitimizes artistic interventions:

'The visual arts alone reflect the active operation of consciousness: the activity that seeks to bridge the gap between ideas of three-dimensional form and visual two-dimensional impressions and to fashion both into a unity' (Tonghoon 2002, 25). Hence, 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 subconsciousness.

For spatial sequence, the repetition of similar, isolated small spaces deconstructs the observer's perception of the overall environment, transforming a space beyond human scale into a series of distinct, tactile segments. In the case of Temple at Karnak and Museo del Tesoro di San Lorenzo Albini (Fig.10), interior space is deconstructed by huge pillar matrix or similar cylinder exhibition rooms, which also create a heteromorphic void between them. When in it, observers cannot read how the room is organized or connected. They, also do not know what is happening outside, but only focus on this envelope itself.

CONCLUSION AND DISCUSSION

Poet Rainer Maria Rilk suggests an intensification of our senses may counteract human suffering and thus neutralize violence and hostility (Araujo 2014). Edmund Husserl defines phenomenology as a 'pure looking', as a pure encounter with phenomenon, just like scenery to the painter. Just like a poet will search for a poetical sense for a special living experience, the architect could also try to find a existing space with specific feelings. And this is also what Pallasmaa expressed, 'The most fundamental essence of architecture is about existence, and it comes from the experience and command of existence, not a formalized and intelligent theory. We can only prepare for our architectural work by developing a unique sensitivity and awareness of architectural phenomena.' (Pallasmaa 2012, 22)

This research has explored the perceptual relationship between haptic and visual senses in architecture, with a particular focus on contemporary work. Cases that embodied a deeply tactile sensibility are compared, in which light, texture, material, and human-scale proportions are used not only as aesthetic tools but as means of fostering emotional and psychological resonance.

By analyzing this visual tactility design approach, especially the nuanced treatment of materials, scale and space continuity, the research demonstrates how tactile parameters can be integrated into the design process to move beyond rationalized, homogenized spatial experiences. This refined understanding of tactility reflects a broader effort to recognize sensory diversity—what might be referred to as tactile neurodiversity—in architectural perception and practice.

Rather than presenting abstract parameters as rigid categories, this study positions them as tools to support a more complete and empathetic design methodology, where the physical experience of space is intertwined with metaphysical meaning. Alois's visual-tactile theory offers a grounded foundation for such an approach, bridging rational design with deeply human, sensory experience.

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A Paradigm of the Contemporary City: Temperature as Embodied Perception

È possibile ripensare lo spazio e l'abitare da una prospettiva incentrata sul corpo, che consideri l'interazione dinamica tra gli esseri umani e l'ambiente come se influenzassero e fossero influenzati? Questo articolo esplora concetti teorici nella pratica, identificando i tipi di spazi che rendono operativa questa idea e le pratiche necessarie per realizzarla. L'uomo appare sempre più distaccato dal mondo fisico e materiale. Tuttavia, si sostiene che si stia entrando in una fase caratterizzata da una rinnovata attenzione per corpo e per elementi empiricamente fondati. L'Antropocene rappresenta un punto di svolta cruciale, che spinge a rivalutare l'impegno umano con il mondo e a immaginare nuovi metodi per affrontare i cambiamenti sociali, politici ed epistemologici provocati dal riscaldamento globale. Un paradigma incentrato sul corpo viene proposto come soluzione per affrontare le sfide di un mondo in trasformazione, esaminando le implicazioni a livello individuale (corpo), sociale (corpo sociale) e culturale (corpo culturale). Questa lente esplora a fondo la connessione tra gli esseri umani e l'ambiente. Il concetto di temperatura ambientale servirà come strumento per l'applicazione di questa visione del mondo, andando oltre le definizioni scientifiche per comprendere la dinamica tra corpi umani, non umani e materiali. Questo concetto e la metodologia proposta per applicarlo, evidenzieranno la rilevanza degli spazi residuali e delle pratiche artistico-architettoniche come punto di partenza per lo sviluppo di nuovi modi di abitare il nostro mondo. L'ipotesi è che le pratiche contemporanee, come l'installazione performativa e le architetture transitorie, possano essere viste come forme di occupazione ambientale, rivelando possibilità di riutilizzo e riattivazione di spazi non visti. Questo approccio promuove forme di sintonizzazione e un'etica della cura, per ridisegnare la nostra comprensione dello spazio e dell'abitare.

commons
temperatura
antropocene
pratiche artistico-architettoniche
corpo

Can we rethink space and inhabiting from a body-centred perspective that considers the dynamic interaction between humans and the environment as affecting and being affected? This paper explores theoretical concepts in practice, identifying the types of spaces operationalising this idea and the practices necessary to realise it. Humans appear increasingly detached from the physical and material realms. However, it is argued that we are entering a phase characterised by a renewed focus on the body and materially grounded elements. Anthropocene represents a crucial turning point, prompting a reevaluation of human engagement with the world and envisioning new methods to address the social, political and epistemological changes brought about by global warming. A body-centred paradigm is proposed as a solution for embracing the challenges of a transforming world, examining implications on individual (the body), societal (the social body), and cultural levels (the cultural body). This lens thoroughly explores the connection between humans and the environment. The concept of environmental temperature will serve as a tool for applying this worldview, extending beyond scientific definitions to encompass the dynamic between human, non-human, and material bodies. This concept and the methodology proposed for applying it will highlight the significance of residual spaces and art-architectural practices as a starting point for developing new ways of inhabiting our world. The hypothesis is that contemporary practices, such as performative installation and transitory architectures, may be viewed as forms of environmental occupation, revealing possibilities for reusing and reactivating unseen spaces. This approach fosters attunement and an ethic of care, reshaping our understanding of space and habitation.

commons
temperature
anthropocene
art-architectural practices
body

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FRAMING THE ISSUE

This paper reflects the author's broader doctoral research pathway, focusing on the philosophical conceptualisation of art as a means to experience Anthropocene[1]. It examines aesthetic eco-ethical actions for producing Commons in the context of global warming[2]. The underlying assumption is that practice can intuitively comprehend and inform certain theoretical questions: the attempt is to grasp how. The paper transitions from a philosophical background to empirical artistic research, generating new theoretical reflections. Its objective is to observe, from a transdisciplinary perspective, how art and architectural practices can create spaces that inspire new ways of inhabiting in relation to climate change. The hypothesis considers art-based practices as producers of Commons (Fig.1), encompassing both their material (space and goods) and immaterial aspects (action and knowledge). Readers will encounter a theoretical framework that first analyses the current human experiences of Anthropocene, then presents a theoretical proposal designed as a reflective tool, offering a potential method for interpreting specific empirical phenomena. The connection between theory and practice is crucial, as an inseparable bond intertwines the two: theory sparks empirical investigation, while practice informs theory, fostering new research pathways and questions. This is to uncover answers to today's urgent issues, suggesting a new theoretical paradigm as a foundation for promoting ways of behaving and experiencing the world.

Indeed, our era seems to be one in which humanity has separated itself from what can be considered physical and material. Humans are navigating a time of artificial intelligence and technology that transcends natural constraints. At first glance, it seems likely to state that human evolution, more than ever, has to forego the natural bond, the materiality of the experience and accomplish a new and still unexplored stage of being, where what's rational and related to the mind has reached its full might[3]. Moreover, some theorists claim it is necessary to view this new stage as detached from human evolution, as something whose control has been lost, giving birth to a new autonomous "sphere": the Technosphere[4].

This paper aims to defend the idea that humanity is experiencing a phase characterised by a renewed centrality of the body, of what's material and empirically rooted. Examining in depth the system of knowledge that typifies what we can call contemporary times, it appears possible to assert that naming Anthropocene represents a shift from the world humanity was building to the necessity of envisioning a new and different perspective on humankind itself. More than ever, it is evident that humans are affecting the environment: understanding that not only humanity *is affecting* but that it also *is affected* is what is at stake (Dewey 1958, Husserl 1966). In other words, recognising the mutual exchange involved in experiencing the world is necessary to discover ways to foster new understandings of the meaning of Anthropocene.

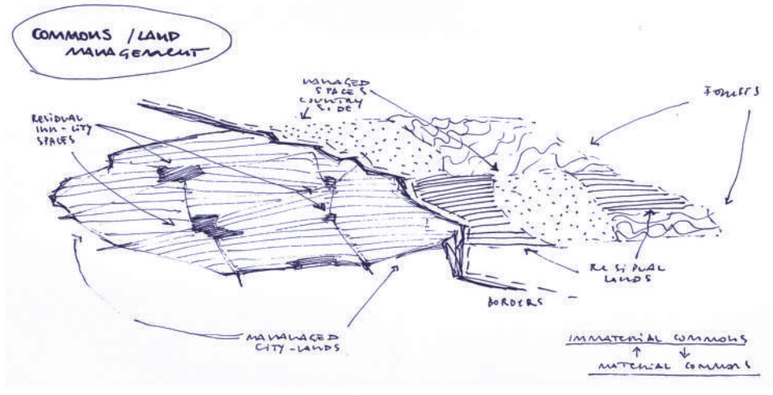

Fig.1 - Representing potential Common spaces inside and outside the city. Drawing by FM.

Given those premises, this paper will try to unfold the reasonings behind the above-proposed hypothesis, delving into the idea of *corporality* taking over (Iofrida 2019) and observing how to implement this concept. By defining its theoretical framework, the article proposes examining how the notion of "bodies" can serve as the pivot for a new approach to the world, deploying various practical means to address the challenges of Anthropocene. *Is it possible to rethink the relationship with the concept of space from a body-centred perspective? If so, how? What theoretical and practical concepts might help undertake this path? Which types of spaces are likely to implement this concept? What practices should be embraced to enact this new perspective?* The following discussion will explore the concept of *Environmental Temperature* as a useful concept to answer the above-posed questions. Temperature is closely linked to bodily perception and applies to every human, animal, and material body; it appears to be a strong starting point for envisioning a reconceptualization of space and inhabitation. Viewing temperature as an environmental factor and going beyond its scientific meaning involves not only the interaction and mutual exchange between two bodies in contact but also encompasses the different meanings that society attributes to the spaces they inhabit. This highlights the mutuality of the relationship between humans and the environment, which involves the exchange of temperatures regarding how humans attribute meanings and how the environment shapes those meanings by integrating its own characteristics into the discourse. The proposal is to view this perspective as capable of implementing an embodied approach to understanding the world, resulting in new theoretical and practical interpretations of humanity's relationship with the environment. Starting from what it means for the subject (*a body*) to face this new approach and going to the society as a whole (*social body*) and looking into the implications on a knowledge-building level (*cultural body*), the relationship between humans and the environment will be addressed.

ANTHROPOCENE AND ITS CONSEQUENCES

Global warming requires rethinking everything previously taken for granted and, as a result, a complete shift in the ways humanity understands and interprets the world (Bonneuil Fressoz 2016). As said before, naming Anthropocene can be considered as a shifting point. This is for two main reasons: first, nature, once deemed immutable and stable – an unalterable stage for human action – is now reacting to humankind's violent actions; second, a specific idea of science, innovation and technology – driven by Capitalism, profit logic, land exploitation, and unruled expansion – is the cause of the witnessed environmental collapse. Usually considered to be what distinguishes humans from the "rest" – referring to a certain idea of what's empirical, nature, and wilderness, in contrast to a more elevated way of inhabiting the world driven by intellect (rationality)[5] – this concept of science and its consequences upon Earth systems appears to be leading us back to confront humanity's finitude. Taken as an opportunity to rediscover a more attuned way of co-habiting with *other parts of nature*[6], two consequences are brought about by Anthropocene[7]. On the one hand, a displacement from the world that is being built is needed, which means rethinking former paradigms, all human history and ways of considering humanity. This entails rewriting the history of epistemology to incorporate the anthropomorphic perspective through which humanity interprets the world and itself, consequently building new knowledge and perspectives. On the other hand, it is essential to envision new forms of access to the world, and ways to comprehend ourselves as *embedded in* and *part of* nature. The aim is to account for the anthropomorphic and the partial perspective through which humanity can observe the world's features and use that understanding to create new and creative ways of behaving and interacting with the unknown.

In an attempt to understand this depiction of reality, the research hinted at in this article proposes to develop new means of comprehending the world, not solely relying on rationality, culture, and science but endeavouring to embrace what is sensible, natural, and connected to perception. It represents a movement of displacement from what is regarded as reliable and objective – following historian of science Lorraine Daston's reconstruction of the social meaning of objectivity (Daston 1992) – to what is intuitive and related to the corporeal. As framed in my doctoral research titled "Art for Experiencing Anthropocene: Aesthetic Eco-ethical Actions for Producing Commons in Global Warming"[8], it is proposed here to embrace a Body-centred Paradigm moving beyond the Paradigm of Universal Rationality[9]. Without allowing for the manifestation of these paradigm characteristics, it suffices to state that perceiving ourselves as organisms, no longer defined primarily by rationality, reveals two distinct possibilities: firstly, to see how the body shapes our way of acting and building the surrounding world (Mancuso 2013)[10], enlightening new possible understandings of human history; secondly, to recognise how our body is fully and constantly affected by the environment itself, unveiling different social structures de pendent upon environmental aspects, or, better, how those structures are shaped to respond to the necessity of surviving in differently connoted spaces[11].

Embracing this new orientation paradigm enables us to see humanity as no longer detached from the material and physical, and making nature a comparative model to promote new ways of accessing the world (Renn 2020). Putting corporeality at the centre, the idea of *perceiving bodies* re-evaluates everything sensitive, empirical and perceptual, disclosing new potential approaches. Following the path shown by phenomenology and thinkers such as Edmund Husserl[12] and, more recently, Bruno Latour, the idea is to move a step forward and radicalising (meant in its etymological sense, from *radix*) their approaches, postulating a deep and rooted transformation encompassing all disciplines and ways of living. Following the idea proposed by Latour that it is necessary to start from something shared by "all agents" – both humans and non-humans –, the idea is to reach a point where "we have thoroughly lost any relation between those two concepts of object and subject that are no longer of any interest any more except in a patrimonial sense" (Latour, 2014). What Latour considered to be the "shared point" is *agency* and the same *shape-changing destiny*. To go beyond the "morphism" that Latour critiqued, "heat" or, better, "temperature" will be proposed in the unfolding of this paper as something shared by all bodies in the world – whether human, material, or non-human. Affecting and affected, this new positioning of humankind makes way for an epistemological transformation that can be more attuned and caring.

How is it possible to build knowledge from an embodied perspective? The first outcome related to knowledge production is that the boundaries between inside and outside can be wholly blurred in continuous mutual exchange[13]. Second, considering humans' perspectives as one with others opens the gaze to *otherness*: adopting *the body* as a new paradigm of understanding, the human – bodily shaped – perspective on the world is one among the million possible. Going from the individual to the social, then from the social to the cultural, is what is at stake when discussing knowledge production.

Understanding how the two described outcomes affect the subject and its behaviour leads to applying the same outcomes to society as a whole. In this context, it is necessary to look at what it is possible to call the *social body* itself as something affecting and affected, as an element of perception that acts to shape – and is shaped by – the environment. The social body can be defined as a site of social interactions and meaning-making, shaped by norms and laws that differ from one social body to another, constructing what can be defined as the social structure. Transitioning from bodies to social bodies at a knowledge production level leads to *cultural bodies*. Each social body is associated with a cultural body, which refers to the formed expression of a specific society that constitutes its cultural apparatus. In other words, it represents the unfolding of social structures related to beliefs, values, and practices that distinguish one society from another. The necessity of the construction of new cultural bodies must now respond to the necessity of building a shared vision of the world that embraces this openness. The establishment of diverse cultural nuances exploring the relationship between nature and culture, humans and non-humans, and the body and environment is now at stake from both theoretical and empirical perspectives.

Examining the relationship between humans and the environment, the concept of space – both built and natural (Dodd 2020) – provides a compelling basis for reimagining how humans inhabit and actively enact this new vision for the world. In other words, it fosters the development of a more eco-logical relationship with the environment that embraces various perspectives and uses. In this context, the urban dimension appears to be the favoured starting point, viewed as the *second nature* (Vercellone 2013, Cronor 1992) created by humans to adapt and shape their surroundings. Symbolically, and from the perspective that this work aims to critique, the city signifies humanity's emancipation from the *first nature*, understood as original and untamed. While detaching from the wilderness, cities were among the first places where human societies developed their contemporary features. The Anthropocene has evidenced that humanity inhabits a nature that is never simply *first* or *second*. In an anthropogenic environment, humans and non-human products are inextricable (Renn 2020), making it impossible to distinguish what was originally present from what humanity created. The city serves as a space for bodies encompassing more than just humans; the anthropogenic environment represents a complex interplay of material, human, and non-human bodies with varying positionalities and experiences. Therefore, in the context briefly described, the city is the place that best represents and initiates the shift toward new forms of inhabiting and acknowledging the world. Moving beyond an individual perspective, both subjective and relevant to a specific social body, the aim is to reconsider how inhabiting can be understood, including the mutual influences of human and non-human dwelling bodies. Embracing this paradigm of thought, the consciousness of affecting and being affected, the transition from *immaterial collectives* (new forms of common knowledge) to material collectives (common space) is what will be analysed (Grosz 2017). *What methods can be employed to comprehend and implement this concept? What conceptual and empirical tools are available to facilitate this transition?*

"ENVIRONMENTAL TEMPERATURE" AS AN OPERATIVE CONCEPT

Within this framework, it may be beneficial to utilise the concept of *environmental temperature* to render the proposed theoretical idea more immediate. From a scientific standpoint, temperature denotes the transfer of heat between in-contact bodies, occurring in a dynamic interaction with space or the environment (Fig.2). It is a category that indicates the specific motion characteristics of the particles of individual bodies, their unique properties of being, and their distinct contributions to the interaction.

The idea is to transcend the scientific perspective, which considers solely the exchange of heat between bodies and their subjective perception, and to incorporate in the definition the realm of feelings, the attribution of meaning, and various interpretations of this relationship. To unify nature, understood through physical heat exchange, and culture, which includes the significance a place holds for an individual or social group, the scientific concept of temperature evolves from a purely physical definition into a novel interpretative, theoretical and practical concept. It signifies a subjective or collective way of perceiving and attributing meaning rather than merely measuring heat variations situated on a scale. Acknowledging this shift, it is proposed to discuss *environmental temperature*, clarifying its meaning in contrast to the scientific definition. This term encompasses the range of meanings attributed to a place by a social body (interpreted as a network of perspectives) or an individual, as well as how the specific location influences them, integrating nature and culture as components of the same environment (Descola 2005).

Why Temperature? In the scientific sense, temperature is a phenomenon that all humans can recognise from a shared experience: global warming, by definition, involves a change in temperature. To address the need for an epistemological transformation, the useful features of the concept of temperature are incorporated into the concept of *environmental temperature*, highlighting the relational dimension that humans experience as social and cultural beings. The underlying hypothesis associated with this concept aims to enhance the intuitiveness of accounting for the various aspects of the aforementioned body-centred paradigm. In other words,

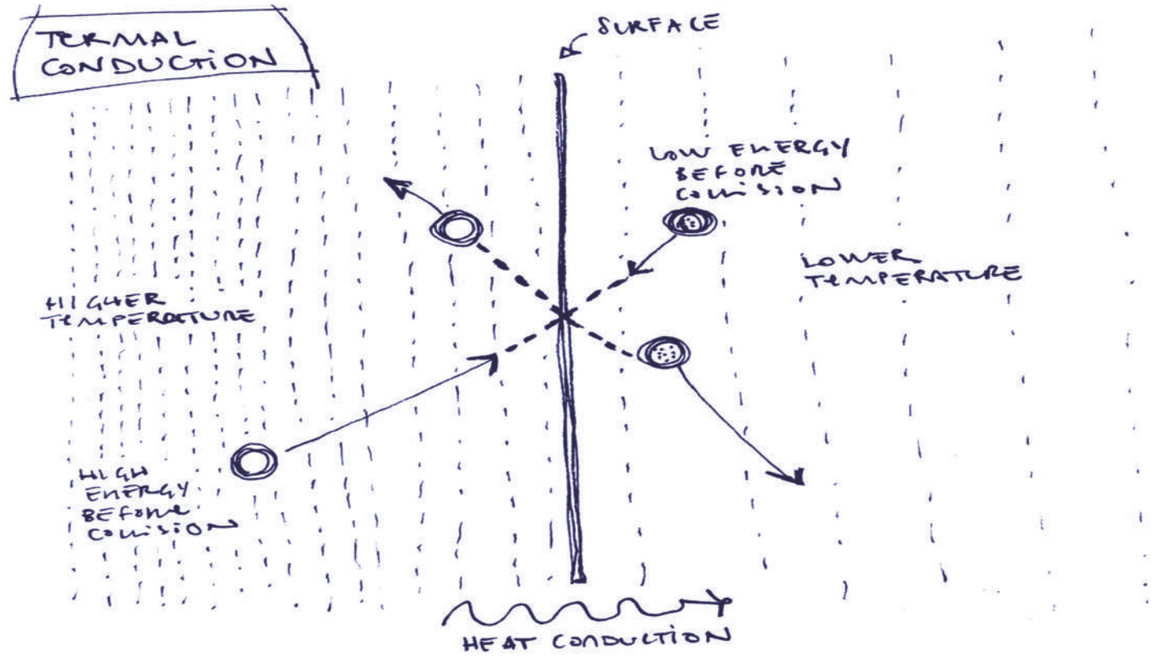

Fig.2 - How the exchange of heat works from a scientific perspective. Drawing by FM.

the attempt is to explore how a theoretical concept can be useful for addressing empirical issues, offering access to new narrative dimensions. Subsequently, these insights will be translated into practical applications.

As previously noted, several factors make temperature an interesting starting concept to enable this attempt:

- First, it is helpful to observe the mutual exchange characterising the body-space relationship, which includes both the human perspective and that of other beings. This involves interactions between bodies and those with the space or environment itself, which, from this perspective, becomes one of the bodies involved.

- Second, it can be regarded as a perceptual vision (singular or collective) with infinite potential nuances.

- Third, it is inherently linked to a relational way of behaving: at least when discussing temperature, two bodies must be involved.

- Finally, the fourth aspect is that it is inherently inclusive: everything, including humans, non-humans, and material bodies, possesses a temperature.

From this perspective, all spaces or environments can be seen as bodies of interaction among different actors, where these roles are interchangeable. The intention is to explore the various nuances of *environmental temperature* that arise from the interactions of a range of bodies, which both influence and are influenced. In this reasoning, space is seen as a dynamic organism that alters its characteristics based on the specific bodies – humans, non-humans, and materials – involved in its composition itself.

By implementing this concept, the yearning is to foster attunement to what is considered other than humans, which is essential for promoting an ethics of care. Distancing ourselves from projective attitudes and the application of human categories, this concept proposes an entry point to embrace the opacity (Glissant, 1990) that characterises how humanity can access the world (Borutti Heidmann 2012). By introducing a more intuitive, perceptive understanding of temperature, the objective is to challenge the accuracy of our measurement methods and highlight their inherent uncertainty. Recognising the impossibility of fully understanding what exists beyond ourselves (and perhaps ourselves), it becomes possible to recognise the projection process and aim to avoid it. In this context, redefining the notion of *environmental temperature* beyond its scientific significance seeks to expand its meaning and aspire to achieve the non-projective attunement described above (Morton 2018). *What does it mean to implement this concept? What are the consequences?*

Implementing the concept

To provide a practical example and clarify further, one could reference the work of renowned architect Philippe Rahm, which demonstrates the application of temperature in a manner quite different from what is stated in this paper. In his remarkable work, Rahm started with installations in public spaces and has now focused on architecture that can be viewed as temperature-responsive, examining the implications of temperature perception from a scientific perspective. By focusing on the "invisible" elements such as temperature, variations in humidity, light, and air movement,

he suggests that architecture should serve as an organic remedy that can be inhaled, savoured, and experienced in a natural way. In his "Domestic Astronomy" Project, Rahm designs an apartment based on *occupying an atmosphere* rather than merely a surface. The development of the apartment structure and function is vertical to leverage the natural heat distribution from the floor to the ceiling. As stated in the work description, the temperature difference inside a normally structured apartment – so to say, developed horizontally – "is absolutely useless and even becomes a problem today in the face of global warming"[14]. Therefore, each apartment space is specifically studied in a vertical development to serve a diverse function and temperature. For instance, the area where the inhabitants are meant to undress will be warmer than the sleeping area; therefore, the undressing room would be located near the ceiling and the sleeping room close to the floor. No longer inhabiting the atmosphere's surface, the apartment's various functions are dispersed, utilising the natural characteristics of temperature distribution, space, light, and air movement. This creates an ecosystem beneficial to humans that does not aim for a naturalistic purpose; rather, it derives from the centre of "artificial means". This paper suggests that this perspective only considers the human gaze, failing in the stated attempt: the accounting of how humankind affects the environment and how it is affected going out from the anthropomorphic standpoint. Bodies – both material, human and non-human – must be recognised in an ethics that seeks to attune and co-habit together.

To avoid this outcome, this text proposes that applying the *environmental temperature* perspective into practice makes redrawing the meaning of Commons in the urban context possible. The proposal advocates for adopting a new perspective – adding on the scientific meaning of temperature – without considering "use" as the initial point of reference. Instead, it aims to explore how spaces influence experiences and, conversely, to examine the various yet-to-be-revealed potentials for repurposing these spaces. The idea is to approach inhabiting from a different angle to create a diverging perceptual perspective (Ranciere 2010) that alters potential interactions with the environment, revealing new possible shared benefits, uses, and access points. In other words, the transition to new ways of inhabiting and understanding the world involves applying the notion of *environmental temperature* and exploring how it can be reinterpreted as an attuned world vision, as outlined by the body-centred paradigm in the context of Anthropocene. This is not just, then, considering how it is possible to design new architectures that utilise temperature and its features for human benefits, but also by turning this sentence upside down and perceiving spaces as other bodies might view them.

Methodologically, two steps must be followed, moving from immaterial to material collectives.

First, analysing the *environmental temperature* of a selected space aims to enhance the social body's awareness of the meaning attributed by that specific social body to that space (Fig.3).

- Second, stimulating these meanings through hands-on intervention to alter perspectives and generate new qualitative nuances and applications of the space. This involves inviting community actors to embrace diverse perspectives to connect human and non-human viewpoints (Fig.4). This approach to implementing the concept of environmental temperature addresses the previously mentioned need to create new and more attuned ways of inhabiting. In other words, implementing the theoretical aspects of temperature and its ecological implications facilitates a shift in perspective that promotes closer connections to non-human and material bodies, enabling the transition to a more attuned future existence. Moreover, these two described steps represent a new potential stage towards envisioning the meanings of common spaces (common knowledge, thus immaterial collective) and, consequently, creating new methods of commoning (embodied practices, hence material collective). Several questions now need answering. *What is meant by common spaces? What types of spaces are more suitable for applying the above-described methodology? What practices are useful for promoting what has been defined as a divergent perceptual perspective?*

Fig.3 - Ways of mapping the perception of a particular social body. It represents a mapping of the perceived commons in the rural areas of Manikappangu village, Tamil Nadu, India. A symbolic system was created to represent the different aspects of the inhabitants' perception. Drawings by Gioele Bertin. Mapping process by Gioele Bertin and FM.

What kind of spaces? Toward the definition of different categories.

In accordance with the argument, defining the concept of common space is now imperative. Following the words of the architect and activist Stavrides,

"Understood as distinct from public as well from private spaces, Common space emerged in the contemporary metropolis as sites open to public use in which, however, rules and forms of use do not depend upon and are not controlled by a prevailing authority. It is through practices of commoning, practices which define and produce goods and services to be shared, that certain city spaces are created as common spaces" (Stavrides 2016, p.2)

This definition of common spaces related to environmental temperature encompasses the notion that all social bodies and participants engaged in commoning practices have the opportunity to redefine a space's specific environmental temperature actively. Thus, we can speak of a community of practice (Wenger Mc Dermott Snyder 2002) – comprising part or all of a social body – that actively rewrites the meaning assigned to a space, along with its uses, benefits, and accessibility conditions. This can be understood as a new normativity emerging directly from the needs of bodies (always meant in the broader sense encompassing the environment and its features) that inhabit a space. Expanding upon Stavrides' definition, which focuses solely on contemporary metropolises and existing public spaces that transform into commons, a more inclusive and comprehensive perspective on what can be regarded as a potential common is essential. Introducing the notion of the Third Landscape, presented by designer Gilles Clément:

"By its very nature, the Third Landscape is a territory for the many species that cannot find a place elsewhere. The remaining species not included in the Third Landscape are represented by cultivated plants, farmed animals and beings whose existence depends on crops and livestock [...].

Faced with the oscillation of numbers, the Third Landscape positions itself as a territory of refuge, a passive situation and as a place of possible invention, an active situation [...].

In all circumstances, the Third Landscape can be seen as the part of our living space that is left to the unconscious. Depths where events gather and manifest themselves in an apparently undecided manner". (Clement 2002, p.9 p.14 p.31)

Given its strong connection to society and its role as a refuge for species that cannot find a place elsewhere, the Third Landscape seems to be a space worth considering when discussing the creation of new Commons, as it is inherently common. If a common space can be defined as one without rules and forms of use determined by a prevailing authority – accessible to the public – then implementing proactive measures to reclaim the potential of the Third Landscape is essential. As Clement states, there will always be a Third Landscape: "a living space deprived of Third Landscape would be like a mind deprived of the unconscious" (Clement 2002, p.31). This paper wants to examine one of the spaces that constitute the Third Landscape as the privileged one to enact the shift, allowing room for what is unruled, unknown, and a refuge for otherness.

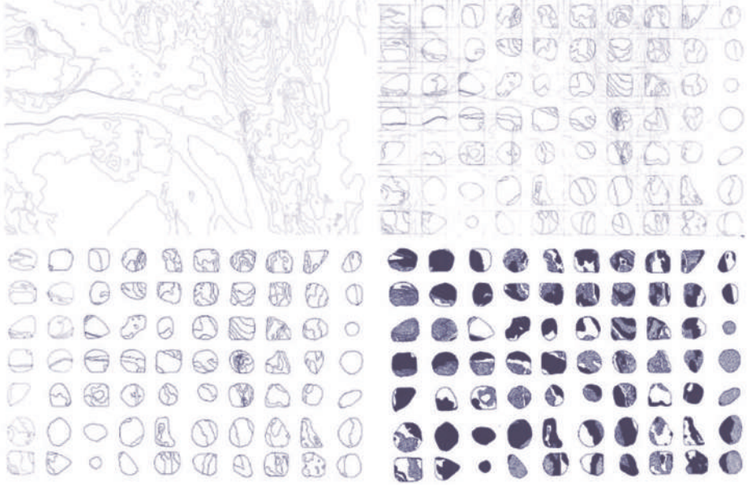

Fig.4 - Represents a divergent perceptual way of mapping a territory using non-human elements. Stones serve here as an interpretation tool beyond representation as a s ymbol of residues. Drawings by FM based on the topography of Umeå, Sweden. perception. Drawings by Gioele Bertin. Mapping process by Gioele Bertin and FM.

Considering the most suitable types, the proposal is to view residual spaces (Fig.5) as privileged areas for action. Following the definition given by Clement, residual spaces can be understood as leftovers, unseen spaces that inherently contain multiple undisclosed perspectives. By definition, every human intervention results in the creation of residues: "all spatial organisation generates a neglected [residual] space" (Clements 2022, p.7). In the urban environment, what is pertinent to this paper for reasons already discussed, residues "correspond to lands awaiting allocation or awaiting the implementation of projects that are subject to budgetary provisions or political decisions" (Clements 2022, p.8). A strong dynamism and rich diversity characterise them. The idea is to view residual spaces as a threshold between the past, present, and future, between spaces with a defined design or function. This concept aims to encompass not only abandoned spaces, urban voids or unbuilt areas but also unseen corners, undesigned squares, and unused benches and sidewalks, seeking to realise their potential and, by shifting perspectives, identify new possible uses.

But why are they better suited for applying the concept of environmental temperature? This is for three features.

- First, residual spaces are liminal to society and hold a potential multiplicity: they can be seen as bordering spaces that blur the lines between

culture and nature.

- Secondly, they connect to otherness, being inhabited by plants, animals, and material objects that have become dominant due to human inactivity.
- Lastly, they possess a specific environmental temperature linked to a past community: they remain excluded from the current cultural body yet are situated within the city.
- Considering all these characteristics, residual spaces appear to be a promising starting point for transitioning towards new, more ecological forms of use and reactivation.

The next paragraph will present practical examples that offer a detailed description of what is expressed here.

Art and Architecture as Producer of Commons

What kind of practices are possible to enact to use the potential of residual spaces and to promote a shift to more eco-logical ways of inhabiting? Returning to previous discussions, the implementation of environmental temperature is seen as a means to promote more attuned and, consequently, ecological ways of inhabiting. Residual spaces are identified as rich in potentialities, further facilitating the development of this attitude. Understanding which practices are at stake in applying this approach is now essential. Art and architectural practices are regarded as capable of shaping and reshaping the use of space based on the needs of the (temporary) interactive community. Viewing art and architecture as research tools enables space involvement through transitory interventions shaped by and into space. Following the two methodological steps introduced previously, the idea is to rely on art and architecture as sources to enact this shift (Nobile Melina 2024). Strictly related to what's material, empirical, and sensitive aspects, art can be viewed as the intuitive and immediate method of crafting new narratives for the world that humans seek.

Conversely, architecture serves as the practice that envisions and implements ways of inhabiting in response to the present (and future) needs. In recent years, there has been a growing movement linking these two disciplines, which are unified by the concept of Commons (Dodd 2020). Combining the various approaches of these disciplines enables the conception of temporary methods to inhabit and engage with space, challenging human perspectives and moving towards the attunement process discussed at the beginning of this paper. By making aware and provoking the social (and political) meanings attributed to a specific space, it seems possible to create new partitions of the sensible (Ranciere 2000) to enact the political and relational meaning of producing eco-centred environmental temperatures. The roots of the proposed approach can be found in the work of practitioners such as Ugo La Pietra and Maria Lai: working across art and architecture through performance and visual documentation, works

Fig.5 - Residual Space. Picture taken by FM.

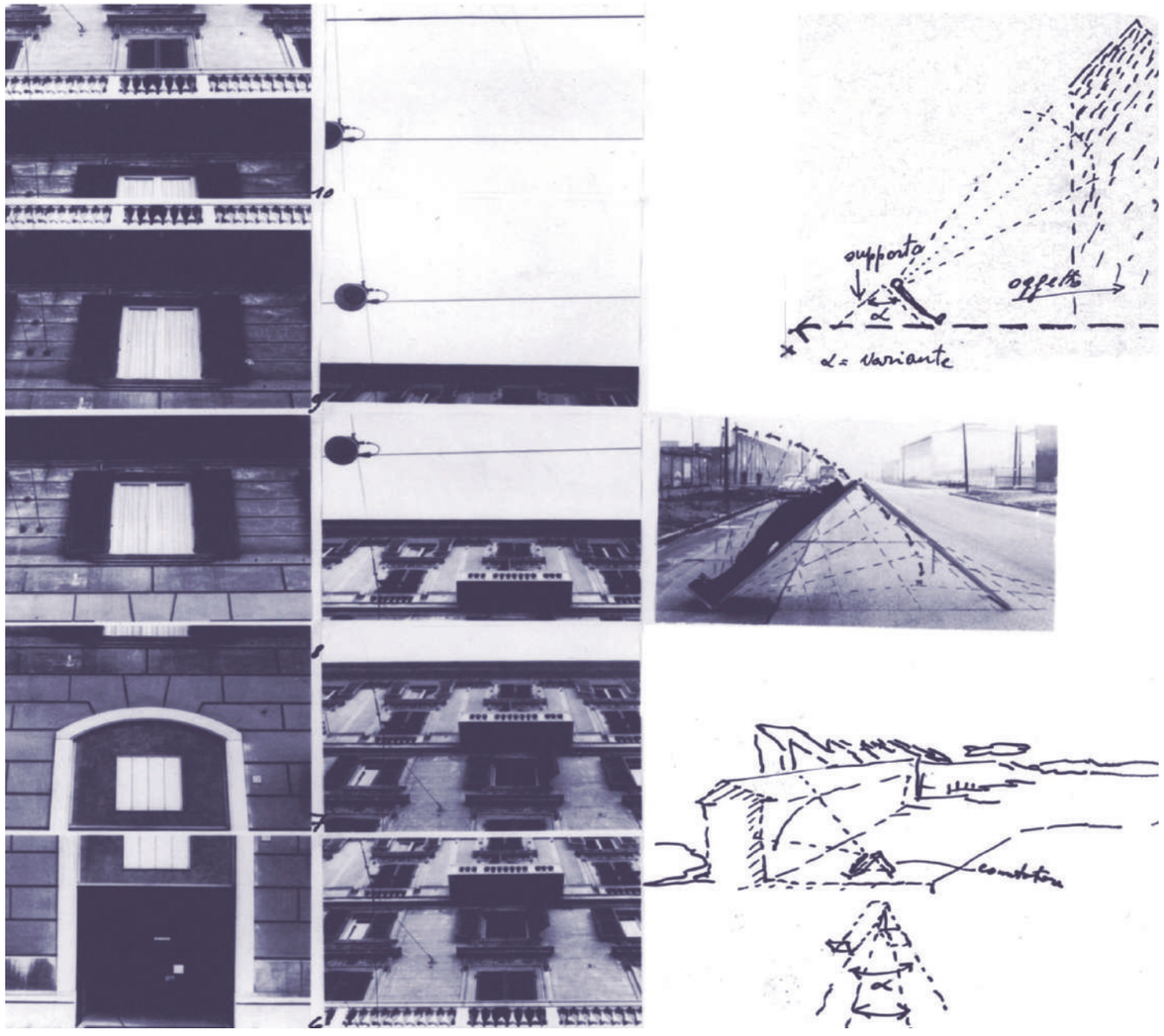

Fig.6 - Ugo La Pietra, IL Commutatore, 1970, courtesy Archivio Ugo la Pietra. This movable device is meant to slowly change the perspective of the public space: it allows a mechanical shift as a metaphor for the possible transformations that each inhabitant can operationalise.

of art such as "Per Oggi Basta (Commutatore)" (Fig.6) (La Pietra 1974), "La Riappropriazione della Città" (La Pietra 1977) or "Legarsi alla Montagna" (Lai 1981) are the basis of a movement that goes from art to architecture, translated in contemporary practices as transitory architectures (Area 183, Luglio Agosto 2022) and performative installations. Taking the means of working in public spaces with elements forgotten in daily life or regaining the right to use them, redefining its rules and laws (so creating a common space) with the community, those works were manifestations of a specific attitude invested with politics[15].

Certain examples of this practice that focus on the concept of residue, each carrying a distinct meaning, can be seen in the work of Sarah Ross, Izaskun Chinchilla, Cooking Sections and many art/architectural collectives working worldwide. Works of art such as "Body Configuration Testing Resistance" and "Archisuits" (Sarah Ross 2005-2006) investigate the various ways bodies can adapt to space, challenging the limits of structures that resist the human body or creating unconventional methods of inhabiting public spaces, fitting into or onto structures designed to exclude them. Benches, railings, and sills became new spaces for the use of the human body, producing new forms of interaction and access. The Architect Izaskun Chinchilla has created, within the Concentrico Festival (Logroño), a hundred carry-on chairs displaceable in different parts of the city and three urban halls to create temporary gathering spaces and to collect data on the last equipped areas (residual spaces) of the city from citizens' perspective. New common spaces are created with temporary structures to collect common perspectives of the use and non-use of the public. Cooking Sections, working with food art and Anthropocene influences on food systems, with the installation

"On Tidal Zones" (Cooking Sections 2017-2021), have created a structure meant for humans and more than humans being a table for performative dinners and at the same time a structure that can host algae and bivalves growing. Shedding light, not only onto a place that wasn't considered usable, but also on a significant issue such as intensive salmon farming, the installation interacts with the environment, working with tidal rhythms.

It is possible to say that all these artists engage with the concept of residuality in diverse ways, embracing a political notion of the artistic act. Sarah Ross, through her playful "Archisuits" and "Body Configuration Testing Resistance," highlights undisclosed uses of public spaces, interacting with elements that – from a human-centred anthropomorphic perspective – are typically overlooked for their intended purpose and instead serve as thresholds between bodies and space. Architect Izaskun Chinchilla fosters opportunities for collective knowledge, illuminating residual spaces through the intentional engagement of bodies and architectural structures physically occupying these areas. What is at stake is the new modalities to inhabit the public space, which are regaining the right to discuss their means through the voice and the body.

Cooking Sections addresses the political and social issues arising from Anthropocene, by creating convivial spaces for both humans and non-humans. The artistic installation of "Tidal Zones" in a residual area designated for exploitation and resource extraction redefines these spaces, transforming them into places for sharing food and discussing the consequences of how we inhabit the planet. Connecting with what was previously stated, they introduce new environmental shades, urging the bodies involved to redefine their ways of inhabiting spaces: by engaging with the potential of residual areas, new convivial encounters emerge as long as new commons.

TOWARD NEW FORMS OF COMMONING

It is possible to assert that all these structures play with environmental temperatures, creating new and ever-changing nuances based on the interactive bodies. All the works of art introduced follow the idea of reframing the possible uses and interactions with public space, exploring non-human perspectives through a more intuitive form of reflection. In an effort to reject imposed ways of behaving, they all create new normative spaces, whether to rediscover hidden functions, reactivate unseen areas, or experiment with forms of mutual interaction.

These practices propose what can be called a new form of spatial occupation, an environmental occupation, as an enduring and evolving practice. Not a fixed process, it allows for new connections with space and the environment to be created and redefined in the same location, offering infinite possibilities to revive what has been forgotten and envision new paths toward a more ecological future. As an ongoing phenomenon, these practices can offer a glimpse that leads to unforeseen theoretical and practical interpretations of inhabiting. Beginning with various conceptual collectives or, more appropriately, from different shades of environmental temperatures, it appears feasible to reconceptualise "space" as transformative and open to both shaping and being shaped. Inhabiting becomes a constant negotiation between all the bodies involved in the temperature exchange, experimenting with innovative means of being part of the environment and co-habitation with other bodies.

To conclude, this perspective can foster a notion of Commons intrinsic to both the body and the environment, connecting human, animal, and material bodies to rethink new and more eco-logical forms of inhabiting space. Temperature is not only definable as an environmental factor but also belongs to everyone (and to no one), symbolising the relational aspects of living. Each exchange results in both inner and outer modifications, akin to being in a pool where the water ripples with our movements, and our skin feels the water's texture (Bryant 2010). By utilising a simple concept like temperature and reexamining it from a body-centred perspective that includes the social dimension, we can grasp the experience of both affecting and being affected, which has become more prominent than ever due to the impacts of Anthropocene.

By broadening human perspectives through a more inclusive and comprehensive approach, one can recognise that the changes observed are common to humans and to all entities considered as bodies (material, human, and more-than-human). Discussing bodies rather than individuals, forces us to confront what is material and empirical: the widespread and shared feelings and the need to develop collective approaches to address both material and immaterial issues. When viewed as environmental, temperature is seen as a factor that can easily facilitate this complex theoretical and practical shift. It serves as a gimmick to enable the necessary change in perspective demanded by Anthropocene. A new way of behaving is necessary; the ethics emerging from this proposal focus on caring and more responsible, conscious behaviour.

As noted, the practices arising from this ethical approach must continually adapt to the changing dynamics of bodies, resulting in what has been termed an environmental occupation – a transitory way of engaging with space in a state of relational flux. This paper aims to provide a theoretical interpretation and propose new approaches for understanding empirical events while always recognising our physical bodies and acknowledging how we are all bodies that affect and are affected.

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NOTES

1. The definite article should be avoided when considering the ongoing debate about the origins of this epoch, which is referred to as a phenomenon rather than an epoch. Paul Crutzen coined the term in 2000 and defined it as the epoch in which humans act at the level of geological forces. Several hypotheses have been proposed regarding its beginning in academia. Crutzen identifies it with the Industrial Revolution; others associate it with the Great Acceleration or, looking further back in time, with the invention of agriculture or fire.

2. The doctoral research is still ongoing and also the title might change. This paper is part of a wider cluster of philosophical and empirical reflections, on-field experiments, and active engagement in transdisciplinary approaches.

3. Here, the transition from the physical to the immaterial, from the corporeal to the virtual, underpins the statements made.

4. Peter K. Haff proposed the concept of the Technosphere, which seeks to describe the physical properties of a human-technological system that assumes a role akin to the biosphere or hydrosphere. In one of his articles Haff articulates why it is plausible to consider technology as a sphere, in other words, as an autonomous system over which humans exert no control (See: HAFF, P., Humans and Technology in the Anthropocene: Six Rules In: Anthropocene Review, Vol. 1 Issue. 2, August 2014, pp. 126-136). What this paper aims to convey is that the emergence of the virtualisation of many aspects of human living has illuminated what is material and corporeal. Specifically, the lechnosphere theory overlooks the physical force, the labour, and the corporeal effort involved in creating those machines, as well as the social and embodied reasons why certain technologies are built. Acknowledging how objects affect humans is essential to understanding how they affect them.

5. The philosophical reference originates from the opposition noted in German Idealism, articulated by Hegel between Geist and Natur (Spirit and Nature). Proponents of this movement examined their relationship, with Schelling uniquely asserting their inherent coexistence. The prevailing view sees Geist as transcending Nature, viewed as impure and corrupting, necessitating detachment from it.

6. This form of expression encompasses humans within nature, striving to transcend the divide between nature and culture distinction.

7. See note 1. For further exploration see: BONNEUIL, C., FRESSOZ, J-B., The Shock of the Anthropocene: The Heart, History and Us, London New York, Verso, 2016.

8. See note 2.

9. As the historian of science Jürgen Renn describes it, the Universal Rationality Paradigm relies on the idea of science as detached from other historical developments, independent, based on a philosophically neutral knowledge (neither good nor bad), and separated from social evolutions (Renn 2014). In this way of thinking, Rationality is a model that can be applied to all other knowledge domains. An accounting of the historicity of knowledge production, as embodied in a particular epoch and society, examining the empirical production of knowledge dimension.

10. The reference pertains to the morpholdgical interpretation proposed by several authors, including biologist Stefano Mancuso and philosopher Johan W. von Goethe (Goethe 1790). According to these theories, the morphology of bodies influences how humans perceive the world, projecting anthropomorphic categories of interpretation based on the anatomical and biological structure of the physical body.

11. Considering Pragmatism and Dewey's theorisation of the relational aspects of reality, experience shapes both the subject and its behaviour. The environment and the various features in which a subject is born are deeply intertwined: there is no independent (individual) subject.

12. The reference here is the lectures' collection on "Passive Synthesis", in which the philosopher was trying to grasp those reality aspects that are passively (and bodily) perceived

13. This text references the debate in epistemology concerning the opposition between internalisms and externalisms in doctrines. The internalist perspective in epistemology argues for the neutrality of science about socio-cultural dynamics. It is, at the same time, "hinged on an ideology of the speculative purity of science" (BADINO, M., IENNA, G., OMODEO, P.D 2022, p 54). Conversely, the externalist perspective proposes a system of equilibrium, where science, history, and society mutually reinforce one another, emphasising the influence of cultural and religious beliefs and, above all, the economic and social framework on the production of science.

14. See: http://www.philipperahm.com/data/projects/domesticastronomy/index.html

15. Here, the reference is the idea of partage du sensible (partition of the sensible) by the French philosopher Jacque Ranciere, which invests art with political meaning. By creating partitions of the sensible, art exercises what, by definition, is politics: defining who might access or not the space, what the inner rules and laws are, etc.

Exponential Space as a Fifth Urban Figure

Toward a Phenomenological Actualisation of Françoise Choay's Quadripartition

corpo
spazio
architettura
fenomenologia
tecnologia
body
space
architecture
phenomenology
technology

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Questo articolo esamina l'interazione tra corporeità umana, architettura e spazio urbano attraverso una lente fenomenologica. Integrando l'ontologia wittgensteiniana della realtà come "sistema di fatti strutturati" (1922) con i concetti spaziali kantiani mediati dalla fenomenologia husserliana, identifica il corpo come mediatore primario dell'intenzionalità spaziale, radicato tanto nella cognizione estetico-sensuale (Formaggio, 1996) quanto nella finitudine esistenziale (Casey, 1996). Il framework teorico unisce contributi architettonici fondamentali – dal "vuoto racchiuso" di *Geoffrey* Scott (1914) alle masse spaziali di *Henri* Focillon (1934) – con le recenti acquisizioni neuroscientifiche sulla cognizione incarnata (Gallese in Mallgrave, 2015). Attraverso una rilettura critica delle "quattro figure di spazi urbani" definiti da Françoise Choay negli anni '70, lo studio propone lo "Spazio Esponenziale" come quinta categoria, risposta concettuale alle tecnologie esponenziali (Kotler, 2012) e al loro effetto trasformativo sulla percezione spaziale. Il modello avanzato risponde all'ibridazione digitale-fisica nell'architettura contemporanea, richiedendo nuovi strumenti teorici per interpretare le relazioni corpo-spazio-tecnologia. La revisione fenomenologica disvela infine una mutazione ontologica: le teorie spaziali tradizionali devono confrontarsi con inedite condizioni dell'essere in ambienti urbani saturi di tecnologia. Lo spazio esponenziale rappresenta così non un semplice ampliamento del sistema di Choay, ma una riconfigurazione dell'ontologia urbana stessa attraverso schemi cognitivi incarnati.

This article investigates the interplay between human corporeality, architecture, and urban space through phenomenological analysis. Integrating Wittgenstein's ontology of reality as a "system of structured facts" (1922) with Kant's spatial concepts via Husserl's phenomenology, it establishes the body as fundamental mediator of spatial intentionality, grounded in both aesthetic-sensual cognition (Formaggio, 1996) and existential finitude (Casey, 1996). The theoretical framework synthesizes seminal architectural theories – from Geoffrey Scott's "enclosed void" (1914) to Henri Focillon's spatial masses (1934) – with contemporary neuroscience on embodied cognition (Gallese via Mallgrave, 2015). Through critical engagement with urban theorists, the study proposes transcending Françoise Choay's quadripartite urban classification (1970s) by introducing "exponential space" as fifth typological category. This conceptual advancement responds to Kotler's exponential technologies (2012) and their paradigm-shifting impact on spatial perception. The proposed model addresses contemporary architecture's transformation through digital-physical hybridization, requiring new theoretical constructs for evolving body-space-technology relationships. This phenomenological revision ultimately reveals an ontological mutation – where classical spatial theories must adapt to fundamentally new conditions of being in technologically saturated urban environments. The exponential space paradigm thus offers not merely an addition to Choay's categories, but a reconceptualization of urban ontology itself through embodied cognitive frameworks.

TOWARD A PHILOSOPHY OF "BODILY INTUITIONS"

In his Tractatus Logico-Philosophicus (1922), Ludwig Wittgenstein maintained that reality could be described as an indivisible whole consisting of a "system of structured facts." Human artifacts participate in this reality through two fundamental elements: concrete "facts" and the "structure" that relates them. It is within the human-being/world relationship that the body, through experiences and "crises" (in Husserl's terms), develops its own subjective, corporeal, and inter-corporeal intentionality (Franzini, 1996, p. 13). The body anchors its vital essence in cognitive operations grounded in an "aesthetic-sensual" foundation, while existing in a state of finitude. In this context, the body assumes a dialogical value through which the experience of reality becomes consolidated. What Dino Formaggio (1996, pp. 13-14) defines as "the science of bodily intuitions" requires a carving out of its own conceptual space anew.

This necessitates examining the theoretical implications of widespread "exponential technologies" (Kotler & Diamandis, 2012), which demands a redefinition of the relationship between the human body and emerging totality. To frame the discourse on body-world relations through the concept of the *science of bodily intuitions* means accepting the apparent contradiction between *Science* and *Intuition*. This requires establishing a method that consciously navigates what Foucault (1966) termed the "interstices between epistemes" – those spaces of overlap, transition, or discord between different domains of knowledge in the human sciences. Such investigation entails examining states of *non-equilibrium* in the systems governing thought practices, revealing how knowledge becomes structured through both inclusions and exclusions. This unveils life's inherent complexity and its paradigmatic transformations. Aesthetics positions itself as an instrument for reconnecting *Science* and *Delight*, serving as a means for humanizing scientific inquiry. This approach doesn't diminish science's validity but expands its theoretical scope – not through rigid definitions or categories, but by cultivating a pragmatic sensibility that explores perceptual and productive experiences of sensitivity. We might call this a general theory of sensitivity encompassing both the human body and the body of art. This methodology doesn't advocate for a confused partiality within diversity, but rather establishes horizons spanning across knowledge domains. As these domains evolve their paradigms, historical parameters, and terminologies, they strive to reach the root of things to arrive at the source of meaning, where original operations render the body a matrix of meaning, communication, and projective possibilities.

This alternative framework allows humans to test their finitude to derive the potential for *pre-categorical dialogue*. Here, the body-space relationship becomes a project of *engagement* in the broadest sense – referring to individuals' capacity to transcend abstract separations between mind and body, action and thought, thereby progressing toward authentic knowledge. Today, this perspective demands revising the concept of corporeality in light of contemporary paradigm shifts. Modern individuals now face the challenge of testing their *finitude*, creating new categories, drawing from these the potential to reshape the dialogue between body, space, and *hyper-technology*. From this standpoint, bodily intuition constitutes the capacity to anticipate and respond to stimuli in our increasingly interconnected, technology-mediated world. Technology, though frequently perceived as alienating, can in this context be understood as a "Medium" (McLuhan, 1964) – an extension of the body itself. Technological devices don't negate the body's role but rather amplify its ability to perceive and interact with both physical and virtual spaces it *inhabits*. Thus conceived, an aesthetics understood as *science* must be specified as knowledge liberated from objectivist residues and open to qualitative understanding inseparable from subjective intentionality, the body's own project, and intercorporeality. This is a science rooted not in abstract metaphysics or *psychological residues*, but in the life-world where the meaning of our existence and cognitive operations resides – a meaning always grounded in aesthetic-sensory experiences originating in the body. To be truly scientific, this must be analytically embraced within phenomenology's tradition of methodological rigor. Within this *philosophy of the body,* the *technologically prostheticized* body undergoes a paradigm shift that expands far beyond its traditional capacities.

While artificial, this expansion enhances *perceptual-sensory* capabilities and consequently *intuitive-operational* ones, leaving the body – though transformed – anchored to its original role as a *matrix of meaning,* now charged with confronting profound ongoing transformations. As Merleau-Ponty asserted in Phenomenology of Perception (1945, p. 108): "The body is our general medium for having a world" – the medium through which experience constructs itself. *This body-world* connection faces challenges when technological intervention amplifies corporeal capacities, extending them toward new forms of perception and action. In this context, new possibilities emerge, particularly during what Husserl (1936, pp. 17-23) called phases of "crisis." Yet to fully comprehend these possibilities, we must move beyond mere historical documentation (while acknowledging its importance) and open ourselves to what might be termed the *intersomatic sensible.* This requires transcending individual subjectivity to embrace intersubjectivity and the dynamic relationship between space and time. As Heidegger argues in Being and Time (1927, pp. 172-177; 374-382), our existence is intrinsically temporal and situated, and technology compels us to reconsider this relationship using new interpretive tools. Where philosophy intersects with science, and where cognitive psychology converges with phenomenology, the sense of time becomes intertwined with spatial and corporeal perception. The human brain integrates sensory inputs to create continuous representations of time and space (Nobre, 2006). This connection echoes Bergson's insight (1907, pp. 1-50) that time (durée) and space aren't separate entities but interconnected dimensions of human experience, rendered increasingly complex by technological transformations. Simultaneously, the technological amplification of corporeal capacities risks creating a *hypertrophy of augmented perception* that could overwhelm bodily intuition, creating perceptual bottlenecks. As McLuhan observes (1964, pp. 6-10), technological extensions amplify human capabilities while also imposing limitations, potentially creating imbalances between body and environment.

In this scenario, the gap between body and world risks exponential widening. This situation demands that human perception redefine itself, simultaneously questioning and reaffirming its centrality in processes of sensitive perception and action – particularly in highly technological and increasingly artificial contexts. The fundamental challenge remains preserving the body's capacity to function as a human "project" (Sartre, 1943, pp. 94-96) – an active participant in meaning construction, even within increasingly artificial networks of interaction. The observed phenomena demonstrate with particular clarity that highly anthropized environments – urban spaces specifically – constitute the primary locus for examining these transformative dynamics. Building upon Françoise Choay's seminal 1970s theoretical framework (Espacement: Figures of Urban Space in Time) and its four established categories: 1. Contact Space; 2. Scenic Space; 3. Circulation Space; 4. Connection Space, this study proposes the conceptual addition of a fifth category: 5. Exponential Space. This further conceptualization responds directly to spatial transformations induced by *exponential technologies* (Kotler, 2012) and their profound impact on perceptual paradigms. Phenomenological examination reveals this transformation's dual character. While corporeal finitude persists as the fundamental boundary of spatial experience – with embodied cognitive schemata continuing to mediate physical spatial interaction – the growing digital integration simultaneously introduces qualitative discontinuities that fundamentally reconfigure traditional parameters of urban habitability.

This dialectic between structural continuity and ontological innovation positions *Exponential Space* not as a simple categorical expansion, but rather as a substantive reconfiguration of urban ontology itself. The conceptual framework's epistemological significance lies in its capacity to transcend the *continuist-discontinuist* dichotomy. By proposing an integrative model that accounts for both enduring cognitive structures and emergent qualitative transformations, it addresses the *digital-physical* hybridization that characterizes Exponential Space. This demands new analytical methodologies to comprehend the complex *body-space-technology* relationships defining contemporary urban existence.

The advent of this spatial category necessitates critical reassessment of traditional interpretive paradigms, which must now engage with unprecedented existential conditions where technological saturation reconfigures spatial experience's fundamental parameters. The central theoretical challenge involves maintaining analytical sensitivity to both historical cognitive continuities and digital-induced discontinuities within a unified framework capable of addressing contemporary urban complexity in its totality.

BUILDING IS DWELLING, DWELLING IS BEING, BEING IS CARING

We need now to reconstruct a line of coherence that positions the contemporary situation within a historical and evolutionary process. This process considers the phases of a phenomenology of the body in its relationship with its purely physical and psychological components, as well as the anthropized space that contains and orients its experiences. The focus now is to understand how, why, and in what form humans "inhabit" the world. The notion of "dwelling," as Martin Heidegger presents it in his 1954 essay Bauen Wohnen Denken (Building, Dwelling, Thinking), contained in Vorträge und Aufsätze (1964) (Lectures and Essays), offers the key to this indissoluble bond. Thus, the interest is not in dwelling in itself, but in its essence as a decisive and essential trait of the human being in her – his relationship with the world.

The first clarification Heidegger (1964, pp. 96-99) offers is the following: " Dwelling, it seems to us, is achieved only through building. The latter, building, has the former, that is, dwelling, as its goal. However, not all buildings are dwellings. [...] Yet, even these types of constructions fall within the sphere of our dwelling. This sphere surpasses the realm of these constructions and, on the other hand, is not limited to dwellings." Heidegger first proposes a *cause-and-effect relationship*: "building" becomes indispensable for " dwelling." He then expands the discourse, noting that not all buildings are dwellings in themselves, but all buildings fall within the "sphere of our dwelling." Furthermore, this sphere "surpasses the realm of these constructions" themselves. What Heidegger presents is very similar to what is commonly defined as the "space of dwelling," referring not to a single building but to the anthropic ecosystem itself as the very place where life is expressed and where humans'

complex way of being in the world unfolds. Regarding this concept, and clarifying and expanding it further, Heidegger adds: "The way you are and I am, the way we humans are on the earth, is dwelling [...]. Dwelling appears in its full breadth when considering that dwelling lies in the essence of being human, understood as the mortal's sojourn on earth. But *on earth* already means *under the sky*. Both mean together *remaining before the divinities* (die Gottlichen) and imply a *belonging to the community of men*. There is an original unity in which the Four: earth and sky, the divinities and mortals, are one" (Heidegger 1964, pp. 96-99). It is in building-as-dwelling, then, that the key to humanity's way of being in the world can be traced. Through it, the relationships between the two systems can be understood. Another thinker, Leon Battista Alberti (1452), many years earlier, had identified in the connection between dwelling and building the very locus of the creation of the "human world." Françoise Choay (1986, p. 97) writes about the reasons that led Alberti to write his treatise on architecture: "De Re Aedificatoria is the result of amazement (before architectural achievements) and questioning (about their processes). Recognizing building as a fundamental activity led Alberti to ask – from which principles did it derive – and how could its elements be defined without being overwhelmed by the complexity of the problems raised by the infinite diversity of human activities." It is evident that for Alberti, the activity of building holds paradigmatic value; it, more than anything else, testifies to "the creative power of men because it best satisfies the demands of the three levels on which human activity operates: necessity, convenience, and aesthetic pleasure." Thus, in the very act of building, placed in Alberti's perspective, one can truly identify the minimal unit capable of uniting, in a single *creative/constructive* fact, elements that until then might have appeared dissociated (Podda 2018, p. 125). To proceed further with the argument, it is essential to clarify the etymological basis of the term *to build*, which can be traced back to the Latin aedes facere (to make a house). Aedes refers to the irregular Latin plural aedes-ium, meaning *a house*, with the significant clarification that in the singular aedis-is means *temple cell* or even *beehive cell*. The word *to dwell*, also derived from Latin, comes from *habitāre* (frequentative of habēre, to have), which in its proper sense means *to continue to have* (Podda 2018, p. 126). This fusion of the two concepts shows how the very act of *dwelling* is composed of two determined factors, systematically fused. It unites, through the axiom of a composite body, the constructive capacities of techné and poiesis (art and production) with the ability to care for something and someone, representing the protection of the intimacy of aith-os (the warmth of the hearth). Heidegger (1964, pp. 98-99) helps us better understand this reciprocal concept when he writes: "It is not that we dwell because we have built, but we build and have built because we dwell, that is, because we are as we are inhabitants. [...] Dwelling, being placed in peace, means remaining in the protection within what is kindred to us, which cares for everything in its essence. The fundamental trait of dwelling is this: to care." A *philosophy of bodily intuitions* cannot be separated from the concept of dwelling, and consequently from the concept of building, as one depends on the other, indissolubly linked in a unicum that defines the way we belong to the world and the world belongs to us – the very heart of the human experience on earth. If building is our way of dwelling, and dwelling is our way of caring and being cared for, our capacity for relating to the world is indeed filtered through our creative/constructive capacities. If this is true, the primary, preparatory, and foundational act can only be *perceptive/intuitive*. The pragmatic and evident goal is to fulfill all these expectations through the skilled use of techné and poiesis (art and production) in pursuit of aith-os (the warmth of the hearth) in a unity that, using L.B. Alberti's words, is able to satisfy our "necessities, convenience, and aesthetic pleasure" (Podda, 2018, p.125). This interpretation highlights the necessity of fully understanding how our body, with its perceptions, is the main actor in this action intrinsic to human nature and activity.

THINGS AND PLACES, PLACES AND SPACE, SPACE AND EXISTENTIAL SPACE

Moving further in this direction, we must now understand the type of relationship that exists between the constructed things that compose our habitable environment and what we identify as places. Consequently, we must also explore the connections between *places* and *space*. This step is essential to establish a substantive coherence between concepts that often appear disconnected or whose interdependence is not fully understood. While we cannot delve deeply into this topic here, it will suffice to introduce some essential principles that will aid in the development of subsequent reasoning. Kant's Copernican revolution in the study of space offers powerful tools to deconstruct the Cartesian and Euclidean view, paving the way for a phenomenological approach. In the Critique of Pure Reason (1787), Kant demolishes the concept of space as an objective entity: "Space does not represent any property of things in itself [...] it is nothing but the form of all the phenomena of the external senses" (Kant, 1787, A26/B42). This radical insight challenges Cartesian dualism, as *res extensa* is not an independent substance, but space emerges from the relation between subject and world: "We do not know things in themselves, but only their appearance according to our sensible forms" (Kant, 1787, Preface to the second edition). Furthermore, he overcomes Euclidean abstraction by demonstrating that geometric properties are not intrinsic qualities of reality: "Geometry synthesises a priori the properties of space as the form of our intuition" (Kant, 1787, B40). The necessity of geometric truths thus derives from the structure of subjectivity. This perspective lays the foundations for phenomenological analysis, in which space is understood as a *schema* that organises experience (Kant, 1787, B179) and spatiality as the intentional correlate of consciousness: "Time and space are forms of sensible intuition" (Kant, 1787, A22/B36). Husserl would develop these insights in The Crisis of the European Sciences (1936), showing how lived space (*Lebenswelt*) precedes mathematical space and how corporeality (*Leib*) is the organisational centre of spatiality. Spatial intentionality, always oriented and situated, thus becomes a foundational element of experience. Merleau-Ponty would radicalise this perspective in The Phenomenology of Perception (1945), stating that perceptual space is "the place where sense is constituted" (Merleau-Ponty, 1945, p. 243) and that primary spatiality arises from *embodied being-in-the-world*. "Space is not the theatre of things, but the medium through which things arrange themselves" (Merleau-Ponty, 1945, p. 254). This path shows how the Kantian turn dissolves the myth of absolute space, lays the foundation for an analysis of lived spatial experience, and opens up the phenomenology of spatial corporeality. With Heidegger (1964, pp. 102-103), who asks: "The bridge is a thing and only this. Only? There exist along the river numerous spaces that can be occupied by something. One of these becomes, at some point, a place, and this by virtue of the bridge. Thus, the bridge does not simply sit in a preexisting place; rather, the place comes into being only because of the bridge." In this brief passage, Heidegger relates the terms we previously discussed – *building/dwelling* – and develope the third element necessary for our analysis: the concept of *space* that we address before via Kant. He begins with the bridge as a *constructed thing*. The bridge exists in a space (along the river), and the connection between the bridge and space determines the *place*, which in itself is an expression of dwelling. Heidegger also questions the relationship between *place* and *space* and, consequently, the connection between *humans* and *space*. In addressing these questions, he distinguishes between the concept of space as extension (*extensio*), reducible algebraically to three dimensions – height, width, and depth – and space (*spatium*) in its proper sense, which represents an interval between two concrete points, measurable as a distance. This type of space is particular, as it determines *proximity* or distance between people and things. Thus, space now takes on a significance, once again rooted in corporeality, and adopts terminology that is not abstract but concrete, tied to the body and the relationship between humans and the world. Building on these premises, Christian Norberg-Schulz offers a detailed analysis of the relationship between humans and space, defining this type of space as "existential space." (1971). Existential space, Schulz (1982, p. 25) writes, is: "A relatively stable system of perceptual schemes or "images" derived from the environment. As a generalization drawn from the analogies of many phenomena, it has an objective character." Schulz arrives at this conclusion through studies conducted by Jean Piaget on the modes of learning and perception in children, particularly in The Child's Construction of Reality (London, 1955). From this, Schulz derives key references for understanding the elementary structures that govern the awareness and mastery of environmental characteristics, such as landscapes, urban environments, buildings, and physical things in general. A crucial concept here is *topology*, which, as Schulz explains: "Does not deal with distances as quantitative distances, such as lengths, angles, or areas, but is based on relationships of proximity, separation, succession, enclosure (*inside-outside*), and continuity. [...] Topological schemes are not abstract but tied to the things themselves." In clear alignment with Heidegger's earlier ideas, Schulz also argues that the value of space does not lie *in itself* but in the relationships between the objects it contains, positioned in specific places and reciprocal relationships. Schulz (1971, p. 9) further states: "Man's interest in space has existential roots. It arises from the need to grasp vital relationships in the surrounding environment and to confer meaning and order to events and actions. The individual essentially orients themselves toward objects, adapting physiologically and technologically to physical entities, interacting with others, and grasping abstract realities or meanings transmitted by various languages for communication. [...] Most actions include a spatial dimension, as the distribution of orienting objects falls into classifications such as internal-external, far-near, separation-union, continuity-discontinuity. [...] To develop intentions, the individual must understand spatial relationships and unify them into a concept of space." It becomes evident that the issue of spatial experience, as perceived by humans in their environment, is a complex process involving numerous variables, both general and individual. This results in a space that is neither isotropic nor homogeneous (Cartesian) but rather a *space* as a sum of objects, *schemes* (Piaget, 1950, p. 8), and individual perceptions, which Schulz (1971, p. 11) describes as: "The sum of four-dimensional spatio-temporal events." The concept of *existential space* described by Schulz helps refine the dichotomy between Space versus Place and the relationship between *Space/Constructed Thing* as introduced by Heidegger. Place, in these terms, emerges as a center of space, a *subjectively centered* concentration or densification of space, defined by constructed objects/things to which individuals assign intimate and concrete value, shaped by their personal worlds. For such individuals, the *place* assumes central significance. Schulz (1971, pp. 29-30) writes: "All centers are *places of action*, sites where particular activities occur or social relationships take place, such as the homes of relatives or friends. [...] Places are goals or focal points

where individuals experience significant events in their existence, but they are also starting points for orientation and mastery of the environment. "Mastery of the environment occurs through what Françoise Choay (2003, pp. 10-11) defines as: "The *competence to build*, a competence inscribed in our genetic heritage, in the same way as another human trait, the competence to speak." As previously mentioned, it is through this *competence* that humans appropriate and care for (Heidegger) their environment. In conclusion, it is through this competence that Cartesian space acquires the value of a specific place capable of accommodating human bodies and mediating interactions between body and body, between body and earth, between history, stories, and memories, and between past, present, and future generations (Choay, 2003, p. 11).

ARCHITECTURE AS THE ART OF SHAPED SPACE

Up to this point, we have structured our discussion by considering the elements that commonly define what we call space. We started with the idea of a philosophy of the body, what we have termed the *philosophy of sensitive intuition*. We then introduced some related concepts, starting with the concept of space and moving on to the similarities and differences with the concepts of *centre* and *place*. We realised that they do not exist if they are not linked to the activity of *building*, and we understood how it is precisely through this skill that the human being finds his dimension, his status, and can thus take root in his environment. Now, if it is true that "The limit is not the point at which a thing ends, but, as the Greeks knew, that from which a thing begins, its very essence" (Heidegger, 1964, pp. 102-103), a further shift forward is necessary. If *Space* is the *raw material*, what constitutes, in *de-limiting* it, the *true essence* of space is undoubtedly architecture. It is through it that the human being expresses her / himself, practising it concretely through *constructive competence*. In saying this, we now intend to approach our general theme from the specific perspective of the architectural problem and its phenomenology, understood as the discipline of space formation. As Bruno Zevi (1960, p. 17) writes in the introduction to his text Architettura in Nuce: "the etymological analysis of the term architecture does not help to identify the expressive essence of this art; rather, by highlighting its semantic plurivalence, it reflects conceptual uncertainties about the figure of the architect and about the very object of architectural historiography". Within this *semantic uncertainty*, Zevi adds: "A quick terminological overview shows that in various languages the words denoting the architect's activity now emphasise the practical-technical aspect, now the artistic aspect. Thus, numerous definitions of architecture were coined, through which an attempt was made to define more precisely the very heart of the discipline ", as Luigi Moretti wrote in the article Structures and sequences of spaces, published in the magazine Spazio n˚7 in 1953 (Podda, 2024. 182-191). Although Erich Brinkmann and August Schmarsow are two When tracing his genealogy, one must start with the current of thought that defined architecture as *Raumgestaltung* (space planning). Among the main protagonists, it is important to read a brief excerpt from the studies of Geoffrey Scott (1914, pp. 226-230), who wrote that "architecture gives us three-dimensional spaces in which we stand [...] our mind is by habit fixed on tangible matter, and we speak only of what stops our eye; matter is given form, space comes of itself. Space is *nothing*, a mere negation of the solid. And so, we come to neglect it. But however much we may neglect it, space acts upon us and can dominate our spirit". Scott not only clearly defines the value of the *enclosed void* as the centre of architectural action, but also anticipates the second component of it: *movement*. In this regard, a few years earlier, Henry Focillon stated (1934, p. 28): "By its essence and its purpose, the art of architecture takes place in real space, the space in which our walk moves, occupied by the activity of our body [...] We must not forget that 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 emphasises a series of concepts, starting with that of the body moving in space, *the space in which our walk moves; occupied by the activity of our body*, which constitutes the theoretical basis for establishing the concept of sequence and therefore of perception in architectural space-time. In the Italian cultural sphere, Bruno Zevi published the book Saper vedere l'architettura' in 1948, a fundamental historical-critical work, in which the author proposes a historiography of architecture based on the concept of interior space. Luigi Moretti in his article Discontinuity of Space in Caravaggio, in Spazio n˚5, 1951 (Podda, 2024 pp 109-115) finds the breaking point at a precise moment when he writes: starting from that late Renaissance in which one begins "out of a sort of biological fatigue, or rather out of the fatal pendular opposition of the spirit to worlds already conquered, to concentrate the density of reality on particular areas of the surface of representation and to empty others. " (Podda 2024, p. 115) As we have already mentioned in the introduction to this article, referring to the thought of L. Wittgenstein (1922), the real world appears to us in a full and coherent totality. Reality is an indissoluble whole, it is a system of structured facts. It is precisely the relationship between these two elements, *facts* and *structure*, that Moretti addresses, albeit in different terms. When Moretti uses the term *Discontinuity*, he is referring precisely to a specificity of the relationship between these two elements, basing his interpretation on the pictorial work of Caravaggio. It is here that he identifies the crisis of the *coherent unity of reality,* the moment in which, in his view, the totality of the work begins to disintegrate and to present gaps, voids, or we could say *silences*, in which the continuity of the *system of structured facts* is, so to speak, *deconstructed* or, rather, decomposed and dissected and then *thickened into clots of reality* separated by what we could call *voids of reality*. Moretti (1951) writes: "In a cut shoulder an entire human structure is summoned, in a short space a world is condensed"; there is clearly a very important conceptual passage here, which, as Moretti points out, upsets the homogeneity of space in Renaissance representation, raising it to an unprecedented level of exaltation and expressive power. Moretti, analysing Caravaggio's work, realises that his approach inscribes a very important paradigmatic leap in the history of figurative representation. In his works he finds a reality made up of "centralised compositional blocks that constitute the first figurative chains cut into a world devoid of interest, bordering on emptiness". (Podda, 2004 p. 116) The transition takes place by shifting the axis of the figurativeness of the work, from the *whole form* to its decomposition into *several parts*, thus implementing a *fracturing of reality*, which in turn determines a necessary subsequent recomposition according to new and unprecedented possible narrative syntaxes. Each part is an "extremely dense lump" of communicativeness, so much so that it can contain the communicative value of an entire form; the parts then resonate with each other and the entire composition comes to life. If Moretti identifies the fracture of space in Caravaggio, Giedion (p. 432), in his book Space, Time and Architecture, identifies Cubism as one of the moments in which the concept of the so-called *fourth dimension* was most vigorously clarified. He writes: "Cubism breaks with Renaissance perspective. It sees objects relatively: that is, from different points of view, none of which has exclusive authority. By dissecting objects, he sees them simultaneously from all sides, from above and below, from within and without. He moves around and inside his objects. To the three dimensions of the Renaissance, which have remained the constituent facts for so many centuries, a fourth dimension is thus added: time. [...] The presentation of objects from different points of view introduces a principle intimately linked to modern life: simultaneity. It is a chronological coincidence that Einstein began his famous work, Electrodynamik bewegter Körper (Electromagnetism of Moving Bodies), in 1905 with a precise definition of simultaneity". The movement of the body in vacuum allows us 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 she/he is not only the decoding instrument but also the motor and generator. With a body that teaches us to push, contract, strain and touch, we gather experiences that help us perceive features of the world. The body and its emotional underpinnings, both conscious and preconscious, are shaped by the world but also by the way we think and act. Zevi (1960, p 52) writes in this regard: "In architectural spaces, man does not merely observe an object from the outside or penetrate it with his soul and imagination; he is immersed in it, absorbed in a cosmos that operates through an infinite multiplicity of coordinates and the duration of their continuous rhythm". Rem Koolhaas, in his essay *Junkspace* (2001), uses the metaphor of a "spider's web without spiders" to describe contemporary space, characterised by fragmentation and an absence of intrinsic coherence. He states: "Junkspace is a web without a spider; although it is an architecture of the masses, each trajectory is strictly unique" (p. 36). This image highlights how modern spaces are often the result of globalised and impersonal forces, lacking a unifying design intent, leading to experiences of alienation and disorientation. In contrast, Henri Lefebvre, in The Production of Space (1905), argues that space is actively produced by human beings through their social interactions and everyday practices. In this perspective, human beings are like spiders weaving their webs, creating meaningful and lived spaces. Koolhaas' analysis emphasises how the production of spaces by anonymous, globalised forces leads to a loss of identity and orientation, while Lefebvre's view emphasises the importance of human action in creating environments that reflect social needs and values. This comparison highlights the tension between spaces generated by impersonal processes and those created through conscious human involvement, highlighting the implications that such modes of spatial production have on people's everyday experience. Turning to the present, as Harry Francis Mallgrave (2015, p.10) points out in his book The Empathy of Spaces, the knowledge gained in recent decades from cognitive neuroscience corroborates these insights and attributes a central role to "sensory-motor mechanisms ". We are thus, writes Mallgrave (2015, p. 10), "embodied beings in which mind and body, environment and culture are interconnected at different levels" and our experience of the world is predominantly situated in architectural space, where every perception "corresponds to a hedonic/affective experience that conditions our evaluations, even the seemingly *objective* and rational ones. " Gallese introduces the concept of " embodied simulation" to describe this process, which involves perceptual, experiential and imaginative phenomena that constitute our mode of openness to the world. (Ammannati-Gallese 2014, p.23-48)

THE CRISIS OF THE CITY, THE DISAPPEARANCE OF THE CONTACT SPACE

Moving from the general discourse on the multiple meanings and characteristics of space in its various expressions and architectural phenomena, we now reflect on the urban context. This analysis aims to assess, within the spatialities of urban history, the

Fig.1 - "The contact space" Saint Martin of Londres. Romanesque church and surrounding wall of the former priory. CHOAY, F. Spazi Urbani nel Tempo. Skira, 2003, p 23.

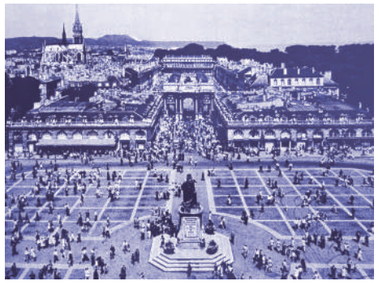

Fig.2 - "The scenic space" Nancy, Meurte et Moselle, Place Stanisls. View from the town hall on the 'Place del la Carrière' and the 'Place du Fer à Cheval'. CHOAY, F. Spazi Urbani nel Tempo. Skira, 2003, p 65.

Fig.3 - "The circulation space" Paris, view of the bulevard Saint Germain, part of Haussmann's first network of street engravings, 1855 CHOAY, F. Spazi Urbani nel Tempo. Skira, 2003, p 83.

value of what, using the terminology of the philosopher of art Dino Formaggio, has been termed "bodily intuitions." Through this perspective, we examine the shift in meaning from historical categories that traditionally define the *city* to an idea of the city that helps us understand the contemporary condition. A crucial reference for this analysis is Françoise Choay's book Espacements: Figures of Urban Spaces over Time, in the Italian version edited and translated by Ernesto d'Alfonso in 2003. The book defines, in a very effective way, the "Figures of Urban Spaces over Time" and their evolution. Although focused on the French city, its synthesis makes it applicable as a model for Western cities in general. Choay identifies an evolutionary sequence of urban space, first presented in her 1969 edition, covering a timeline from the Middle Ages to the 20th century. She defines four phases to codify the *mutations of urban space*. The Italian edition of the text from the early 2000s includes an additional contribution by Ernesto d'Alfonso, offering a perspective on contemporary conditions. However, over two decades later, these conditions have evolved further, prompting a need for updated terminology, potentially introducing a fifth phase. Choay's terminology provides a clear framework linking historical periods and the key concepts that define their urban characteristics. Her approach keeps together urban space, thresholds of evolution, and the human body, understood as a *sensitive body*. The discussion begins with the Medieval Urban Space, which Choay defines as "Space of Contact" (Fig.1). This term highlights the characteristics of this spatiality, where a tactile and concrete relationship between the body and space is fundamental. In this context, the city wall, which encloses and compacts the urban form, plays a crucial role. Choay writes that the closed and limited space "contributes to creating a sense of belonging and community in the inhabitants. [...] The walls materialize the singularity and unity of the city, opposing the surrounding countryside. [...] However, this assertion must be mitigated because the closure is not total. Since its origin, the Western city has also been an opening, an overflow, a suburb. [...] Inside the city (Medieval), the land is occupied according to the mode of contiguity and proximity. [...] Everything and everyone touch in the street, from one building to another" (Choay, 2003, pp. 18-22). The medieval city is thus a "microcosm," where space appeals to bodily perception and material sensitivity, unifying the body and urban space in an almost magical manner. The next phase is the Classical Urban Space, which Choay defines as "Scenic Space" (Fig.2). The transition from the medieval to the classical city marks a paradigmatic shift. Choay attributes this change to three main factors: technological, political, and intellectual. "The evolution of offensive weaponry makes the ancient walls ineffective [...] in terms of transport, the road imposes itself [...] on the political level [...] there is the triumph of the nation-state with the characteristic form of absolute monarchy. The Europe of capitals is born; the urban space that historians call classical or baroque is specifically that of capitals. [...] Finally, intellectual research plays a role that should not be minimized. Starting from the 15th century, Italian artists, Masaccio, Piero della Francesca, Brunelleschi, later imitated by subsequent generations, attempted to reorder the world through an abstract conception of space. It definitively aestheticizes the urban landscape and simultaneously prefigures the great scientific and philosophical break of the 17th century perpetrated by Galileo and Descartes. They are the ones who empty space of its magical qualities, reducing it to extension and number" (Choay, 2003, p. 49). An additional rupture occurs between the 19th and 20th centuries, which Choay defines as "Space of Circulation" (Fig.3). The Industrial Revolution and rapid demographic growth establish new urban paradigms. Choay describes how Haussmann's Paris (1853-1870) exemplifies this shift: "Haussmann understood that the ancient community was dead, that it was necessary to transform the urban agglomeration into an effective tool for production and consumption. For this, he builds what he calls a 'general circulation system.' [...] A street has as its sole reason for being the connection between two points" (Choay, 2003, pp. 78-79). In this phase, urban space is primarily structured for mobility, and communication is no longer based on bodily proximity but on technological advancements like the telegraph, telephone, cinema, and television (Choay, 2003, pp. 90-96). The fourth category identified by Choay is the "Space of Connection" (Fig.4), a contemporary paradigm that aligns with globalized urban conditions. She describes how "the perfection of transport systems reduces the distance between places and their ancient influence, allowing individuals almost planetary belonging. The development of telecommunications and mass media enables the homogeneous diffusion of information through a global space that promotes and establishes unity. [...] The space of connection surrounds us virtually" (Choay, 2003, p. 105). Although Choay acknowledges the persistence of traditional urban cores, she recognizes their integration into networked spatialities. The transition to digital space has profoundly transformed bodily experience and spatial perception. Manuel Castells introduces the concepts of "space of flows" and "space of places" to describe this evolution. The "space of flows" refers to digital networks and information exchanges that transcend physical localization, while the "space of places" pertains to interactions occurring within specific geographic contexts (Castells, 1996, p. 412). Paul Virilio expands on this by discussing the "evaporation of materiality," where increasing digitalization leads to a loss of tangibility in human interaction (Virilio, 1998, p. 67). Despite the increasing overlap of time and space, the human body remains a mediating element between the volatility of thought and the concreteness of the world in which thought is expressed. In this scenario, the concept of the transmediated self emerges, where individuals continuously navigate between the virtual and the real, experiencing an existential condition characterized by constant interaction with both digital and physical environments. This dual belonging requires a new understanding of dwelling, integrating bodily presence with digital identity.

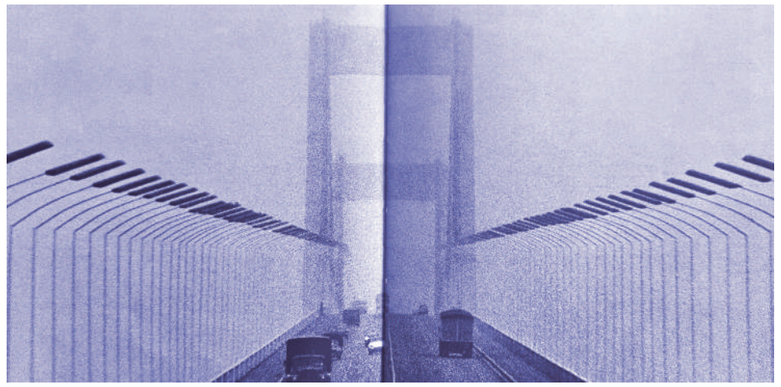

Fig.4 - "The connection space" Bordeaux, Gironde. Pont d'Aquitaine, suspended from a reinforced concrete framework, opened to traffic in 1968. CHOAY, F. Spazi Urbani nel Tempo. Skira, 2003, pp 106-107.

TOWARDS THE DECANONIZATION AND DIS-BELONGING

Until the 1970s, as Choay's studies illustrate, the "space of connection" could still adapt to previous urban paradigms (*Medieval/ Contact – Classical/Scenic – Industrial Revolution/Circulation*) through shifts in scale and successive integrations. Today, however, the new digital era and its "exponential technology" (Kotler, Diamandis 2012) connection space present the challenge of coexistence between new and old forms, particularly concerning the "space of contact," which plays a primary role in the body-urban space relationship. This progressive disconnection, now seemingly irreversible, drives cities and their inhabitants toward a true "decanonization" (a lack of a shared framework) of urban space, which consequently degenerates into what French philosopher Marcel Gauchet, in Un monde désenchanté (2004), terms a "pathology of dis-belonging." Urban space, in its material essence, passively participates in the crisis of its distinctive characteristics, with spaces of contact (public areas historically dedicated to encounter and exchange) losing their appeal to virtual spaces or confined private ones, such as large shopping centers. These spaces, only superficially public, serve as condensers of flows and connectors between virtual networks and real activities, though their core function revolves around the exchange of goods and, therefore, shopping. The origins of this process do not lie solely in the rise of thematic networks but in a convergence of long-active factors. R. Koolhaas (2001, p. 36) helps define this shift: "Shopping, with its frenetic demand for profitability, cannot be public: we are facing a paradigm shift where public and private transform into known and controlled versus residual and abandoned." He later identifies this phenomenon as Junkspace, explaining, "Junkspace is elusive, something we don't want to understand but must eventually, as it's likely the only space left. [...] Junkspace is what remains after modernization has run its course or, rather, the container in which modernization occurs." As Ernesto d'Alfonso observes, "The acceleration of speed, mass attendance, and functional accumulation demand a large-scale architectural type – a megastructure alien to its context" (d'Alfonso, Samsa, 2001, p. 284). This introduces the hybridization and mutation of typologies, driven by factors detached from local contexts and oriented toward large-scale urban morphotypes. The new urban entity, severed from its immediate environment, establishes privileged connections not with local surroundings but with extensive, infrastructure-rich

Fig.5 - "The exponential space" A group of young people who do not engage with space in its physical and tangible qualities.This reflects the weakening of physical, contact-based space in favor of the virtual realm of disconnection and non-belonging (Suzhou, 2024).

areas capable of integrating it into local, national, and global networks. Its extreme multi-scalar nature, both local and global, defines it – not through internationalism but atopia: a realm of boundless possibilities, unconstrained by ideology or rootedness, grounded in immateriality. This atopia has its critics. Vittorio Gregotti warns in Tre forme di architettura mancata: "Between globalized homogeneity and postmodern oddities, contemporary aesthetics' schizophrenia risks seriously undermining architecture, an ancient artistic practice" (Gregotti, 2002, p. 82). In this complex interaction between technology and urban space in its material and immaterial dimensions, we must consider an accelerating evolution in recent decades. Hyper-technological mass-connection systems, defined as exponential technologies or digital *hyper-connectivity*, have not only become mainstream but have also seen immense technological advancements. Storage and processing power have grown exponentially. As noted, a competition between the real and the virtual is unfolding. Concepts like virtual space and social networks are now integral to our lexicon. Real-world activities increasingly migrate online due to accessibility, cost-efficiency, speed, and simultaneity. Over 35 years ago, Foucault introduced the concept of the "epoch of simultaneity." Yet, despite the virtual's dominance, architecture's end-user remains the corporeal human being. Recognizing this, architects must address the dual network of real and virtual systems, leveraging contemporary technological standards. The mass digital network challenges traditional notions of control, introducing a collective hyper-subject, as Mario Costa describes: "A community of minds and computers working together on tasks where the individual self is removed" (Costa, 2012, p. 84). Alongside this mastery enabled by vast storage and processing capabilities, urban unity erodes. Rapid changes disrupt the stratification and sedimentation essential for urban processes, replacing coherent rules with fragmented, abstract experiences. Architecture is increasingly called upon to provide solutions incorporating technological and media prostheses, particularly those arising from pervasive digital networks, reflecting the series of changesstill unfolding. We are gradually advancing into the domain of mediated virtual presence, which rivals corporeal presence. While this transformation appears inevitable, it demands an increasing understanding of technological processes to operate with intentionality. As Alberti stated in De re aedificatoria: "Recognizing construction as a fundamental activity compels us to ask: from what principles does it originate, and how can its elements be defined amidst the infinite diversity of human endeavors?" In light of these developments, exponential connectivity technologies now constitute an essential "material" for the new fifth paradigm of urban space: "exponential space" (Fig.5), where the impermanence of the body and physical contact is diminished or even negated. At this juncture, space undergoes a transformation that transcends the mere digitization of places, generating an expanded, mediated, and alternating corporeality through an exponential oscillation between physicality and intercorporeality.

Though the body, in its finitude, persists in its vital "aesthetic-sensual" essence, it is here disempowered in its role as a consolidator of reality's experiential dimension. What Dino Formaggio (1996, pp. 13–14) terms the "science of bodily intuitions" necessitates carving out a new conceptual space. *Exponential space*, proposed here as the *fifth category* emerges as an evolution from a *space of contact to a space of connection*, and finally to a *prosthetic-multiple space*. Acknowledging its hybrid nature, characterized by escalating tensions between presence and absence, embodiment and virtualization, its evolution aligns with the accelerated transformations of cognitive and sensory experiences. This is not a mere shift in scale but a paradigmatic mutation that challenges the *foundational principles* of spatial perception. In this context, Henri Bergson's notion of *duration* (1907) regains relevance, as virtual simultaneity fractures temporal linearity. Similarly, Vittorio Gallese's studies on *embodied simulation* (2005) emphasize how neurobiological mechanisms of perception are reshaped by digitally mediated realities, where the physical environment ceases to be the primary reference for sensorimotor experiences. Architecture must thus rethink its role within a framework where the built environment is no longer the sole medium through which space is experienced. *Exponential space*, in its current state, is characterized by fluidity, dematerialization, fragmentation (Fig.6). It no longer adheres to classical principles of spatial composition but follows the logic of networks, flows, and instantaneous interactions. A city conceived under these premises becomes less a place of permanence than a transient landscape – an ephemeral node within a continuous flow of information and relationships. In this sense, the future city is not static but perpetually reconfiguring itself, challenging architects and urban planners to redefine their tools, methodologies, and theoretical approaches to space.

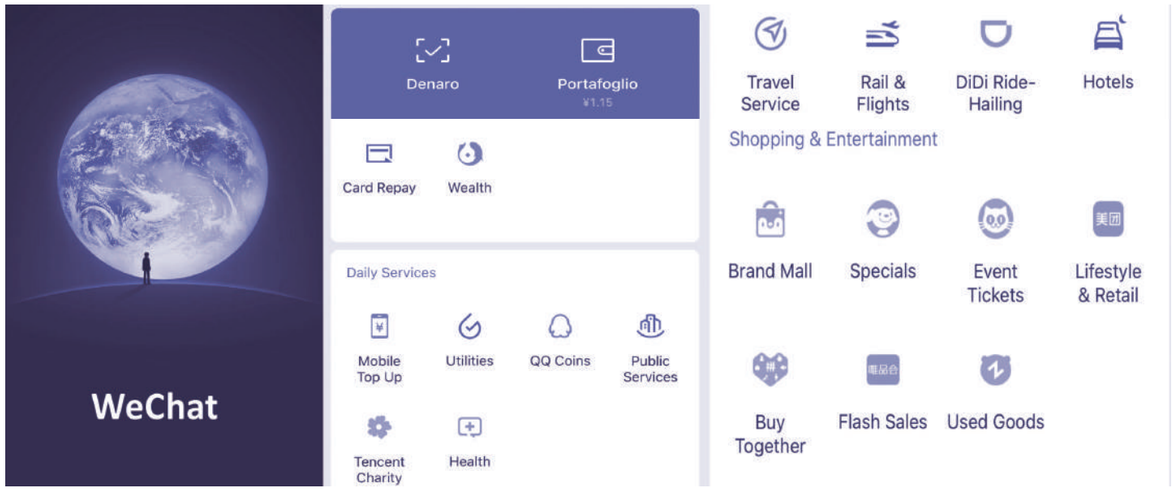

Fig.6 - "exponential space platforms" Screens related to the Chinese WeChat platform. The platform lies at the core of economic, social, and urban spatial dynamics in contemporary China. Through it, users can access a wide range of services: mobility, entertainment, healthcare, shopping, events, lifestyle, payments, and more. WeChat embodies the primary interface between "individuals and the world" in China. Photo by the author (Suzhou, China, 2024).

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Products, Atmospheres and Interactions

Relationship between the physical and phenomenological bodies and Light Art

light art
fenomenología
script
performance
atmósferas
light art
phenomenology
script
performance
atmospheres

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Las obras de Light Art integran características del mundo virtual en el espacio físico. Según la fenomenología, todo lo que percibimos se siente real para nuestro cerebro, haciendo que estas instalaciones se experimenten como reales. Bruno Latour introdujo el concepto de "script" para describir las instrucciones de comportamiento que nos imponen las tecnologías, y las obras de Light Art nos inducen a comportarnos de formas específicas según su naturaleza. Esto genera diversas experiencias dependiendo de la obra. Este estudio analiza varias instalaciones de Light Art, considerando su interacción con los cuerpos físicos y fenomenológicos. A partir de ello, se propone una categorización tripartita según la relación entre el arte y el cuerpo: productos, atmósferas e interacciones. Esta conexión entre cuerpo y arte puede ser un elemento transformador en los espacios culturales y urbanos contemporáneos.

Light Art integrates characteristics of the virtual world into physical space. According to phenomenology, everything we perceive feels real to our brain, making these installations experienced as real. Bruno Latour introduced the concept of "script" to describe the behavioral instructions imposed on us by technologies. Light Art installations lead us to behave in specific ways depending on their nature. This generates diverse experiences based on the particular piece. This study analyses several Light Art installations, focusing on their interaction with physical and phenomenological bodies. Based on this, a tripartite categorization is proposed according to the relationship between art and the body: products, atmospheres, and interactions. This connection between body and art can serve as a transformative element in contemporary cultural and urban spaces.

INTRODUCTION

Since the late twentieth century, we have witnessed the exponential growth of artificial light as a tool and a material to conceive installations aimed at reshaping the viewer's perception. Owing to its material properties, artificial light serves as a medium that bridges tangible and digital architectures, enabling the emergence of the immaterial within built space. This approach leads to the understanding of architectural space as a medium capable of being theatricalized through light, generating emotions and perceptions in the viewer (Ramírez Valenzuela 2014). Light Art creations are fundamental in generating these intangible realities, representing an extreme illustration of perceptual modification. The works of Light Art fall within the realm of phenomenological experience, being "environments that confuse the actual with the virtual or allow us to feel feelings that are hardly our own yet interpellate us nonetheless" (Foster 2013, xi-xii).

These installations seek to transform the observer into the artwork since it is through the viewers' subconscious that the work acquires meaning. Therefore, the work of art needs the bodies that interact with it to exist, because it exists through its interpretation. After the interpretation, the work of art becomes a reality for the observing subjects, who will act according to their new, perceived reality. These installations blur the boundaries between the physical and real worlds, and the virtual and phenomenological, placing the virtual within the real in opposition to the traditional dichotomy. 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, 319). Although phenomenology, especially in Merleau-Ponty's thought, challenges the dualism between mind and body, in this research the distinction between the physical body and the phenomenological body is used as an analytical tool to describe different modes of embodied experience in Light Art installations. Rather than assuming an ontological separation, this distinction allows us to trace how artworks affect perception, agency, and presence in different ways.

Light Art installations served both as aesthetic experiences and experiments on the boundaries of our perception to explore the body's reactions under different stimuli. Moreover, these reactions produced through the phenomenological body contribute to altering the behavior of physical bodies in space. Bruno Latour grouped under the term "script" the 'built-in' prescriptions of technologies over humans (Latour 1992). The concept of the "script" explains that the non-human prescribes a behavior in the human as if it carries implicit instructions on how we should relate to them or in their presence. Under this precept, the non-human, in this case, the light, prescribes a behavior in the body that finds it. Contemplating, approaching, sitting, moving, relaxing or touching are acts that are part of this "script". The observing subject performs because it is what it has to do in the presence of the work of art, even if nobody tells the observers what they have to do. Therefore, there will be installations that invite the bodies to become more performative than others to the point that the observers themselves are not necessarily aware that they are performing (Duncan 1995, 1-2). The way a curator sets up an exhibition, and the way people move through it, situates the artworks. This placement determines how the public experiences the art. By looking at this "choreography", we develop a more robust theory of meaning-making that goes beyond cultural sociology's exclusive focus on how the audience's cognitive presuppositions inform and constrain the interpretation of cultural objects. (Griswold et al, 2013). To benefit from these dynamics, Light Art installations usually deny a main or ideal point of view from which to observe the installation. This way, the moving position and the active functionality of the body are encouraged to the detriment of the static and passive spectator (Bishop 2005, 13)

Lighting designers and artists must foresee the behaviors and emotions that their works will generate. To do so, they require a shared visual vocabulary that resonates 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 behavior of visitors who confront the artworks. Not all sources and ways of using lighting get the same results, but they all get some result.

This research analyzes a series of Light Art installations in terms of their relationship with the observant bodies. The installations have been chosen to represent different dynamics between bodies and light. Those analyses are based on photographs of the works. In this way, the research seeks to understand how the material and immaterial conditioning factors that create the script of these installations affect the behaviors of the bodies. Subsequently, graphic analyses of the bodies' movement around the installation have been made to see how people interacted with them. The results are presented in a division of three categories that serve as a conceptual framework for the relationship between the body and the installation: products, atmospheres and interactions (Fig.1).

The first category is the products, defined as installations where the relationship between the body and the work of art is that of two separate entities. The body is passive in front of the installation and is separated from it. It doesn't exist an alteration of the body or the installation. The second one is the atmospheres, defined as installations where the body is immersed in the work of art and becomes part of it. The atmospheres seek to envelop that body as part of the work itself creating a relationship of co-dependency: the art exists by itself and alters the phenomenological body while the body, by its presence, participation, or interpretation, completes the installation.

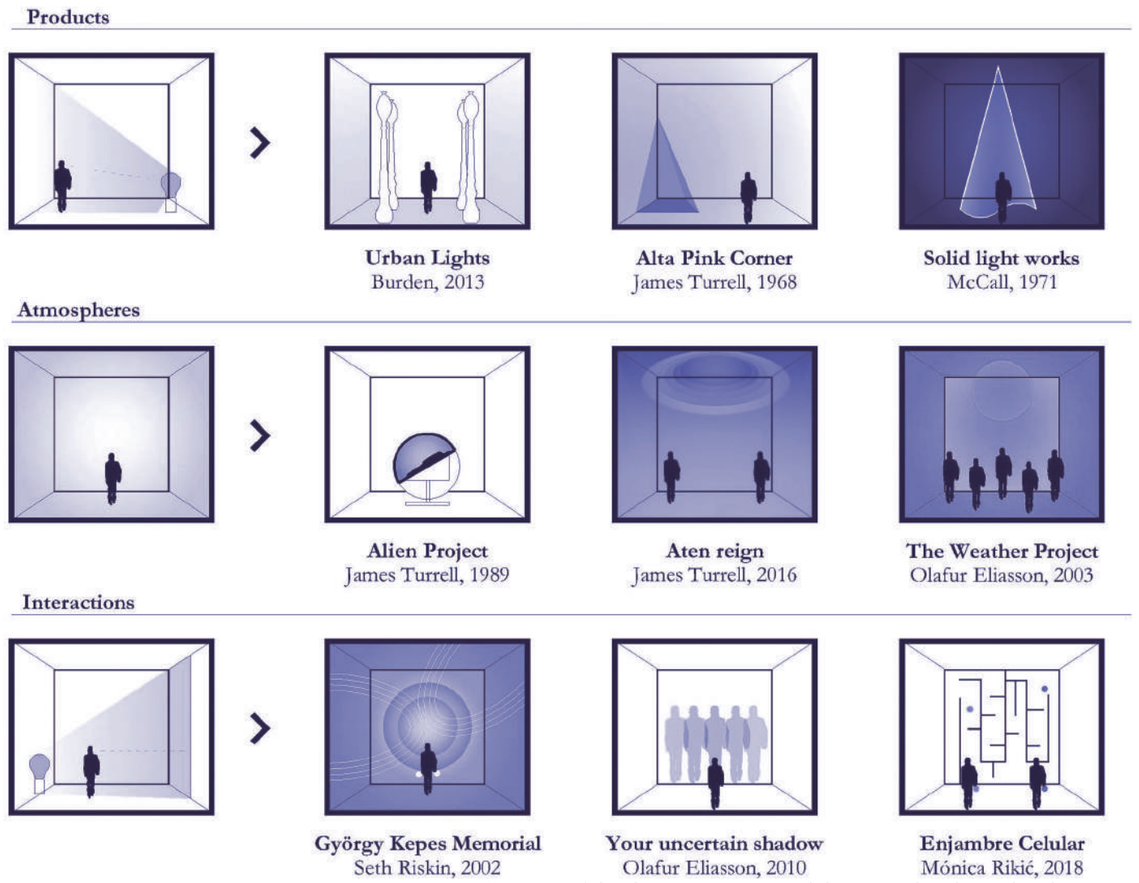

Fig.1 - Diagram of the three categories and the examples showed in the paper.

The third category is the interactions, defined as installations that require the performance of the physical body for their existence. In them, the installation is transformed and created through the physical body and its movement. Therefore, interactions are dependent on the bodies and transform the observer into a creator who performs under the script of the installation.

PRODUCTS

This first category is inspired by Dan Flavin's work. He considered that his sculptures made with fluorescent lights were "modern technological fetishes"[1]. The artist related his work to the iconography of Russian religious art, and by relating his pieces to fetishes, he highlighted the separate condition between the observing body and the observed object. As fetishes, the spectator looks at them from a distance, not approaching or engaging in any kind of physical interaction with them. The relationship sought is that of a body subordinated to an object that has the power and rules the scene.

This total separation between the object and the subject is what formulates the product category. Furthermore, inside this category, we can determine two types of products: material and immaterial. While the material ones use visible luminaires that create the installation, increasing the difference and opposition between body and object, the art in the immaterial ones is the visible results of the projected light, which the body can walk through to test its solidity. Flavin's installations exist in the material realm, but there are other installations, like James Turrell's Light Projections – Afrum (1967), or Alta Pink Corner (1968)–, that are objects that only exist in the virtual reality – a flat image perceived as 3-dimensional due to viewers psychological and perceptual need to pull the known form up into three-dimensional solidity (Butterfield 1993, 71). The differentiation between material or immaterial products may or may not have any direct implication on the relationship between the physical body and the artwork, but it has an impact on the phenomenological body. It is through the phenomenological

body that the light achieves its solid appearance, on which the installation relies, so it is through the perception of the observer that the installation becomes real.

Urban Lights (2013)

One example of the material products is Urban Lights (Burden, 2013) installation located outside LACMA museum in Los Angeles (Fig.2). The installation consists of 202 authentic cast-iron lamps with 16 different designs from Los Angeles that date from 1920s and '30s, all of them collected by the author of the installation, and among which passers-by can wander (Vankin 2018). The work invites the viewer to enter inside, transforming the public square where it is installed into a super-illuminated hypostyle space that can provide a sense of security, privacy and enchantment. According to Burden, the sculpture transforms itself into "a building with a roof of light." Burden says that street lamps like these were symbols of a civilized and sophisticated city – safe after dark and beautiful to behold (Burden, 2013). In Western cultures, the presence of light in public space is directly associated with safety while dark areas at night are associated with crime and illicit activities – even if this association is not as direct or true nowadays. In this installation, the viewer becomes an active being but does not have to alter the nature of the installation. Visitors walk around the safe space that becomes the hypostyle plaza. They move around and not just in the side that faces the main street – even if that is the most populated spot.

This installation is a variation of Dan Flavin's attitude of worship from the outside, as the viewer can interact with the work becoming closer to it. In opposition to the fetishist and sacred idea that separates the object – or saint – from the person, Burden's installation creates a sacred space to gather in and also expresses the welcoming idea through familiar lamps – ones that can be found in other cities – creating a relaxing atmosphere.

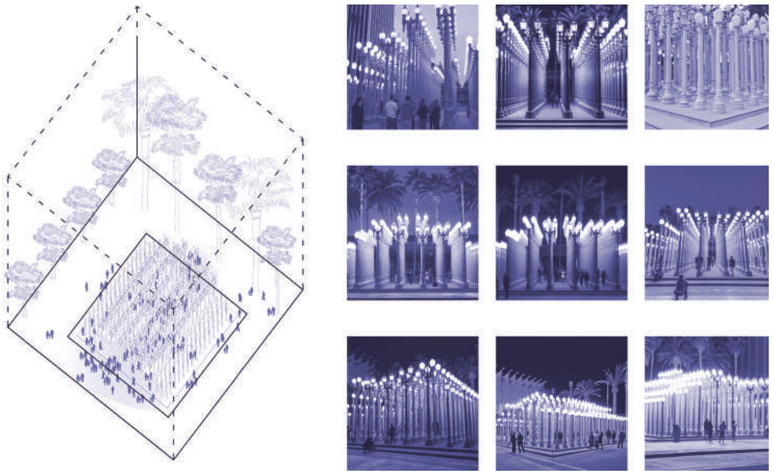

Fig.2 - Axonometric diagram of Urban Lights (Burden, 2013) based on photos of the installation. Own elaboration.

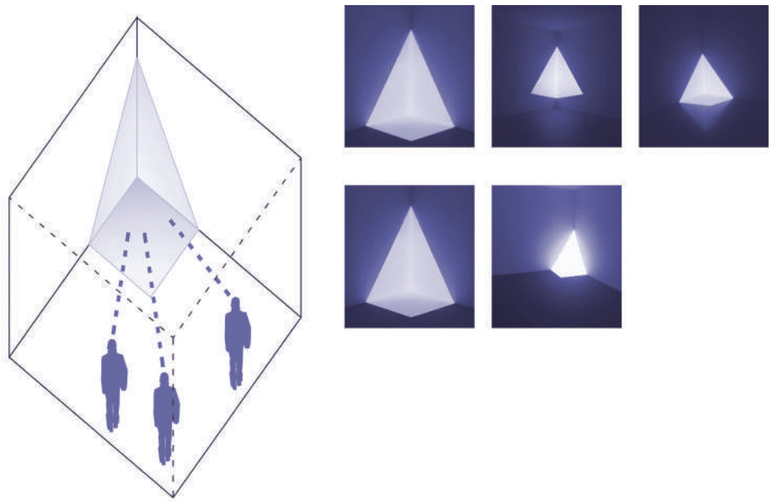

Fig.3 - Axonometric diagram of Alta Pink Corner (James Turrell, 1968) based on photos of the installation. Own elaboration.

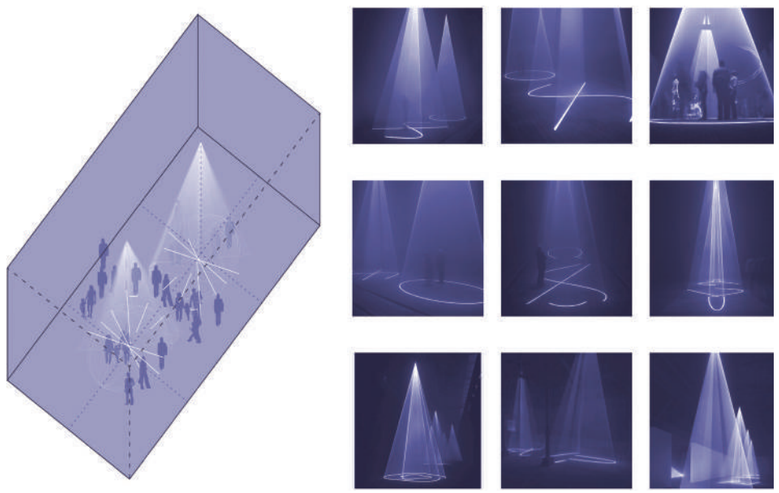

Fig.4 - Axonometric diagram of Solid Light films (McCall, 1971) based on photos of the installation. Own elaboration..

Alta Pink Corner (1968)

On the other hand, similar to Dan Flavin's fetishism, we can find James Turrell's Light Projections (Fig.3). In his early works, Turrell created optical effects of light figures that appeared solid when, through the viewers' perception, planes of light were transformed into three-dimensional figures. These immaterial objects are intended to be observed from a distance, placing the subject again as a passive being in front of the work of art. This separation recreates the first idea of the body being separated and dominated by the fetishized object. There is no active physical reaction in the body, but in this case, it [exists ...unclear] a phenomenological reaction. While Burden's or Flavin's installations were based on palpable physical objects, Turrell's cases highlight the ability of light "to significantly alter our perception allowing us to visualize seemingly solid objects when in reality, the only object that exists is the mental object created by the medium" (Katzberg 2009, 29).

Solid Light films (1971)

Likewise, in his Solid Light Films (1971), McCall also played with the paradox of generating seemingly solid objects through the use of light. The difference Turrell's works were that these light projections were planned to be easily pierced by the physical body. Under the paradoxical concept of "Solid-light films" (Fig.4), McCall invites the visitors to play with the paradox of trying to touch the projections – even if the hands and the body are going to pass easily through the light. The same as Turrell's he invites the viewer to see the volumes as solids even if they are just light. The active viewer can decide whether to walk among the volumes created with light, but can also choose to walk through them, breaking the sensation conveyed by the object about the solidity of the product. It is the temptation to touch the light expecting to feel something by touch, a sensation that will not happen. This installation becomes a mix between the previous two ones. First, you can find the idea of walking through, similar to Burden's – in this case, in a dark room you can only see what happens inside of the changing lights – this action engages with the physical body that moves itself driven by the light. Secondly, is the virtual appearance of solidity, the phenomenological body perceives the light as something solid that we cannot cross. To prove it, the bodies situated themselves in the areas where the light moves through, allowing the light to cross the physical body.

ATMOSPHERES

Fig.5 - Axonometric diagram of different perceptual cells by James Turrell based on photos of the installations. Own elaboration.

The second category of this research's conceptual framework is atmospheres – installations in which the spectator's body is absorbed as part of the artwork. This category is generated from the questions raised by both Turrell's and McCall's product installations: "Where is the work? Is the work on the wall [or the floor]? Is the work in space? Am I the work?" (Coburn 2009, 81). In the case of atmospheres, as the body becomes part of the installation, the location of the art is both outside and inside the body. It approaches both the physical and the phenomenological body, creating a reaction in both of them, and at the same time, all these installations need the presence of the bodies that enter into them to be read as a whole.

Perceptual cells collection (1989-1996)

After James Turrell's early works – generated sculptures with light playing with the perception of the spectator – the artist kept exploring the perception of viewers through his famous atmospheres. These installations were specially aligned with Turrell's work and research as he holds a Bachelor's degree in perceptual psychology and a Master of Arts degree. He was particularly interested in the Ganzfeld effect – also called perceptual deprivation – which is the effect that results from the brain amplifying the neural noise when exposed to an unstructured and uniform stimulation field.

In Alien Project (1989), Perceptual Cell (1991), or Ganzfeld Sphere (1996) (Fig.5), Turrell created a series of Ganzfeld experience spaces – for one person at a time – that made it possible to experience changes in one's perception by way of altered lighting conditions. Turell uses light of different hues and rhythms, to challenge our sense of being located and the boundaries of the physical body. As far as possible in these installations, the spectator lacks reference points on which to focus. This way, one's own nose (a prominent but normally unnoticed protuberance in our field of vision) becomes visible, and the lack of focus or visual signals gives

rise to hallucinations. According to the visitors' book of Ganzfeld Sphere (Benson 2001, 125), the testimonies relate that they were unable to know if their eyes were open or closed, or if what they were watching was the membrane of their eyes or the dome, or if the colours where inside or outside of their heads.

In the case of Alien Project, he created a simulator where the body can lie under a hue-changing light that makes it look as if it has been abducted. The spectator who arrives sees the abduction room, enters it and lies down on the stretcher that lifts him into the light. The viewer becomes part of the performance of the work, a work that in turn allows the viewer to be part of the script. The perceptual cells were several mobile works that allowed the visitor to have a similar experience, and in the Ganzfeld Sphere the installation simulated a body scan. In the 3 installations, the visitors were expected to have the experience alone, since the purpose was to create the hallucinations generated by the Ganzfeld effect. We can see how the devices are evolving to allow less and less intervention of external elements – in Alien Project there is a person more or less close to us and we are placed on a mobile platform; in the Perceptual Cell we are standing and the space where the light is produced only surrounds our head; and finally in the Ganzfeld Sphere we are already lying down and the space on which the light is reflected occupies our entire field of vision and the full-body.

Aten Reign (2013)

Following his signature strategy on the use of color to alter the perception of visitors, but with slight differences, Turrell created Aten Reign (Fig.6). This installation in the hall of the Guggenheim of New York used the helicoidal whole and created a conical cupula, changing the natural light provided by the skylight, for the artificial light of its installation which seeks to create an atmosphere in the space. In this case, Turrell created a huge agora in the atrium for people to gather together under the installation. Instead of the solitude of their first installations – more focused on the internal changes in the perception system due to the lack of reference – in this one, the interest relies on the togetherness of the act, the current moment, and the reminder that there are multiple ways to see and perceive the world.

The users are placed on the perimeter of the room and some of them lie down in the center. The installations look for people to stay there, creating a contrast to how we usually see museums – moving from one artwork to the next one paying attention just for a couple of seconds. In addition, it contrasts with the activity and tours in the museum by eliminating the view of the helical ramp that is the main attraction, making us focus on the courtyard space. The movement in this room is more conditioned by the zenithal light and the location of a seating area on the perimeter. All the movement and the view are concentrated in a central point on the ceiling, contemplating the changing colours of the work.

This installation followed a similar prompt to his sky observatories, especially in Roden Crater (1972), where visitors stay overnight and contemplate the light of the work for introspection and also the stars in the desert sky. In all his pieces the participants can feel that light is inhabiting the space too.

The Weather Project (2003)

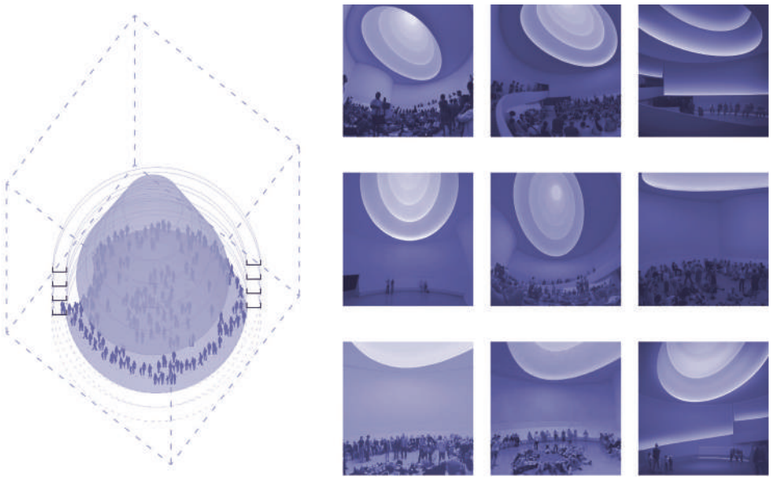

Fig.6 - Axonometric diagram of Aten Reign (James Turrell, 2013) based on photos of the installation. Own elaboration.

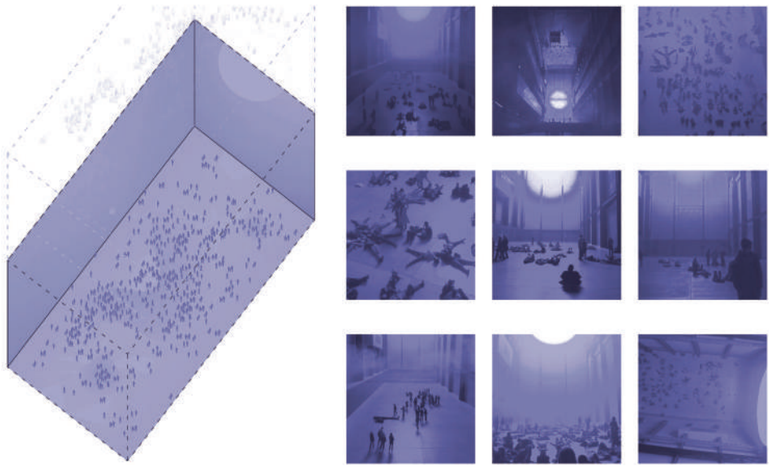

Fig.7 - Axonometric diagram of The weather Project (Olafur Eliasson, 2003) based on photos of the installation. Own elaboration.

In 2003, Olafur Eliasson installed the Weather Project in the Turbine Hall of London's Tate Modern (Fig.7). The installation consisted of an apocalyptic sun that lit the entire hall and invited visitors to stand beneath it. In the words of Rem Koolhaas, it allows the turbine hall to become the huge agora that it was supposed to be due to the activities of the users (Koolhaas 2014). We can see how the users conquer the whole space, and they move around freely, they walk, lay on the floor, and if you look at the pictures, you can see people doing acrobatics or yoga.

The installation is not meant to be observed from a fixed point, but neither is it meant to be surrounded, or seen from multiple angles. In this case, the installation is meant to look and be seen and be aware of how we look, so the work must be traversed and it is through this traversing, playing and being, and watching others doing the same through the installation, that the work acquires meaning (García Piriz 2018, 109). The work relies on the multiple perspectives of the decentralized subjects who walk through the artwork, turning visitors into observing and observed subjects at the same time (Hornby 2017, 63). According to Olafur Eliasson, the work seeks the experiential response of the subjects (Eliasson 2018).

Olafur Eliasson's installation was characterized by working with the atmosphere as the main element, avoiding the presence of a concrete physical object that could serve as the focus of attention. In this context, the entire nave became the object of the installation, and the actions of the visitors became an integral part of it. This tabula rasa condition facilitated free movements and spontaneous associations, which led visitors to engage in various activities and performances. These behaviors are a significant departure from the behaviors traditionally considered appropriate in cultural spaces. However, it is the installation itself that enables and encourages such actions through the "script" in which the design and configuration of the space – the transformation of the turbine hall – facilitates and structures the interactions of the visitors. Even more relevant is that the participation of the attendees generates synergies that involve new actors, who influence each other through their actions. Ultimately, it is the people and their movement that endow the work with meaning, underscoring the importance of collective interaction as a central component in the interpretation and experience of the installation. The position orients the location and at the same time, the location orients the construction of meaning. Bodies and objects move through space and influence each other. Ultimately the work becomes an experiment in atmospheric and visitor control through phenomenology (Hornby 2017, 73). The sun is the bait for the visitors, the light and fog that reinforces it are the mediums, and the performances and effects of the bodies are the result of the installation. If Turrell's intention in Ganzfeld Sphere and Athen Reign was to foreground the act of seeing, the Weather Project focused on seeing ourselves seeing. These installations are focused on the interpretation and subsequent reaction of the body – by perceptive alteration or movement – so the artwork achieves its significance in the interpretation or through the body reaction. In the case of the Perceptual Cells it is through the hallucinations or the separation between the phenomenological and physical bodies blurring the limits between what was the body and what was light; in Aten Reign it is about changing the path and movement of bodies around the museum interfering in the orientation of the body on time; in the Weather Project the installation focus in the activities of the bodies under the installation, is not that much about the big sun displayed in the agora, but about the reactions that we can see in others.

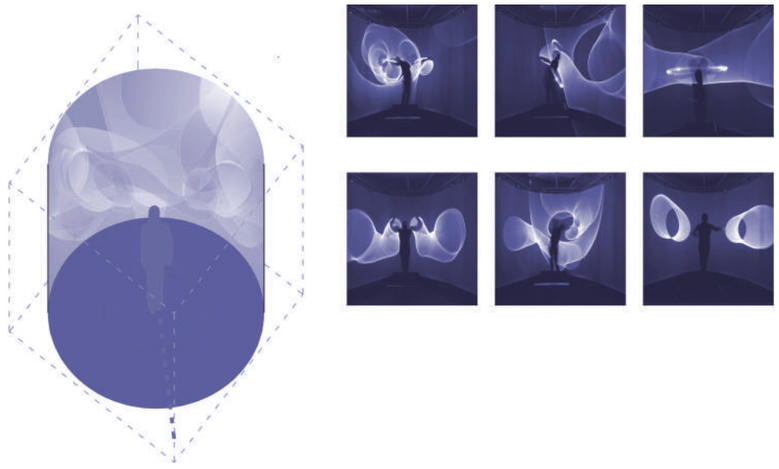

Fig.8 - Axonometric diagram of Light Dances (Seth Riskin, 1989) based on photos of the installation. Own elaboration.

INTERACTIONS

The third type would be the interactions. In these works, the body is necessary for the installation as the artwork gets fueled and is dependent on the body's movement. This category is about the total symbiosis of the body and art as dependent entities of the artistic process. I would divide them into two main types: the first one would start from the artist's performance, so the testimony that would be left to the spectators is photographic or video material resulting from their performance; the second type would be the one that starts from the visitor's action, so the spectators are in charge of deciding how the installation will be materialized through their action. As the spectator is also the creator of the result, the role of the artist is the one who gives the tools and creates the conditions for the collective art to happen.

Light dances (1989)

According to Seth Riskin's Light Dances (Fig.8) "is a conscious transfiguration of the body, its movement and the encompassing space; a transposition of matter to light exalted in the dance. This corresponds to the conceptualized spirit of the performer whose body is "consumed" by light" (Riskin 1989). This work was part of his Master's thesis at MIT directed by Otto Piene. For the performance, the artist stands in the center of a dark room with a black backdrop and a light in each hand.

In this way, by capturing images of his movement we can see the result of the complete installation in which the body gets lost inside the light – in some pictures, we can perceive a human silhouette, in other the silhouette of the body is created by the mind that knows that there is a body there. Although the whole body is in movement, it does not leave its position creating a fixed installation around it that is dependent on the speed and movement of the upper-body.

Your Uncertain Shadow (2010)

One example of the second type of this installation is Olafur Eliasson's Your Uncertain Shadow (2010) (Fig.9). 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 colored silhouettes. Each silhouette is crafted by obstructing light of different colors from slightly varied angles.

As visitors move around the space, passing closer to and farther away from the lights, the silhouettes shift in color 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. Similar to what happened on the Weather Project where the visitors saw themselves seeing, Your Uncertain Shadow is about seeing ourselves doing.

Enjambre Celular (2019)

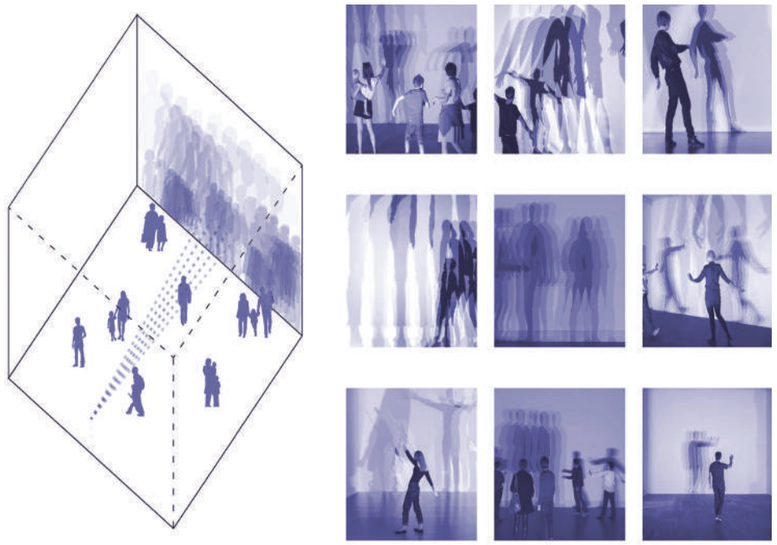

Fig.9 - Axonometric diagram of Your Uncertain Shadow (Olafur Eliasson, 2010) based on photos of the installation. Own elaboration.

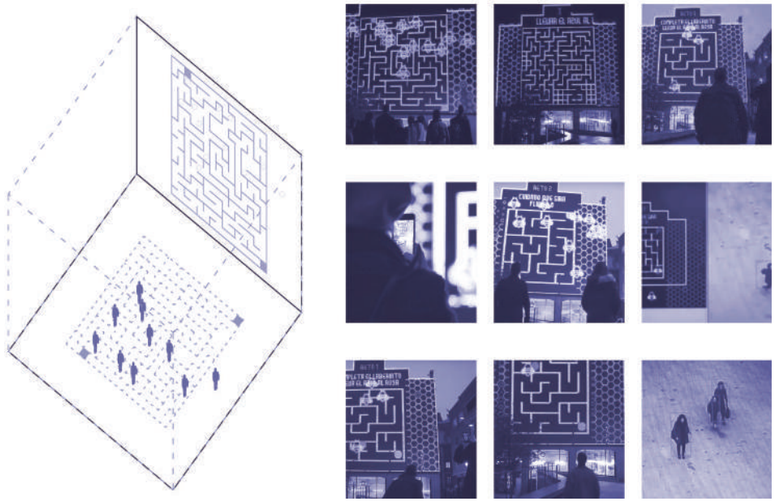

Fig.10 - Axonometric diagram of Enjambre Celular (Medialab, 2019) based on photos of the installation. Own elaboration.

The last installation is in the Media Facade of Medialab Prado (Fig.10). One of the side facades of the cultural centre is covered by a giant screen. This digital façade aims to be used as a device for artistic experimentation by the research groups related to the Medialab. The façade is made with a matrix of pixels. Each pixel is made of 7 LED lights – 2 red, 3 green and 2 blue – and is individually controlled by a DMX. Through the individual manipulation of the pixels, the façade is transformed into a big screen made with lights. To make easier the experimentation and interaction with the public space a CCTV camera was installed in the façade so they could have real-time information from the plaza in front of the building. Taking advantage of the cameras that the screen had, a video game installation was created that allowed the people who were in the square to move their avatars – bees in this case – on the screen as they moved around the square. They idea was to resolve different games showed on the screen, so people had to engage and participate individually and in groups. This installation seeks public participation and urban engagement through art in a playful way.

DISCUSSION

In this research, a series of installations of Light Art are analyzed in their relationship to the bodies of the observers and artists who interact with it. It is proposed a separation between the physical and phenomenological bodies, and the research on the installations takes note of the influence of the phenomenological reality on the physical for the analysis. Before the graphic analysis of the installation and the movement of the physical bodies, the installations are divided into 3 categories according to the relationships between the bodies and the installations: products, atmospheres and interactions.

There is an ever increasing interaction between the bodies and the art according to the role of the viewer with the creation or participation. With the products, the viewers only physical response is when the installation confronts them into provoking them into touching (Solid Light films) or when the viewers find some familiarity that calls them in (Urban Lights). This interaction never changes the reality of the installation but emphasizes it.

But as it was said in the introduction, sometimes the script can be less explicit, for example the act of staying away from the light, watching it from the distance (Alta Pink Corner), is also part of the script, and is a provocation to stay away, the same that we stay away from the religious icons or fetishes that we can watch, but we cannot touch. In the atmospheres the phenomenological reality activates the physical body in different ways, like the passive bodies in the perceptual cells or Aten Reign, that stay still in one spot, to the wandering, and playful activities under the big sun of the Weather Project.

There is a huge parallelism between the physical realities of Aten Reign and the Weather Project installations: huge agora, light from the top, and atmosphere that invades the whole room. But the reaction of the viewers differs because of one element, what they are looking at. In Aten Reign the theme is about introspection, they look straight to the light and inside themselves oblivious of what happens around them, in the Weather Project they look at themselves from the outside – through the mirror – and they also look at others and interact with them. So, the physical body becomes active through the provocation of the reflection. The third category is the one that requires a constant interaction between the body and the light to exist.

The three installations require the movement of the body for the light to move and create the installation. In the case of the Light Dances, the result is photographed and is what is left to the spectators, while in Your Uncertain Shadow and Enjambre Celular, the artistic result is born from the play of the visitors.

The Light Artworks installed in museums can be seen as small-scale experiments in a controlled environment, which can later be used in other scales or places – similar to what happened with Enjambre Celular that is made on a public space. It is important to analyze people's relationship with these installations to understand the phenomenological relations between people and art pieces and so on with the physical space.

Understanding the relationship of the body in phenomenological spaces can help to develop and understand new techniques and tools for the construction of contemporary spaces for the twenty-first century.

NOTES

1. "The 'diagonal' in its overt formal simplicity was only the installation of a dimensional or distended luminous line of a standard industrial device. Little artistic craft could be possible... The 'diagonal', in the possible extent of its dissemination as common strip of light or a shimmering slice across anybody's wall, had the potential for becoming a modern technological fetish" (Flavin 1965), former records daily news, while the latter focuses on past events and builds theoretical interpretations of those events.

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Beyond Confinement

Bodies, Spaces and the Challenge of Social Reintegration

carcere
ricerca-azione
prototipi
sovraffollamento
reinserimento
prison
action research
prototypes
overcrowding
reintegration

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Il sovraffollamento delle carceri in Italia mette in luce una tensione critica tra la fisicità della reclusione e gli obiettivi riabilitativi del tempo della detenzione. Oltre a rappresentare una questione quantitativa, il sovraffollamento riflette sfide più profonde legate alla necessità di modificare gli spazi e le modalità di gestione degli stessi, con implicazioni dirette sul benessere di detenuti e operatori. L'articolo ripercorre l'esperienza del gruppo di ricerca *Laboratorio Carcere* del Politecnico di Milano, esplorando come il progetto di architettura possa contribuire a trasformare le carceri da strutture di contenimento a luoghi che promuovano la dignità umana e la reintegrazione sociale.

Attraverso l'impiego di "prototipi di transizione", il gruppo di ricerca sperimenta interventi concreti che pongono al centro l'interazione tra gli individui e gli spazi in cui vivono, creando occasioni di relazione sia all'interno degli istituti sia tra il carcere e la società esterna. Tali interventi, concepiti non come risposte ma come inneschi per nuove domande di progetto, permettono ai ricercatori di rilevare direttamente le caratteristiche degli spazi di reclusione. L'apertura di *Off Campus San Vittore*, uno spazio di ricerca e didattica del Politecnico di Milano all'interno del carcere storico della città ha rappresentato un punto di svolta nel condurre la ricerca-azione. La frequentazione settimanale di tali luoghi consente ai ricercatori di osservare, misurare e comprendere le condizioni di comfort abitativo in diverse stagioni dell'anno, offrendo una prospettiva più complessa e articolata sugli spazi detentivi. Le riflessioni qui presentate, radicate nel contesto milanese, intendono stimolare un confronto più ampio con altri contesti europei sul tema urgente della qualità abitativa negli spazi di reclusione.

The issue of prison overcrowding in Italy highlights a critical tension between confinement and the rehabilitative goals of detention. Beyond the quantitative issue, overcrowding reflects more profound challenges related to modifying spaces and their management methods, directly impacting the well-being of both inmates and staff. This article retraces the decade-long experience of the *Laboratorio Carcere* research group at Politecnico di Milano, exploring how architectural design can transform prisons from containment structures into places promoting dignity and social reintegration.

The group's approach involves "transition prototypes", experimental interventions focused on interactions between individuals and their spaces. These interventions aim to create opportunities for relationships both within institutions and between prisons and external society. These interventions conceptualised not as solutions but as catalysts for novel design inquiries, enable researchers to directly observe the characteristics of spaces hidden behind prison walls. A significant development in this regard was the establishment of *Off-Campus San Vittore*, a research and teaching space of the Politecnico di Milano located in the historic prison of Milan. Weekly visits to these spaces allow researchers to observe, measure, and understand the comfort conditions in various prison places throughout different periods of the year. This offers a more comprehensive and nuanced perspective on detention spaces. The reflections, rooted in the Milanese context, aim to stimulate a broader dialogue with European contexts, addressing the urgent issue of living quality in detention spaces.

On 16 December 2024, 62,153 people were detained in Italian prisons, compared to a regulatory capacity 51,320. However, due to various reasons, 4,462 beds were temporarily unavailable, reducing the effective capacity to approximately 47,000 places and resulting in an actual overcrowding rate of 132.6%[1]. These numbers highlight the persistent issue affecting the 189 Italian prisons.

Prison overcrowding is more than a logistical or numerical problem; it reveals the complex tension between physical space and the individuals confined within it. This issue compromises not only the material and structural conditions of detention but also profoundly impacts the psychological and social well-being of inmates, as well as the staff working within these institutions (Møller and others, 2007; WHO, 2023).

Prison is, by definition, a place where freedom of movement is restricted. While this limitation aims to ensure community safety and punish criminal behaviour, it must also be accompanied by a rehabilitative objective: to prepare confined individuals for social reintegration, enabling them to reclaim an active role in society.

The dynamics of detention, therefore, turn around the positive tension between bodies and the spaces of confinement. However, the prison's ideological role as a site of discipline and punishment (Foucault, 1977) has historically overshadowed the bodily and subjective experiences of individuals. Yet these experiences are placed at the centre of penal execution by current legislation. As stated in the European Prison Rules under its basic principles: "(5) Life in prison shall approximate as closely as possible the positive aspects of life in the community; (6) All detention shall be managed so as to facilitate the reintegration into free society of persons who have been deprived of their liberty" (Council of Europe, 2006).

Drawing on experiments conducted by the multidisciplinary research group *Laboratorio Carcere* at Politecnico di Milano, this paper explores the relationship between bodies and prison spaces through an 'operational' design vision. This approach supports and tries to materialise the transition of prison architecture from being merely a space of detention to becoming a place of relationship – inside and beyond the prison walls[2].

BODIES AND SPACES: BEYOND THE QUANTITATIVE DIMENSION

The bodies in question are the confined ones, individuals convicted of crimes or being held awaiting trial when deemed necessary by authorities to ensure public safety or the proper conduct of judicial proceedings. However, they are also the bodies of those who work in prisons: prison officers, educational, healthcare, and administrative staff, as well as cooperative workers and volunteers who cross the gates daily to contribute to the functioning of the "prison machine". The spaces embrace the complex system of buildings and open areas enclosed within the prison walls. The barrier enforces the removal of those who have committed crimes from society and keeps them out of sight, an action that contradicts the purpose of rehabilitation, which requires visibility, connection and reintegration.

When individuals are deprived of personal freedom, they lose the ability to move freely and make autonomous societal choices. This deprivation entails numerous restrictions on daily life, including limitations on movement, separation from family and community, and the loss of certain civil rights. However, fundamental rights such as health, humanity and dignified treatment must be upheld. Prisons should, therefore, provide a "life space" and function as institutions that "ensure hygiene, education, and culture while also safeguarding the right to affection" (Colombo 2022, X). However, this mandate is often not fulfilled, not only in Italy[3].

In Italy, the introduction of Law No. 354 of 1975, "Rules on the Penitentiary System and the Penal Execution of Measures Depriving or Limiting Freedom", marked a significant shift in the detention system. Prisons were redefined as spaces for the rehabilitation and social reintegration of convicts. The law established key principles: the rehabilitative purpose of punishment, respect for human dignity, the centrality of work, and the participation of detainees in institutional life. This evolution in the concept of punishment is reflected today in many legal frameworks and is widely embraced across Europe and beyond.

However, in everyday practice, prisons are still predominantly viewed as spaces for containment and exclusion of those who have committed crimes, particularly in instances involving specific types of offences or sensationalised cases. This perspective is likely influenced by the enduring idea of the "modern prison" as a tool to "discipline the bodies and minds of detainees" (Foucault, 1977). In his investigation of "other spaces", the French philosopher identifies prisons as heterotopias of deviation: physical places and symbolic spaces representing punishment, justice, and social control. Understanding prisons as heterotopia provides a valuable framework for analysing their role in modern society, evaluating their evolution, and recognising how they increasingly embody complexity and contradictions. This demands a constant "design thought" (Di Franco, 2012) capable of negotiating the tensions between the spaces and the bodies that inhabit them.

However, the implementation of rehabilitation and social reintegration principles is limited by the inadequacy and condition of the spaces intended to host the treatment activities envisaged by law[4]. Prisons persist as a "real place outside all places" (Foucault, 1967).

When Law No. 354 of 1975 came into force in Italy, new facilities were built, often replacing existing ones, alongside maintenance and expansion efforts for current ones. However, these interventions failed to translate the reform's intentions in a spatial manner (Bozzuto 2020). The organisation of prison facilities remains primarily focused on containment and restricting inmates' movement. Several factors have reinforced this custodial and neutralising view of confinement, including the security emergencies brought on by political terrorism and the escalation of organised crime during that period. This perspective inevitably influenced how sentences were carried out and the design of detention facilities. In building new prisons or renovating existing ones, the first task of ministerial technical offices was to ensure security, with a paramount focus on preventing escapes and maintaining strict discipline (Marcetti 2011).

Such choices have led the Italian system to persist in a state of "ordinary emergency," characterised by chronic overcrowding and harsh living conditions for confined individuals and those working within the system. The European Court of Human Rights (ECHR) has repeatedly criticised these conditions. The widely cited Torreggiani and Others vs. Italy[5] ruling established that overcrowding constituted inhuman and degrading treatment, violating Article 3 of the European Convention[6].

Over time, the Court's rulings have helped to redefine the operational understanding of detention spaces. As Alessandro Albano notes, "[through its judgments, not only about Italy] the Court begins with a problem perceived solely as spatial and contributes to redesigning a broader model of detention" (Albano 2020, 36). Starting from the issue of overcrowding, the ECHR's decisions have progressively shifted the focus from incarceration as "empty time" to constructing conditions in which space becomes a "co-creator of life time, an intrinsic quality of a designed place" (Palma 2020, 20). The emphasis has moved beyond merely satisfying the quantitative requirement of 3 square metres per inmate, prioritising the creation of a system of spaces that support inmates' daily practices. There is a growing recognition of the need to intervene in prison structures, promoting environments designed "to allow individuals to find some measure of well-being, even amid the difficult circumstances they face" (Palma 2020, 11).

MAKING SPACE FOR BODIES: OPENING TO DESIGN

Addressing the issue of prisons, it is essential to recentre the focus on "space as a problem", acknowledging its intricate and twisted nature (Tschumi 1996, 31). Tackling complexity requires an approach that oscillates between treating space as an autonomous entity – the pure space – and understanding its intended and unintended uses, enabling its experience and meaning.

In the project that is necessary to reform Italian detention facilities and put concrete actions in place[7], it seems unavoidable to move beyond an exclusively regulatory vision that has, over time, led to the neutralisation of individuals (Bianchetti 2020, 65). This perspective reduces inmates to "those who are guarded" and staff – police officers and other employees – to "those who guard".

In *Asylums*, sociologist Erving Goffman (1961) introduces the concept of the "degradation ceremony" to describe the loss of subjectivity experienced by the confined, depriving them of the ability to feel and exist within their bodies. This loss results from standardising daily routines, control over their environment, and submission to authoritarian rules, which are not always transparent. By contrast, regulations and laws use the term 'custody' to highlight the need to move beyond a purely segregative approach in sentencing. As mentioned earlier, the shared vision is to place the individual at the centre of the prison organisation, moving beyond efficiency-focused and purely retributive theories of punishment.

In introducing the rehabilitative purpose of detention, legislators highlight how all observation and treatment actions carried out by prison staff must enable the creation of an individualised plan tailored to the specific needs of each detainee.

However, how is it possible to adopt a diversity-sensitive approach to the execution of punishment? Such an approach requires a variety of spaces to support daily life and clashes with the anonymity often seen in detention facilities. The anonymity of prison spaces results from decades of design practices focused exclusively on containment and security, whether in building new facilities or adapting existing ones. These spaces were often designed based on outdated conceptions of the role of punishment. In Italy, inmates spend their days moving between cells, shared with others, corridors that, over time, have increasingly taken on the character of shared spaces, and outdoor courtyards accessible at set times. However, these courtyards are often unused due to their inadequate size or lack of facilities for meaningful activities. For specific needs, inmates may access spaces outside their wing, such as meeting rooms with family and lawyers, healthcare facilities, or work areas for those who qualify for access.

Anonymity is also rooted in the fact that prison facilities rarely distinguish between pre-trial detainees and those serving short or long sentences, between young and elderly inmates, or between Italian speakers and non-speakers. It often neglects the presence of officers, staff, volunteers, and inmates' families as well. The anonymity and trivialisation of these spaces result from several factors: a general abandonment of thoughtful design – summed up by the all-too-common refrain, "but this is a prison" – ; the overwhelming of technical offices with daily emergencies; and the accumulation of small-scale routine maintenance interventions that eventually become the norm. These works are carried out urgently and with

minimal resources – often by in-house maintenance teams (officers and inmates) that lack sufficiently qualified personnel – and focus exclusively on resolving immediate functional issues using available materials. Little attention is given to the overall spatial impact. The result is a mismatch of materials and colours and a prevailing sense of impermanence. Often, the distinction between spaces relies solely on wall colours.

In the increasingly urgent need to reconfigure detention spaces, it is essential to envision interventions that go beyond their "false neutrality" (Palma 2020). It is necessary to abandon an approach that predefines spaces (almost exclusively) based on their dimensions and security requirements – often overestimated – and instead embrace a design vision capable of fostering relationships between the physical attributes of space, its potential uses, and its meanings. A spatial design that is capable of "establishing that field of action where the capacity to inhabit the world by caring for it is exercised" (Leveratto 2018, 113) and, in turn, caring for oneself.

To pursue the goal of "making space for action", it seems necessary to move away from a purely planimetric dimension, where predefined functions are distributed according to minimal pathways designed to ensure maximum security. Overcoming this zenithal perspective means "making space for the bodies" that inhabit the prison, paying attention to "the ways and places of their being in space, their actions, vulnerabilities, and desires" (Bianchetti 2023, IX) while avoiding their neutralisation by reducing them to stylised figures or statistical entities. This approach outlines a project that is aware of the fact that, in prefiguring space, we shape how different bodies exist and often resist within it, making design "first and foremost, a practical, political, and ethical exercise" (Bianchetti 2023, 58). Designers are called upon to imagine various spatial conditions where time, conflict, and the unpredictability of uses are valued, accepting that not everything can be anticipated. This challenge presents additional difficulties for prison administration, which must embrace uncertainty and adjustment as structural aspects of its daily operations. However, only through the ability of all those involved to accept the challenge of an "open project" – which may also be characterised by disorder and exceptions – can we envision a transition from detention as "empty time" to imprisonment as "project time", sensitive to individualities and capable of proactively including fragments of external society.

LABORATORIO CARCERE: DESIGNING PRESENCE

Over the years, *Laboratorio Carcere* has undertaken a series of targeted interventions aimed at opening the lived dimension of space[8]. These small localised actions, nominated as 'transition prototypes', are attempts to create conditions for staging diverse ways of fostering relationships between individuals. One example is the *Casetta Rossa* (Fig.1), a small red wooden pavilion designed as a space where children and parents can meet through play. It is a contained yet open environment[9]. Providing comfortable and safe spaces for physical activity was the goal behind creating Action Track, which involved opening two gaps in the wall separating two courtyards, an action with strong symbolic value (Fig.2) to build a red, shock-absorbing running track (Fig.3). Encouraging self-care as a daily practice led to the Free Acting project, which experimented with small-scale interventions within the common spaces of the women's block.

Walls and floors in social areas and laundry rooms were equipped with fixed tools (often everyday objects such as handrails and hooks) and informative graphics about exercise routines (Fig.4 and 5). These transformed the spaces into informal and accessible areas for daily physical activity[10].

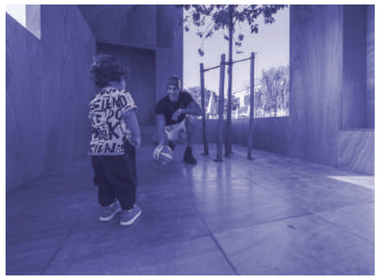

Fig.1 - *Casetta Rossa*, a meeting day. Credits I. Balena.

Fig.2 - *Action track*, the passage opening in the division wall.

Fig.3 - *Action Truck*, a training session with a team came from outside.

Fig.4 - Free Acting, the researchers mock up a possible intervention in the female block for a test day.

Fig.5 - Free Acting, a woman tests the equipped wall in a communal space in the wing. Credits A. Donelli.

Even simple actions, such as ringing an intercom to open the entrance gate or waiting for your turn for an appointment, have become opportunities to reimagine spaces as welcoming and attuned to individual needs. This principle was applied at the Juvenile Social Service Offices in Milan, where the design encourages users to choose where and how they want to sit, fostering a sense of individuality.

It is important to remember that convicts are brought to prison; they do not arrive voluntarily seeking help, as is often the case with other social services. For this reason, actions that can facilitate establishing a "good helping relationship" with operators from the very first encounter are essential, enabling different modes of engagement.

By promoting realized modifications, the research seeks to overturn a well-established vision that regards construction as the outcome of a design process, whether autonomous or participatory. By experimentation with "tentative forms" (Barbieri, 2017), the research aims to engage with the context actively. The interventions are intended to provoke the situations they address, challenging the practices through which collective spaces are produced and experienced. One of the main goals is to "make space for practices" involving individuals, groups, and communities. The experiments act as "spatial agents (...). They are negotiators of existing conditions in order to reform them partially. Spatial agency implies that the action to engage transformatively with [societal] structure is possible but will only be effective if one is alert to the constraints and opportunities that the structure presents" (Awan, Schneider, Till 2011 p. 31). With its prototypes, the research becomes an exercise in "testing the possible" (Hirschman, 1988), triggering targeted changes to build the conditions for a broader transition. This transformation is achievable both by activating new imaginaries for reshaping prison spaces, incorporating the designs of their inhabitants, and by dismantling intervention practices that, in complex institutions, tend toward inertia and resignation.
In the first case, we deal with pointed modifications, such as removing or relocating selected elements and using new materials to enhance sensory comfort. One example is the intervention in San Vittore prison's CAR section (High-Risk Cells). This small area houses individuals in a state of severe psychological fragility. Despite this, the environment was previously indistinguishable from parts of the facility. The project, developed in collaboration with the administration, aimed to address some critical issues, such as the lack of a permanent "healthcare-psychiatric" position, an adequate monitoring room for officers and poor living conditions. It became an opportunity to experiment with alternatives. Wood, often judged unsuitable material for detention facilities, was introduced – but appropriately treated – to create spatial and perceptual discontinuity from other areas of the prison. A timber-framed partition wall with glass panes replaced the usual polycarbonate sheets to improve the quality of light. A suspended ceiling made of wooden fibre panels was also installed to enhance the section's acoustic comfort. Finally, a dedicated air conditioning system was added in the corridor and common areas to improve the habitability of a space that demands special attention (Fig.6).

The *ReverseLab project, A Space for Contemporary Art Between Prison and City*[11], aimed to challenge the prison institution's natural introversion. Through the lens of contemporary art, both as a medium for production and consumption, the project initiated the refurbishment and reactivation of an uninhabitable space that had been closed since the mid-1980s (Fig.7).

This space was transformed into a site dedicated to artistic and cultural production. Thanks to the project, this abandoned area was converted into a permanent workshop for training activities aimed at inmates. It also became – and will continue to be – an exhibition space open to the public, fostering dialogue and comparison between the prison and the city.

Hosting a public exhibition with site-specific contemporary artwork inside a detention area offered two key perspectives. From within, it revealed the potential of specific prison spaces from a fresh angle. From the outside, it allowed the

Fig.7 – *ReverseLab*, the first ray basement before the renovation work.

Fig.6 - The ongoing works within the CAR section.

Fig.8 – *ReverseLab*, the exhibition opening: *Gli artisti sono quelli che fanno casino.*

public to access and firsthand experience parts of San Vittore's detention spaces. The spaces that hosted the first exhibition, *Gli artisti sono quelli che fanno casino* (*The Artists Are the Troublemakers*)[12], open to the public from September 28 to November 16, 2024, replicated the dimensions and layout of everyday detention spaces found on the upper floors and in other wings of San Vittore. The event was possible through collaboration with public and private institutions, support from third-sector associations, and strong public attendance during the days exhibition was open (Fig.8).

LABORATORIO CARCERE: RESEARCHING THROUGH PRESENCE

Using "transition prototypes," *Laboratorio Carcere* is engaged in redefining the design needs of detention spaces and identifying possible approaches to address them. This effort focuses on both inmates and operators. A challenging task involves designing spaces that must balance containment and control with humanisation and socialisation. This research pathway targets overcoming the false dichotomy between security and rehabilitation, demonstrating that both are essential for the effective carrying out of punishment. Only through active collaboration among all stakeholders is it possible to create prison environments that combine safety with opportunities for participation. For instance, a secure environment encourages inmates to engage in treatment programmes and leisure activities outside their rooms, while spaces offering diverse living conditions – for both socialisation and privacy – help reduce tension, prevent incidents, and promote psychological well-being.

Such a design effort cannot solely rely on applying regulations and technical expertise, although both are indispensable. It requires collaboration among treatment professionals, designers, and prison administrations, who are daily tasked with 'creatively managing' these spaces. This is crucial because the perception of space differs significantly between those who inhabit and endure it and those who conceptualise and design it, theoretically and practically.

Being outside, redefining the design of detention spaces is no easy task because these environments are hidden behind walls and difficult to access. This lack of familiarity often leads to abstract and generalised principles being proposed. In 1949, Piero Calamandrei, an Italian jurist and politician, wrote in the journal *Il Ponte* that "one must see" in order to emphasise the importance of firsthand observing the living conditions of incarcerated individuals to make fair and forward-thinking decisions.

By promoting the fabrication of 'transition prototypes', the research group embraces Calamandrei's exhortation. Through noticeable action, researchers gain the opportunity to immerse themselves in prison contexts and directly experience the characteristics of these spaces, capturing aspects that only firsthand observation can reveal. As Mallgrave notes, "perceiving or inhabiting a built environment, we simulate the forms and materials with our bodies; in a sense, we empathise with them physiologically and emotionally, and only later do we form a complete awareness of whether we find pleasure in the experience or not" (Mallgrave 2015, 177). This bodily and sensory experience is essential for gaining deeper insights into the limitations and potential of existing spaces and for engaging in more direct dialogue with those who inhabit them. Researchers can develop a multidimensional understanding of prison environments thanks to the prolonged immersion required by implementing these projects. This knowledge, accumulated through repeated visits and observations, serves as the foundation for proposing interventions and developing new design solutions while also collecting fresh field data.

This approach to conceiving and conducting research directly within the prison environment underwent a significant evolution with the opening of *Off-Campus San Vittore* in October 2022. It is one of four research spaces established by the Politecnico di Milano as part of the *Off-Campus*: il cantiere per le periferie programme, which aims to address issues of marginality in various contexts across the city of Milan. This initiative, promoted by Polisocial, seeks to strengthen the presence of the Politecnico in its city and foster the idea of a more socially responsible university: attentive to social challenges, open, and closely connected to its surrounding territories and communities.

Fig.9 - *Off Campus San Vittore*, the two rooms open on the corridor. Credits Laboratorio Immagine PoliMi

Establishing a research space within the detention area at the *Casa Circondariale di Milano – San Vittore* has shaped new opportunities to experience and observe prison daily life, broadening the scope for conducting field research. The innovative aspect lies in the ability to access the prison weekly without planning specific activities in advance. This means, for instance, being able to repeatedly measure and assess, using one's senses, the thermal, acoustic, and lighting comfort conditions in various spaces of San Vittore at different times of the day and the year. These spaces include the detention areas, common areas, and facilities used by staff and prison officers, such as the canteen, cafeteria, and open spaces. The two rooms that house *Off-Campus* are located within the detention area, resembling the 'overnight rooms' of the wings, and overlook the corridor of the *First Ray* (Fig.9). This corridor connects the entrance to the Rotonda (the central core of the institution, physically and symbolically): an obligatory passage for anyone entering or leaving the detention area.

On the upper floors is the young-adults wing, which primarily houses inmates aged 18 to 25, and the research group is involved in developing various projects.

The *Off-Campus* serves as a privileged vantage point, providing opportunities for "fortunate encounters" with those who frequent San Vittore, whether officers, inmates, or volunteers (Fig.10).

Fig.10 - A co-design activity in an underused courtyard in San Vittore prison.

During these encounters, first-hand observations are enriched by feedback gathered through informal conversations with inmates and staff, allowing for the recording of different perceptions regarding the same spaces and/or issues. These discussions, often repeated and ongoing, evolve into opportunities for continuous dialogue and frequent exchanges of opinions. Repeated collaboration builds trust and familiarity, which are essential for conducting in-depth and accurate analyses of environmental conditions. Over time, certain routines develop with some individuals, which may take the form of advice or serve as the basis for new collaborations and projects. A significant example of this interaction is the partnership with the team MOF (Ordinary Maintenance of Buildings).

The MOF is composed of officers and inmates responsible for the routine maintenance of prison spaces. The MOF officers are indispensable partners during the prototype implementation phases. With them, discussions take place on how to carry out interventions, starting from the usual methods of operation within San Vittore, and evaluating to what extent one can or should deviate to achieve the objectives set for each intervention. In time, one learns to design and develop projects within the actual possibilities of the context.

At the same time, the prototypes aim to convince the MOF and the administration that, under certain conditions, it is possible to pursue alternative approaches to the inertia of routine practices, which are often dictated by contingencies and emergencies, as in the case of the CAR project described above.

The opportunity to remain inside the prison without necessarily responding to an immediate emergency allows one to slow down and, as the anthropologist James Clifford (1997) suggests, to notice what else is happening daily. This approach makes it possible to grasp subtle, often unnoticed aspects, enabling a deeper and more prolonged reflection over time. The concept of slowing down becomes crucial here, not only for understanding the spaces but also for grasping the social dynamics that develop within the prison.

In this context, *Off-Campus* transforms into a "timed place" (Lefebvre, Régulier, 1986), where it is possible to observe the rhythms of prison life as a relationship between time and space. The detention time is often considered linear, marked by the repetitive nature of days and activities occurring at more or less regular intervals. However, by complementing the observation of these "linear repetitions" with "cyclical repetitions", one can note that "there is always something unexpected, something new entering the repetition: a difference" (Lefebvre, 2019, 77).

These "rhythms of renewal" primarily emerge during moments of interaction and socialisation. Each detention space has its own rhythms: those of custody and control, but also those of daily life and human relationships. This dualism between rigid time and flexible time becomes central to understanding how both inmates and staff experience the prison space. Recognising a multiplicity of linear and cyclical rhythms creates an opportunity to design spaces that support, respect, and innovate these temporal and procedural dynamics.

This involves considering not only the physical organisation of spaces but also how they can respond to the different moments of daily life, aiming to balance areas for socialisation and privacy, spaces for activities, and places for rest. This aligns with the research group's ambition to propose actions capable of transforming detention time from ‘empty time’ to ‘lived time’.

DISCUSSION

Through the realisation of prototypes, researchers remain anchored to facts rather than the ideas they have constructed around them. This direct immersion in the prison environment allows for operating within its timelines and constraints while opening up possibilities for experimenting with new solutions. Working with the available resources, procedures, and individuals involved in a real and constrained context enables the adoption of an "attitude to possibilism", as Hirschman (1988) describes it.

It is an openness toward what does not yet exist but can be imagined and realised starting from what is already present. Being physically within the prison and acting through prototypes is a way to familiarise oneself with the issues, starting from the spaces themselves. Pier Luigi Crosta reminds us that innovation begins once familiarity with a context is achieved: "if you are familiar, you invent" (Crosta 2021, 16).

The daily and prolonged proximity to things (even within the limitations imposed by managing such a complex institution) makes it possible to notice unusual and unexpected opportunities for use. It is not so much about confirming or disproving preexisting ideas but about building new ideas by observing what people do, what we might add and what spaces do (Awan, Schneider, Till 2011).

This process of familiarisation allows the research process and the ‘prison project’ to move away from rigid and codified procedural paths, making opportunities for more fluid and spontaneous dynamics. The urgency is not so much about imposing a pre-established plan but rather about implementing actions that respond to the context. The goal, therefore, becomes to "identify the favourable factors operating within their configuration; [...] allowing oneself to be guided by their inclination; in short, instead of imposing one’s plan on the world, to leverage the potential of the situation" (Jullien, 1998, 20).

CONCLUSION

This research method also requires an informal engagement with the contexts, experimenting with the fertility of everyday situations and relationships. By cooperating to overcome operational and conceptual obstacles, the research gains a multi-perspective understanding of the prison, capturing its structural complexity and the thoughts and perceptions of those who inhabit and experience it daily. Familiarising oneself with these spaces not only paves the way for innovation but also enables the development of solutions that arise from the context itself and are truly applicable, addressing the specific needs of those who live in prison day after day.

The direct experience within prisons has allowed the researchers of the Laboratorio Carcere to acquire a richer, more complex, and detailed understanding of the spatial and social dynamics that characterise the prison context, though limited to the Milanese institutions.

The pressing issue now is how to decode this knowledge and make it broadly accessible and communicable, both to professionals working within the prison system and those tasked with designing and managing these spaces.

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NOTES

1. Source "Final Report 2024" edited by Antigone Association.

2. The contribution attempts to deal with the topic of the relationship between spaces and restricted bodies from the architectural design perspective, starting from the Italian context and opening to a comparison with others, both detention contexts and ways of doing research, particularly European ones.

3. For insights into the current state of Italian prisons, see the annual reports by the Antigone Association at www.rapportoantigone.it

4. See, for instance, the annual reports to the Italian parliament and the recommendations of the National Guarantor for the rights of persons deprived of liberty at garantenazionaleprivatiliberta.it

5. See https://hudoc.echr.coe.int/eng#{%22itemid%22:[%22001-116248%22]}

6. In reply to the judgment, the Italian government adopted urgent measures to reduce prison overcrowding (dl 146/13 ‘svuota carceri’ and Lg. 47/15 on pre-trial detention), improve detention conditions and reform criminal justice, introducing alternative detention regimes and a programme to refurbish prison facilities. Alongside these was the organisation of The States General of Criminal Execution (2015), which involved experts, practitioners, academics and representatives of civil society in a series of working tables to discuss and propose solutions to the problems of the penal system, with a particular focus on alternative measures to detention, the social reintegration of prisoners and the improvement of prison conditions.

7. This consideration focuses on the possibility of intervening in existing facilities; addressing the construction of new detention centers would inevitably raise other issues beyond the scope of our current investigation.

8. The investigation path has been nourished by different research that, over the years, has seen the construction of increasingly multi-disciplinary teams moving in a broader horizon than the realisation of the prototype itself.

9. The design and the realization of the pavilion started and involved students attending the Design Studio at School of Architecture Urban Planning Construction Engineering at Politecnico di Milano, a.a 2017-2018 prof. A. Di Franco, M. Moreno and C. Merlini.

10. Both prototypes are the outcome of the research ACTS – A chance Through Sport (2019-2021) financed by Polisocial Award 2019. www.acts.polimi.it/

11. @reverselab.polimi.it

12. The exhibition featured the work that artist Maurice Pefura created with the collaboration of around 40 prison inmates with the support of Laboratorio Carcere, Forme Tentative ETS and Philo APS. It was curated by Diego Sileo of the PAC Padiglione di Arte Contemporanea di Milano.

Transformation of an Anthropic Ecosystem

Essenburg Park between Physical Experience and Digital Representation

urban nature
societal engagement
reclamation
perception
digitalisation

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A partire dalla descrizione del Parco Essenburg di Rotterdam, il saggio racconta un luogo intrecciando aspetti legati alla sua percezione fisica a quelli relativi alla sua rappresentazione digitale. Il progetto è stato selezionato nell'ambito della ricerca dottorale dell'autrice, *L'incolto di Precisione*, per esplorare le potenzialità e criticità legate all'impiego di tecnologie emergenti nella rappresentazione di siti post-industriali. Dopo aver delineato la storia del parco, caratterizzata da conquiste e riconquiste sia antropiche che naturali, viene raccontato il processo di appropriazione di quest'area, originariamente occupata da uno scalo ferroviario, da parte di una comunità che lo ha trasformato in parco, mantenendo le tracce dei suoi usi passati e la biodiversità sviluppatasi nel periodo di abbandono, addomesticata solo per permetterne l'attraversamento. Alla descrizione del parco segue quella di un esperimento condotto in situ, finalizzato a valutare le potenzialità e le criticità di tecnologie emergenti per la mappatura del suo ecosistema. Facendo riferimento alla metodologia di mappatura attraverso transetti ecologici, tradizionalmente operata a vista dagli ecologi, sono stati effettuate scansioni Lidar ed elaborazioni digitali dei dati raccolti, con un progettista come stakeholder per le mappature eseguite dagli studenti di geomatica. Questo ha consentito una riflessione sulle potenzialità e limiti per le tecnologie emergenti nella rappresentazione e descrizione di un ecosistema, operata prima da remoto e poi in loco. La riflessione proposta, soffermandosi sulla descrizione di un processo più che di risultati, intreccia quindi la percezione e le narrative che circondano un luogo con le potenzialità offerte dalla raccolta di dati digitali dal punto di vista progettuale. Operando con questa modalità le analisi dell'esistente l'osservatore assume un ruolo attivo, che selezionando e interpretando il dato modifica la sua comprensione di un sito complesso e potenzialmente le modalità di concepirne la sua trasformazione.

The essay describes the Essenburg Park of Rotterdam, between its physical perception and digital representation. The site was chosen in the context of the author's doctoral research, *Precision Wildland*. It investigates the potentialities and shortcomings of using digital tools to represent the ecologies of post-industrial sites, providing at the same time a perceptual description of the place that complements the collected data. Tracing the site's evolution from polder landscape to freight yard to public park, with its alternating anthropic and natural reclamations, the essay highlights the site's ecological and cultural significance. The place embeds the rootedness of a community, maintaining traces of its past and the unique biodiversity, tamed only to allow visitors to traverse it. The park's description is followed by an experiment carried out on-site, aimed at evaluating the potentialities and criticalities of emerging technology in mapping its ecologically rich ecosystem. Referencing the traditional practice for botanical surveys of mapping sections of changing ecologies, which are traditionally done by sight, lidar scans and digital data interpretation are used. The survey's peculiarity was that a designer acted as the stakeholder for the geomatic students carrying it out, enabling a reflection on the potential and limits for spatially representing a chosen environment, first remotely and later on-site. This process of capturing, interpreting, and using spatial data to represent aspects not perceivable on-site is more relevant than the outputs produced, since it allows for testing the capabilities of chosen technologies and their potential use to describe overgrown sites. Ultimately, this fosters a reflection on perception and narratives surrounding a place, the collection of data and the active role of the observer in selecting and interpreting it, as a potential variable to account for in understanding a complex site and conceiving its transformation.

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 2008,18).

Nowadays, in an era of unprecedented technological advancement, the physical experience of a place is increasingly enhanced by its digital representation, allowing us to discover and collect information that our individual physical bodies cannot hold. This influences the experience of the place at a moment and the storytelling surrounding it, emphasising the hidden beauty of its nature, making an ordinary place feel meaningful. An interesting case to explore these notions is the *Essenburg Park* in Rotterdam, a socio-ecological rich area located near the city's Central Station. This case was investigated within the framework of the author's doctoral research, *Precision Wildland*, exploring the potential connection between landscape architecture practice and the usage of emerging technologies in urban nature.

Initially, the site was a polder landscape, the *Blijdorpse polder*, a typical Dutch biotope where the marshlands were reclaimed for anthropic uses, first for agriculture and then rail transportation. This particular area was a freight yard belonging to the city's oldest railway, created in 1848. This function was abandoned following the optimisation of the railway network with 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.* This association aimed to recognise this place as a park officially and to contest the proposed housing development planned for the area by NS Rail[1], which held the ownership of the plot. The site's original condition as a polder landscape and its potential to become an inexpensive water collection area with use as a public greenspace was another aspect used as leverage against the housing project. In 2017, pressured by the public, the city of Rotterdam acquired the land from NS Rail, appointing the Essenburgparkgroep to look after 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 that had emerged while it was abandoned. This is a post-anthropic landscape, with nature developed on grounds altered by human uses, particularly rich in biodiversity, as ProRail's dossier reported[3], presenting a mix of spontaneously occurring plants favoured by seed dispersal carried by trains.(Koster, 1991) The preservation of this site's condition was made possible through a bottom-up approach, where the physical appropriation of the space was led by the citizens, who defined different spatial configurations within the park. The work was also supported by a designer, a resident of the neighbourhood, who was able to translate the community visions into drawings and mediate with the public authorities.[4] Leveraging the site's tendencies and the need for water retention basins, the design played with heights and pathways to create different experiences, crossing the park and traversing different habitat types whilst moving through it. One pathway is an external loop in concrete on the lower side of the park which becomes compacted ground on the railway embankments. This linear and straightforward connection allows visitors to appreciate the park while moving at different speeds: 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. Small bridges are placed over the water ponds; self-built with wooden elements, quite precarious but constituting a playful element to engage with the park conditions.[5] This physical way to experience the park has been complemented in time by an online platform[6], which hosts voluntarily sourced data from across the Netherlands, that translates virtually the unique character of this place's biodiversity. This digital archive of the animals and plants present on site, is created thanks to the users' inputs via their smartphones. This entails a perceptual shift in the visitors, who don't look only for the "nice" plants and animals but who also observe and record the "uglier" or more banal side of nature, with its mould, insects, and weeds. Traditional herbaria, created by ecologists by collecting samples on-site, are nowadays transformed into virtual herbaria, where scans or pictures of the samples are uploaded to an online database. This is an evolution of such a concept, an open-access platform sourced from experts and citizens' data. One limitation of these tools is that the catalogue shows only singular specimens and not the interactions between them.

After learning about the site's characteristics, I worked with students[7] to use *Essenburg Park* as a case study to test the creation of a digital ecological cross section.[8] The idea was to evaluate the potential and limits of the digital representation of such an environment, to better understand how designers could benefit from this type of data, both to build narratives and use the information to drive the spatial design. Assuming the site's character and its preservation to be a fundamental goal for the transformation project, the aim was to reflect on potential ways to consider such characteristics. In this sense, thinking of this more than simply as the actual images produced, it is interesting to account for this process of gathering information about the site, first through remote work, then on-site and finally looked at through data analysis.

Starting from the aerial Lidar maps available on the AHN

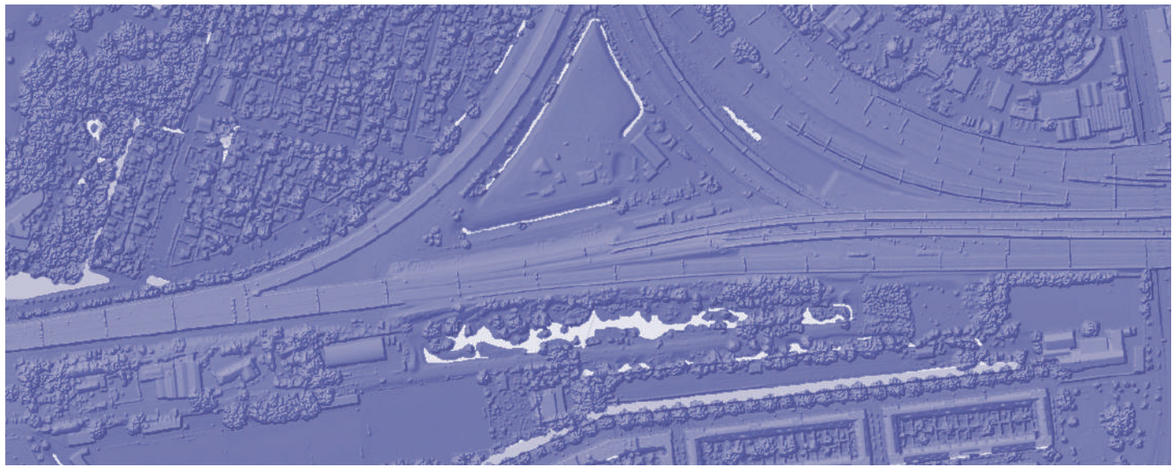

Fig.1 - The Essenburg Park from Above, Satellite Lidar Scan, 2022, Rotterdam. Open access data acquisition of the Netherlands retrieved January 2024. Source: https://app.pdok.nl/ (last accessed 14 January 2024).

database (Fig.1), the students estimated the vegetation density from above, to identify points to carry out terrestrial scans. After the visit on-site, relying on both our physical experience of the place and considering the requirements of the Lidar survey, we found an open area to carry the scans. (Fig.2) This allowed us to represent different conditions characterising the site: clearings, forests, and intermediate vegetation. Two scans of different resolutions were carried out on the same day to study the relationship between the time needed to produce them and the resolution obtained, evaluating the effect of different settings on the end result and on data management necessities. This scan represents a moment in time, showing the complexity of the vegetation structure and the variation in section.

Often whilst designing, it is common to abstract nature, without reflecting on plants' actual behaviour or the interrelationship of species. Ideally, if repeated, the scans could emphasise the variations in the vegetation and, if inferred with species recognition (Nitoslawski and others, 2019), render a more precise representation of the site's flora that would also be geo-referenced. This may be useful to construct a narrative around the site through time, arguing for the importance of its biodiversity and accounting for its changes, mirroring on a bigger scale changes in the whole city, especially in relation to vegetation's adaptations to climate changes (Kowarik, 2023).

This experience is situated in a broader research frame, the author's PhD research "Precision Wildland", developed at Politecnico di Milano with a research stay at TU Delft, which investigates the current and potential uses of emerging technologies for landscape architecture, considering abandoned railway yards as a specific typology of sites. Looking at other applications that intertwine technologies and nature, with a focus on precision agriculture and urban forestry, the research moves between the city's physical spaces and its digital representation, to stress the importance of design when considering existing ecologies as drivers, mainly to argue for the current praxis in transformation processes. As also shown by other research[9], this process of using repeated campaigns in time may allow the designer to account for the specific condition of a site's vegetation, not only the abstracted architectural representation made with symbolic natural elements. This knowledge potentially allows designers to consider the exact site conditions not only in the analysis phase but also to account for its dynamic changes throughout design conception, implementation, and management. Considering the

Fig.2 - The mapping campaign with the students and teaching assistant of the course Open Urban Data. Photo by the Author, 2022, Rotterdam.

common occurrence of tabula rasa design practices which erase the site's existing conditions because they are too complex to be addressed, the availability and integration of this data can offer alternatives to preserve the site's history, retaining its cultural and ecological significance.

In this frame, the case of *Essenburg Park* served as a field test to directly explore the potentialities and shortcomings of selected mapping instruments. However, the uniqueness of the case itself, was able to inform the research on the potentialities for design in such places, not only engaging with the aspects linked to ecology and natural development but also to the experiences within a specific space.

In this park, technology wasn't crucial to the design conception or realisation, which was more linked to a bottom-up approach, but it was pivotal in the storytelling surrounding wild nature. The physical alterations of the site were accompanied by the use of technology to boost social 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 social reclamation as public space to preserve its biodiversity.

Additionally, it could also be further integrated with the use of emerging technologies to monitor the site's changes and to facilitate the place's upkeep, now carried out by citizens, through minimal interventions targeted at maintaining the site's condition. The digital representation can, therefore, allow us to appreciate and account for multiple aspects both in a descriptive way and as data to design with. In this testing experience on-site, it was interesting to evaluate the potential and limitations of emerging technologies in relation to the site's actual condition, realising the importance of properly setting up a data survey

Fig.3 - Preview of the Lidar scan through a monitor, showing the observer and the students seated on a bench. Photo by the Author, 2022, Rotterdam.

and the difference it entails in terms of resolution and final outputs. However, for the time being, this data collection is only limited to a visual experience (Fig.3) and lacks the other sensorial inputs.

Instead, the experience of the body moving in the space engages all the senses with the park. 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 the capacity to perceive the environment, with significant differences between humans and the rest of the biotic community (Uexküll,1934).

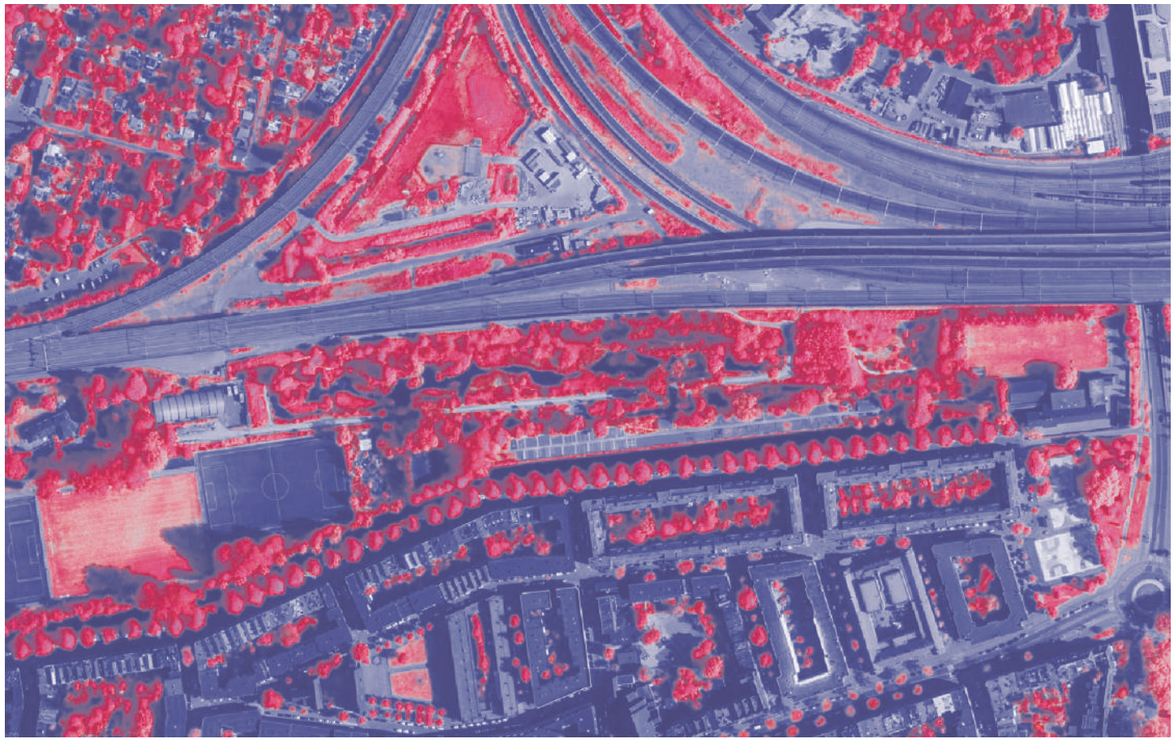

Fig.4 - The Essenburg Park and its vegetation. The intensity of the colour, obtained through infrared imagery, renders the vegetation vitality. Satellite Lidar Scan, 2022, Rotterdam. Open access Airborne Lidar data acquisition of the Netherlands retrieved January 2024. Source: https://app.pdok.nl/ (last accessed 14 January 2024).

Fig.5 - Representation of the park vegetation. Image as output of the lidar scan elaborated by the students using Cloud Compare, 2022. Rotterdam.

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, Viola, 2013) or to perceive aspects of reality invisible to the naked eye, such as the tree vitality, that can be understood through infrared imagery (Fig.4), or the representation of natural dynamics within the site at a given moment in time (Fig.5).

In this sense, technology could also play a role in bridging the gap between the different physical perceptions of a site, otherwise limited by the possibilities of the anthropic gaze. Ultimately, the Essenburg Park precedent showcases an example of different possible perceptions of a place, both in the physical realm and in its virtual representation, opening up alternative perspectives to understand our cities' public spaces and conceive their future.

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NOTES

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. See to further expand: 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: repository.tudelft.nl/islandora/object/uuid%3Aa8f347a1-ff22-4327-8cbb-4bba3fd9c23a (last accessed 14 January 2024).

7. Jildou Wassenaar and Vlad Costantiniescu, two students of the course Open Urban Data, held by professor Roderik Lindenbergh at TU Delft, with the assistance of Lina Hagenah.

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).

9. A notable exploration in this sense is the research conducted at ETH by Christophe Girot's Chair and described in (Urech, von Richthofen, Girot, 2022).

Paxton after Paxton

Form as formlessness from dance to architecture

dança
arquitetura
filosofia
contato improvisação
recursividade
dance
architecture
philosophy
contact improvisation
recursivity

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Em 1851, o jardineiro Joseph Paxton perturbou pressupostos plenamente enraizados sobre a arquitetura com o seu radical sistema construtivo concebido para a Exposição Universal: o Palácio de Cristal demonstrou não só que a materialidade da construção estava destinada a desviar-se para caminhos sem precedentes graças ao advento de novas tecnologias – como a chapa de vidro e o ferro fundido – mas também que a modularidade na construção, embora familiar à cultura tectónica ocidental, podia significar versatilidade na montagem e desmontagem. Em 1972, o coreógrafo Steve Paxton efetuou uma desorganização análoga das expectativas na esfera da dança com o advento de uma forma não prescrita: o desenvolvimento do Contato Improvisação apontou para possibilidades heterodoxas latentes no encontro entre bailarinos, uma direção que não era corrente entre as noções generalizadas sobre o que constituía a dança erudita porque ia além da prescrição de gestos e da previsibilidade de resultados. Ambos os Paxtons mobilizaram o pensamento de forma profunda e irreversível nos seus campos por gerações porvir. Este artigo propõe uma interpretação transversal destes modos revolucionários de prática com o objetivo de repensar a postura dos arquitectos perante o ambiente construído. Neste sentido, o que liga as transformações não relacionadas trazidas por ambos os Paxtons reside na concepção da forma como uma estrutura recursiva. Poderá uma abordagem baseada no feedback tornar-se uma metodologia robusta para a arquitetura do século XXI? A última parte deste artigo sugere uma resposta positiva a esta questão, apresentando brevemente três exemplos contemporâneos que utilizam a forma como forma-informe através do trabalho de Lacaton & Vassal, Georges Descombes e Carla Juaçaba.

In 1851, gardener Joseph Paxton disturbed fully developed assumptions about architecture with his radical building system conceived for the Great Exhibition: 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, 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 because it went beyond the prescription of gestures and the predictability of outcomes. Both Paxtons have mobilized thought utterly and irreversibly in their fields for generations to come. This article proposes a transversal interpretation of these revolutionary ways of practice in order to rethink the stance of architects towards the built environment. In this sense, what connects the unrelated transformations brought forth by both Paxtons lies in the conception of form as a recursive structure. Could an approach based on feedback 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 deploy *form as formlessness* through the work of Lacaton & Vassal, Georges Descombes and Carla Juaçaba.

INTRODUCTION

Can a philosophy of movement reshape how we understand architecture? This paper proposes a transdisciplinary reconceptualization of the built environment grounded in the practice of dance. In order to do so, it traces the epistemological implications of two unrelated events that revolutionized their respective fields: 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, the creation of Contact Improvisation (CI) led by Steve Paxton and others in 1972. These two movements – one architectural, the other choreographic – are placed in dialogue to explore how notions of feedback, flexibility, and emergence can inform architectural practice today. The paper is structured in four parts:

Part One examines the innovative aspects of the Crystal Palace through the lens of historian Sigfried Giedion and architectural theorist Kenneth Frampton. It focuses on how Joseph Paxton's use of widely available – yet largely overlooked – industrial materials became viable through the articulation of a latent lineage of tectonic rationalism, thereby marking a pivotal shift in the logic of architectural production.

Part Two outlines the emergence of Contact Improvisation drawing on anthropologist Cynthia Novack's account. It highlights the radical propositions of CI – such as the absence of predetermined choreography, the dissolution of authorial control, and the composition of movement grounded in anatomical constraints – to suggest the potential for a similar shift in architectural practice: one that embraces contingency, reciprocity, and the unfolding of form through embodied negotiation.

Part Three draws a methodological analogy between the two Paxtons, revealing a shared logic of open systems animated by external feedback. In both cases, form emerges not through imposition, but through responsiveness. Their originality lies not in defining a definitive shape, but in enabling structures – architectural or choreographic – to adapt and transform in dialogue with their contexts. *Formlessness*, here, is understood in relation to virtuality as the capacity to remain in flux.

Part four exemplifies the abstraction of *formlessness* in architectural practice based on the systematic approach deployed by the Crystal Palace and by Contact Improvisation. It presents three case studies by Lacaton & Vassal, Georges Descombes, and Carla Juaçaba. Their works exemplify how architectural form can remain open, adaptive, and contingent. These examples, previously analyzed through interviews (Lasalvia 2021), illustrate how form can emerge not from detached prescription, but from embracing the context, including its constraints.

JOSEPH PAXTON

After just eight days of design and a little over six months of construction, a colossally luminous structure rose in the heart of Britain in 1851 (Fig.1). The Crystal Palace was unlike anything the world had seen: although its author, Joseph Paxton, had experimented with similar components the previous year in a greenhouse for water lilies, the Hyde Park pavilion had no programmatic precedent in history. Never before had such an utilitarian structure been used to harbor an international exhibition. Perhaps this is so because the mechanized aesthetics embedded in its form was inhuman – a fact attested by its controversial effect on the Victorian mind, which was used to associating the positive developments of art and science to the familiar values of humanism established by the doctrine of classicism (Wittkower 1971). That such a monumental expression of glass and iron emerged from the workshops of England, the birthplace of industry, at such a late stage might surprise the historian of technique, given how long it took for industrial materials to find their way into civil architecture.

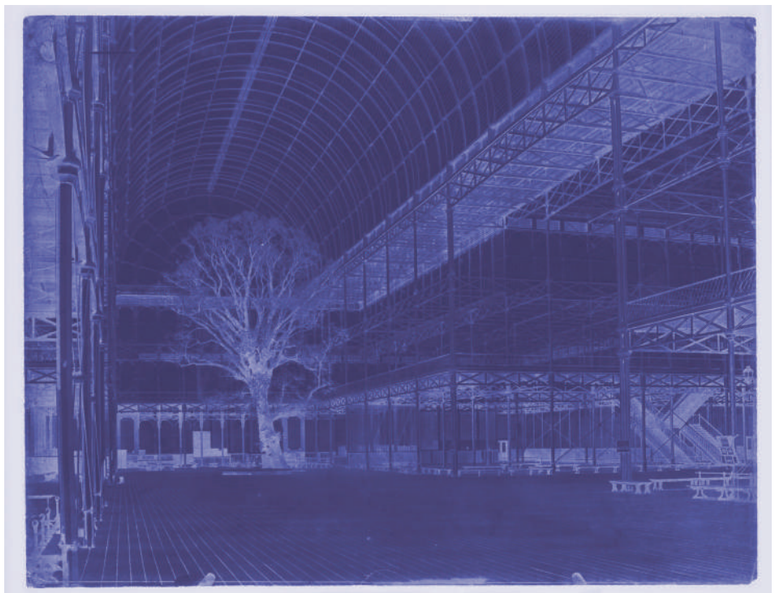

Fig.1 - Crystal Palace, Hyde Park, Transept. Papar negative photographed by Benjamin Brecknell Turner, 1852.

By 1851, already three generations into the industrial revolution, the timing for an epochal revelation was just right, 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, 253). The Crystal Palace marked a critical turning point: its unapologetic use of machine-made components signaled a profound shift in the logic of building. The delayed emergence of this specimen, despite decades of industrial capacity, echoes Bernard Stiegler's insight that "techniques evolve more quickly than culture" (Stiegler 1998, 12). In other words, disruptive innovations in the technological realm always have a phase of slow metabolization prior to wider social use becoming the norm. In this regard, the Crystal Palace is the documented case of a decisive tipping point in one of the oldest disciplines of humankind. After the demonstration of industrial manufacture applied to the arts of building was persuasively achieved, modernity in architecture could be fully admitted.

The transformation of standards operated by Joseph Paxton was not only limited to the materiality of construction, but also included the very logic of architectural conception. This Englishman was the agent capable of manifesting in large scale a way of thinking that had been maturing on the other side of *La Manche* for many decades, but which seldom saw the light of day as materialized buildings. This lineage includes the typological proposition of Antoine Quatremere de Quincy, the modular systematicity of Jean-Nicolas-Louis Durand, the platonic classicism of Étienne Louis Boullée and the neo-gothic rationality of Eugène Viollet-le-Duc. If *French revolutionary architecture* was effective in conceiving a robust theoretical framework for the future, it was the English industrial setting which ultimately allowed for the concretization of a new way to erect buildings. The effect caused by this is succinctly expressed by Kenneth Frampton, when he writes that: "The crystal palace was not so much a particular form as it was a building process made manifest as a total system [...]." (Frampton 2007, 34).

By approaching space with the pragmatic 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 its static 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 assembled, used and dismantled, it could be reassembled with both a different layout and volume by simply rearranging its components. In effect, this virtual possibility became actualized as relocation and redesign was precisely what happened as the pavilion moved addresses in 1852. In the aftermath of the Universal Exhibition, the Crystal Palace was transferred to Sydenham Hill, where it stayed until the structure was destroyed due to a fire in 1936. The relatively conservative layout of its second iteration barely matters for the current argument, since flexibility does not automatically guarantee avant-garde design. Following Frampton's interpretation, the most revolutionary aspect of this experience was not the form that the building assumed *per se,* but the possibilities afforded by its tectonic system, or, in other words, its *formlessness*.

STEVE PAXTON

In 1972, within the context of wider progressive cultural shifts related to civil and social rights, a group of young artists led by choreographer Steve Paxton created what was to be known as Contact Improvisation.[1] The development of this form was directly influenced by avant-garde explorations that blurred clear distinctions between authorial gestures and the expressions of the everyday. In fact, a genealogical link can be traced from John Cage and Merce Cunninham's experimentations with chance at Black Mountain College to the display of the ordinary by the young Paxton with the exhibition of the piece *Satisfying Lover* (1967) at the Judson Church Group. The early experiences in the career of the choreographer would influence his aesthetic vision and steer it toward the disorganization of expectations. In general terms, the common aspect behind these approaches could be described as bringing attention to whatever was already present, but which was for the most part overlooked.

According to the first generation that took part in the invention of Contact Improvisation, 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.[2] 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. More than 50 years later, this practice still proves to be a generous gateway for reflections that reach far beyond physical movement. From a methodological point of view, perhaps such fecund character owes to the phenomenological-like approach of this form, which is based on drawing attention to perceived experience in order to set forth refined relations – both intrinsic and extrinsic to the observer.

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

Fig.2 – Steve Paxton and Nancy Stark Smith, performing with Freelance Dance, Northampton, MA, 1980. (In the background, left to right) Lisa Nelson, Daniel Lepkoff, Christina Svane. Photo by Stephen Petegorsky.

different arrangements so they can jointly respond to gravity (Fig.2). 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.

Although the questions that lead to the formulation of Contact Improvisation were not explicitly ontological, Paxton's inquiry can be read as an *avant la lettre* investigation in agentic symmetry. CI's approach was to flatten the hierarchy between bodies who shared common motion so they could discover how to move about as one. With regard to the distribution of agency, this method was particularly productive in the sense that, by putting individual deliberation aside, the resulting event could not be explained away by attributing its cause exclusively to one entity or another. More dynamic than that, the spawning root for the shared path was a form emanating from the encounter itself, and, in this regard, something completely unknown to practitioners beforehand.

As an embodied proposition, Contact Improvisation revealed the latent potential of co-implication between parts of a relation. Its impact was not merely ethical – it also expanded the field of possibilities available to the participating bodies. Each encounter within this dance generates openings that are contingent upon the specific constellation of elements present at a given moment. These emergent properties arise not from isolated parts, but from the dynamic interplay among them. With time and practice, this reciprocity becomes a reliable conduit for creative feedback – an improvisational current born from reciprocity and finely attuned to the mutuality of Newtonian physics.[3]

PAXTON AFTER PAXTON

The connection between Joseph Paxton and Steve Paxton is not one of direct influence, but of parallel emergence – an analogy born not from shared lineage, but from similar methodological instincts. In its embryonic sense, analogy implies different origins that give rise to comparable functions – which aptly characterizes the relationship proposed here. Both figures engage the virtual-actual pair through systematic composition: a method by which a wide range of variation can arise from a minimal set of rules. Their radicality lies in a shared sequence of operations: (a) affirming the constraints of a system, and (b) catalyzing contingent differences through feedback. In this way, form is not imposed but coaxed into emergence.

On the one hand, Joseph Paxton revealed the structural intervals of his bearing system as a compositional logic, arranging modular components – such as pillars and trusses – according to the spatial constraints of the site. Each iteration of the Crystal Palace was shaped by the interplay between internal system constraints and external demands, including programmatic requirements and topographic conditions. On the other hand, Steve Paxton embraced gravity and friction as external forces acting upon the body, conceiving a dance form in which performers engage spontaneously with these constraints. Using available surfaces – whether the floor or one another – dancers respond to tactile cues, navigating motion through mutual sensitivity and embodied negotiation. From a conceptual standpoint, both systems create a virtual space for action grounded in necessary constraints. Specific configurations are not preordained, but emerge as inevitable responses to the conditions at hand. Could Steve Paxton's proposition offer architectural insights beyond the standardized modularity pioneered by Joseph Paxton?

The transposition of Contact Improvisation's implementation to architecture quickly encounters some obstacles, but it is not entirely infeasible. The greatest hindrance and benefit of such an undertaking has to do with the political relevance of the redefinition of the author's role promoted in the 1970s. If, in CI, formal dynamics arise from the transition of physical supports, it is evident that architecture cannot do without static stability. Thus, the possible mobility that this discipline can afford does not refer to the bearing system, but lies in the programing of uses, the specifications of site and the typification of building elements, all of which are capable of informing architectural form. Within this framework, the architect's role shifts from that of form-giver to one who responds to internal and external constraints as a dynamic way to articulate ever-changing solicitations.

Amid the time-scales of ephemeral performance and perennial edifices, the rhythms of dance and architecture could not be more distant from one another. Thus, the movement of a building must be understood by its successive transformations in time, which usually occur in a slow and dilated manner. With this in mind, a project systematized around the idea of *formlessness* is capable of producing a design that, by forgoing much precision in attributing a form tailored to a particular function, is capable of being transformed without having to conjecture the future with crystal clarity. This is not a new observation, since precisely this point has been the object of Also Rossi's critique of modern functionalism (Rossi, 2001).

To sum up this point, the notion of *formlessness* as developed here does not imply a disregard for the physical appearance of architectural outcomes. Rather, the flexibility it entails stems from a deep engagement with the dynamics of a given milieu. Form, in this view, becomes receptive to the unavoidable forces that emerge from context. In this light, perhaps the most significant translatable element from Contact Improvisation to architecture is its underlying motivation: actions arise not from a premeditated will, but from a desire to explore the evolving relationships between the multiple agencies involved in a building's life. Based on this, architecture can be rethought as a configuration that voluntarily unfolds in time in correspondence to physical and/or social phenomena, whose order is always to change (Brand, 1995).

FORM AS FORMLESSNESS: THREE CONTEMPORARY APPROACHES

The ideas explored thus far can be grounded in recent architectural practice through three distinct case studies. These examples were deliberately chosen to reflect a diversity of scales – both in terms of architectural offices and project typologies. They range from large-scale housing interventions in Paris, to a landscape transformation in Geneva, and a temporary multi-purpose pavilion in Rio de Janeiro. Correspondingly, the practices behind them span from the internationally renowned Lacaton & Vassal, to the mid-sized studio of Georges Descombes, and the more intimate practice of Carla Juaçaba.

I. Lacaton & Vassal

The French duo formed by Anne Lacaton and Jean-Phillip Vassal developed a reputation for their pragmatic approach. Indeed, sometimes critical attention has even been diverted towards what is ultimately a side-effect of their *modus operandi* – the remarkable aesthetic expression coming from the austere application of building materials. However, the parsimony of means practiced by the pair does not exist as an aim to achieve formal expressivity *per se*, but arises from the intention to attain more possibilities from a limited set of resources. "We never start from the idea of building cheaply, but ask how we can achieve everything we want", says Anne Lacaton (Lacaton, Vassal 2009, 12).

Among their recurring investigations is the study of greenhouse systems with the objective of transposing their principles into the urban building context, a theme anticipated in architectural modernity by Joseph Paxton. However, the use of agricultural components for the construction of domesticity is a step further in the direction of typological hybridization, which has been steadily rehearsed by the pair since *Maison Latapie* (1993).

Overall, LV's approach operates according to some paradigms that are more or less usual in contemporary discourse. Yet, the particularity of their work lies in how they transpose utilitarian thinking into practice in a way that is resolutely uninhibited. By following possibilities like the use of industrial materials or the adoption of programmatic ambiguity as a means rather than an end, their objective, in their own words, is that buildings "respond as best as possible, and for as long as possible for what they are intended for, while clearly expressing the possibility of their change" (Lasalvia 2021, 313). Thus, the transformation of their own work by others is embraced as an inevitable horizon as time unfolds because "[a]rchitecture is made to be lived, inhabited. Life is therefore an intrinsic part of it" (Lasalvia 2021, 313).

This responsiveness is especially evident in their transformation of the *Bois-le-Prêtre* housing block in Paris. Rather than replacing the existing structure, they enveloped it in an exoskeleton of flexible space – balconies, winter gardens, circulation areas – that could be appropriated and reconfigured by its inhabitants (Fig.3). Here, the role of the architect shifts from form-maker to enabler, designing not precise outcomes but frameworks for occupation.

The expansion of space, defended by Lacaton & Vassal as a condition for the exercise of freedom, arises from the recognition that the possibility of redefining architecture must remain open to all. Their approach frequently involves exceeding the minimum square footage required by the program, deliberately creating room for unforeseen future uses. Juan Herreros has an assertive opinion on this matter:

> The realization that almost no functionalism makes sense allows us to discover that, just like an office or a classroom, the objects in a living space can be loose, not boxed in, not 'integrated', not fitted; [...] In short, the idolatry of astutely resolved – and blocked – space makes no sense as an organizational argument because it is not a question of finding a solution to an enigma hidden in a list of requirements but of reinventing the variables with which the building will cope with future changes and experiments (Herreros 2015, 393).

Fig.3 - Transformation of Bois le Prêtre (exterior). © Druot, Lacaton & Vassal.

Fig.4 - Transformation of Bois le Prêtre (interior). © Druot, Lacaton & Vassal.

In this light, Lacaton & Vassal's work exemplifies a form of architectural *formlessness*: a practice that resists a precise finality, embraces contingency and invites participation. Much like Contact Improvisation, their architecture is not structured around prescription, but looseness – as spatial agency is distributed, form becomes an emergent property of lived experience (Fig.4). By favouring square footage over familiar materiality, their work aims for accessible simplicity and rawness. The justification for this is based on the understanding that some of the project's decisions (such as finishes and the attribution of uses) are not necessarily up for the architects to decide and are therefore deliberately left open. Thus, the pair enthusiastically acknowledges the fatality that architecture will always be transformed by its users, and, based on this discernment, conceive their designs in a way that can both facilitate and potentiate this inevitability.

II. Georges Descombes

"Doing almost nothing" (Treib 2018, 12) is a continuous motto in George Descombes' work. The majority of the matter integrated by this architect is mental rather than physical. His interventions, particularly in the landscape, are defined not by imposing new forms, but by articulating latent ones. His work draws from what already exists, often revealing buried histories and forgotten rhythms through carefully placed gestures. As Descombes himself suggests, citing historian Patrick Boucheron, his practice is less an archaeology of the territory than a search for "the still active part of the past" (Lasalvia 2021, 315).

For Marc Treib, who also quotes the architect's words, "Descombes approaches the landscape by "pay[ing] attention, without any nostalgia, to what [are the] oldest [features] there," considering them to be the foundation upon which to build a new landscape" (Treib 2018, 17). Thus, Descombes not only enunciates what exists in the present, but also what has already disappeared – as if his intervention was an abstract map made to scale, superimposed on the place. Elissa Rosemberg describes Georges Descombes' cartographic impulse, specifically with regard to an intervention in Geneva's Lancy Park through a passage that elucidates the general reasoning behind his thinking:

> This strategy depends on articulating differences between the new and the old, and making the multiplicity of layers legible and resonant. There is no single narrative of the place – no single positioned viewer, but rather a juxtaposition of fragmentary conditions and spatial sequences that suggest a multiplicity of viewpoints. To insist on describing the condition of absence is, ultimately, to cast doubt on the power of seeing as a means to knowing; knowledge is partial and incomplete and subject to change (Rosenberg 2002, 20).

In effect, actual changes in knowledge paradigms from hydraulic sciences caused, to some extent, Descombes' most iconic project: the reconfiguration of the Aire River valley on the outskirts of Geneva. Historically, the river had been aggressively straightened – first under engineer Guillaume-Henri Dufour in 1899, then again in the 1920s – leading to increased flooding and ecological instability. In the late 20th century, as environmental paradigms shifted, local authorities sought to reintroduce meanders to the riverbed. But rather than simply restoring a historical path, Descombes' team proposed a more open-ended solution.

Their strategy, *Superposition*s, allowed the river to redefine its own course through gradual erosion. To accelerate this process without prescribing an outcome, they introduced a diamond-patterned matrix of shallow channels – essentially a launchpad for hydrological improvisation (Fig.5). As Descombes explained, "we just created a deformation, a launching pattern, whose forms address the play between the river flow and the

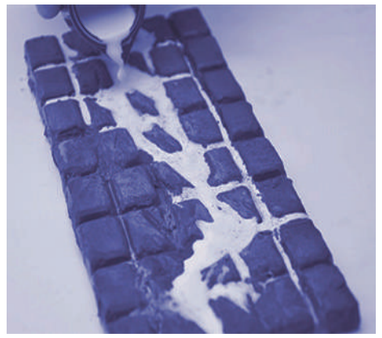

Fig.5 - *Superimpositions* prototype. Georges Descombes [ADR].

prepared terrain" (Descombes 2008, 13). The gesture was precise, yet relinquished control: the river itself became co-author of the design (Fig.6).

This project, like Contact Improvisation, embodies a method of initiating structure without fixing its outcome. It establishes a set of initial conditions – material, spatial, and temporal – and lets form emerge through interaction with dynamic forces. In this way, Descombes' work offers a landscape-based model of *formlessness*: an operation that involves recognising existing agencies in order to integrate them into the river's morphogenesis. This repositions the architect not as controller, but as facilitator of latent processes.

III. Carla Juaçaba

When Artistic Director Bia Lessa was tasked with curating part of the United Nations Conference on Sustainable Development (Rio+20) in 2012, the usual response – erecting large, air-conditioned tents – felt paradoxical. Instead, she invited architect Carla Juaçaba to develop a more contextually and environmentally attuned alternative for the event's temporary structure at *Forte* de *Copacabana*.

Strictly speaking, nothing is inaugurated with *Humanidade2012*. Topping off a rocky cliff with a monumental building is an impetus already present in the early days of architecture, and the fact that the rigorous modulation of its structure contrasts with the teluric voluptuousness of the surrounding topography only reinforces the effects of its artificial figure. Additionally, as far as ephemerality is concerned, Joseph Paxton also designed his pavilion with a malleable metal structure in keeping with the temporary nature of a project conceived for an international event. Also, the aerial display of infrastructure and the free adaptation of the programme to the structural interstice had been previously rehearsed by Cedric Price with the *Fun Palace*[4] and carried out in collaboration with Renzo Piano

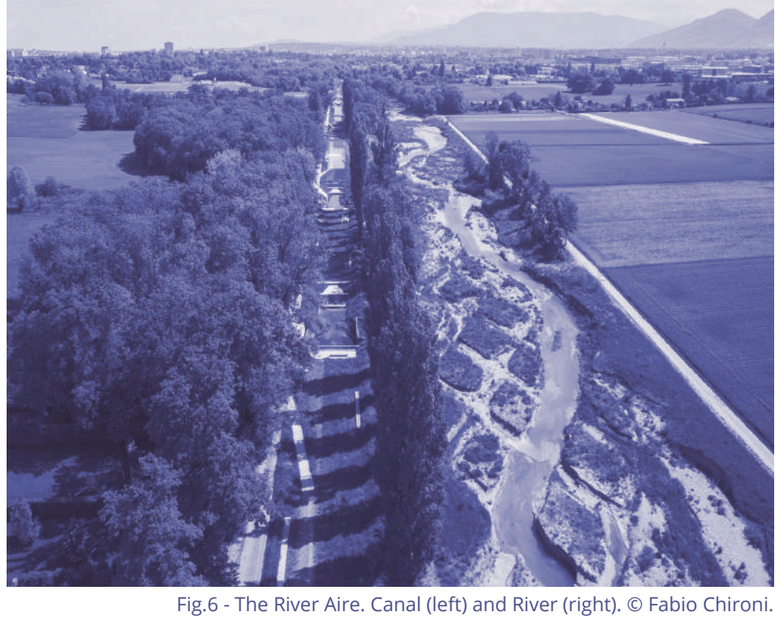

Fig.6 - The River Aire. Canal (left) and River (right). © Fabio Chironi.

with *Centre Pompidou*. And, last but not least, Juaçaba would not be the first Brazilian architect to adopt scaffolding as an architectural element in its own right – this was done half a century earlier in São Paulo by Lina Bo Bardi with *Teatro Oficina.*

As such, the exceptionality of this case study lies above all in the dexterity with which all of these familiar subterfuges were deployed. In other words, the substantial result did not come from an attempt to obstinately dominate the circumstances with the ambition to transcend the possibilities presented, but arised from the viable articulation of what was already present. According to the architect, the building emerged from what was "already there" – an ephemeral platform built on site, which was just prolonged and extended. As the structure was permeable to wind and light, it presented its "very evident condition of fragility," as she noted in an interview (Lasalvia 2021, 316).

Because the structure relied entirely on standardized, reusable components – including more than 7,000 supports anchored with scrap wood – it could be erected quickly and dismantled without a trace (Fig.7). In fact, the versatility of the formal solution allowed the project to be transposed to another *topos*, not as an object, but as an idea.

The speculative project, *Ministry of All*, located on *Esplanada dos Ministérios* in Brasilia, is based on the same tectonic system as the pavilion (Fig.8). However, in its new imagined context, it mimics the shape of the buildings around it. Although this transposition remains a virtuality, it demonstrates an architectural conception that lends itself to different demands. In this case, this doesn't stem from accommodating multi-purpose functions within a closed form, but through the malleability of a system that changes according to the circumstances. Though unbuilt, this iteration demonstrates that what Juaçaba developed was not just a pavilion, but a system: one capable of adaptation across contexts and scales.

FINAL CONSIDERATIONS: THE EMERGENCE OF FORM

In general, architects are anxious to seek form as an end – not acknowledging that it can emerge from a designed process. Because buildings must respond to programmatic, structural, and material constraints, architectural thinking can become overly fixated on the attribution of form – treating it as a static resolution rather than a temporal negotiation. In doing so, designers risk solidifying configurations of space that cannot adapt to the evolving needs of life, thus subjecting their work to premature obsolescence. While fixed-form architecture has produced many remarkable examples, its rigidity can leave it out of sync with shifting social, environmental, and experiential conditions.

An alternative approach gaining urgency in recent decades involves treating form not as a fixed object, but as an open system capable of adapting to changing demands. In this view, the pursuit of form becomes the pursuit of *formlessness*: a design attitude that privileges relationships, responsiveness, and transformation over formal closure. The challenge in pursuing this path lies in the fact that it runs in the opposite direction established by Western architectural tradition, which has the notion of stability (*firmitas*) as one of its pillars.

However, a great challenge also means a great opportunity, since a whole new horizon remains to be investigated if *form* is understood as a perpetual metamorphosis. Ignasi Solà-Morales points precisely to this prospect when he describes the idea of a *liquid architecture*:

> An architecture based on the intuition of becoming as *durée*, as multiplicity of the experience of spaces and times, must be founded on this multiple continuity in which events do not fix objects, nor delimit spaces or stop times. On the contrary, the modern experience of space/time in consciousness reveals continuity and multiplicity, so that what were fixed spaces become permanent dilations in the same way that what were timed times become flows, experiences of the durable (Solà-Morales 2001, 28).

Fig.7 - Humanidade2012 foundations. Carla Juaçaba.

Fig.8 - Ministério de Todos (2014). Carla Juaçaba.

Perhaps one important complement to Solà-Morales idea – as well-crafted as it is – is an emphasis on relations. Form does not emerge from isolated elements, but from the interactions between them. In this context, the concept of relationality becomes instrumental – allowing us to think about latent potentials that may become actualized when the right conditions arise. As Nicolas Bourriaud and others have suggested, contemporary artistic practices increasingly turn toward the dynamics of relation, rather than the autonomy of form (Bourriaud, 2024).

This article has proposed an architectural methodology grounded in the *formlessness of form*: a systematic openness derived from Steve Paxton's development of Contact Improvisation. Through a reading of three architectural practices – Lacaton & Vassal, Georges Descombes, and Carla Juaçaba – it has shown how such a methodology can take shape across different contexts, materials, and temporal scales.

Ultimately, the strength of *form as formlessness* lies in its capacity to change – and thus to remain relevant to the lived experience of space. Whether through the redistribution of agency to inhabitants (Lacaton & Vassal), the integration of natural phenomena into morphogenetic processes (Georges Descombes), or the deployment of standardized systems toward open-ended ends (Carla Juaçaba), the pursuit of *formlessness* offers architecture a way to stay in conversation with context across time.

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NOTES

1. Although Steve Paxton actively sought to decentralize his role in the development of CI, and openly 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 Improvisation's development include Nancy Stark Smith, Danny Lepkoff, Lisa Nelson, Karen Nelson, Nita Little, Andrew Harwood, Peter Bingham and Ray Chung.

2. Steve Paxton describes the experience: "I was in the delicate position of leading a group of students to find within themselves the reflexes and survival to dance a dance I had felt but not seen. A duet with Douglas Dunn during a Grand Union performance. I did not or could not describe to them the nature of my experience. They had to find their own. Doug and I were in great shape. The students were athletically inclined but not trained nor tested. So I got them to move a lot in an intensive period prior to the Webber performances, accepting that whatever we accomplished would be at least a step toward the general idea. Several of that group worked with me for the next 5 years, developing and refining the movement architecture of the dance. I think we did achieve the idea of a specific effect, at last. It was riding touch in the flow of movement. Just that it had first to be proved safe. We didn't have mature examples to see. We had to become the mature examples" (Lasalvia 310, 2021).

3. In a video that summarizes the first decade of Contact Improvisation, Steve Paxton explains: "When we get our mass in motion, we rise above the constant call of gravity toward the swinging, circling invitation of centrifugal force. Dancers ride and play these forces. Beyond Newton's third law, we discover that for every action several equal and opposite reactions are possible. Therein lies an opportunity for improvisation." Paxton continues: "An important aspect of Contact Improvisation is the pleasure of moving, and the pleasure of dancing with somebody in a very spontaneous way. It happens in a framework which considers the body in all its variety as the primary focus from which the mind can draw. With this, the distance is refinable to ever more precise relationships with the physical forces" (Nelson & Contact Editions, 1997).

4. In this regard, Carla Juaçaba explains that "Price was trying to build an image of the future. A rhetorical image, of someone who wanted to foresee it. [...] I think the *Humanidade* Pavilion represents something else: what you can do in each place with what you have and using as little energy as possible. Although the image is similar to the *Fun Palace*, the ambition is from another time" (Lasalvia 2021, 317).

ATLAS

In Presence ATLAS

The UNIVERSITY of Universities (UOU) is an international network of academics from European schools of architecture, collaborating to provide online workshops throughout the academic year for students from different universities who work together remotely and in a collaborative way.

This section of the Atlas shows the work carried out by graduate and undergraduate students in a three-week workshop on the theme of the relationship between body and space. The proposed theme-summarised in the title "Acting/Acted Bodies in the Architectural and Urban Spaces"-asked students to develop an approach from the personal to the collective (or from the particular to the general), starting from their own body and the relationship it establishes with the spaces of their everyday life, to understand critical issues and opportunities and develop scenarios of design transformation at different scales.

The total number of students who participated in this workshop is about 50 and this Atlas is a selection of 7 projects among the 20 presented in the final session. The selected groups are:

- Alexia Ioana Popa, Dina Alloin (Universidad de Alicante).
- Zoia Dolgova, Eva Strobl (Universidad de Alicante).
- Anaís Asensio, Lola Mourenza, Martín López (Universidad de Alicante).
- Shivam Singh, Fathah Mohammed, Gachechiladze Daviti (Politecnico di Milano).
- Eda Altindağ, Kacper Arkadiusz Pietrzak (Politecnico di Milano).
- Diego Díaz Linares, Esther Molina Burguillos, María Sánchez González (Universidad de Alicante).
- Joan Briones, José González, Élia Montagud (Universidad de Alicante).

AIMS

Through an architectural and urban experiential journey, the workshop explored the evolving relationship between the body and space in public and private contexts. Its main objective was to envision design improvements that integrated urban and architectural perspectives, examining how the blend of in-person and digitally mediated reflections shaped the experience of architectural spaces and urban actions. The workshop encouraged participants to reflect on spatial perception critically and consider innovative approaches to enhancing the interaction between the human body and the surrounding environment.

METHOD

Participants were invited to undertake an architectural and urban journey involving both their private and public spaces. They mapped and highlighted the significant places within the body-space relationship and imagined potential design improvements for each site. The workshop encouraged participants to critically assess the in-person and digital dimensions of the architectural space experience and urban-scale actions. The workshop aimed to foster a deep awareness of spatial dynamics through this method, stimulating a creative and responsible approach to urban and architectural design.

Moreover, the applied methodology proceeds from the particular to the general. Understanding the criticalities of one's home-university journey becomes the stimulus for researching similar issues at the scale of the urban compartment to which one belongs and for stimulating design strategies. Such actions, beginning with an attempt to solve local problems, are intended to address criticalities at a broader scale.

TECHNIQUE

Throughout the workshop, various practical and theoretical techniques enabled participants to interact directly with the explored spaces. Multimodal and layered descriptions and interpretations were used to raise awareness of the relationship between the acting body and the space that acts upon it. Participants were encouraged to reflect on critical issues and opportunities for improving this connection

The methodology promoted a creative and reflective approach to addressing everyday challenges related to spatial experience, considering the psychological, emotional, and sensory aspects of their interactions with the built environment.

STRENGTHS

The strengths of the workshop were many. First, it allowed rich cultural exchange among participants from diverse backgrounds. Additionally, the workshop promoted both analytical and synthetic introspection, allowing participants to develop site-specific architectural and urban micro-projects by applying critical thinking to their design processes. Another key strength was the ability to document and present urban and architectural projects effectively, both orally and visually, using various techniques such as freehand drawing, sketches, physical models, virtual models, and renderings. This documentation process enabled participants to explore their projects in depth, adapting them to broader contexts and evaluating their replicability on a larger urban scale.

WORKSHOP STRUCTURE

Phase 1 – Trigger. The first phase involved a graphic-photographic analysis of each participant's personal home-university route. A critical-operational approach was adopted to highlight the limitations and challenges encountered during the journey, not only in physical and dimensional terms but also in psychological, emotional, and sensory aspects related to the body-space relationship. Participants identified a sequence of spaces characterised by specific deficiencies or disturbing elements to be addressed.

Phase 2 – Project. Participants developed a strategy for micro-architectural transformation projects in critical urban spaces in the second phase. The proposed interventions aimed to make substantial and lasting changes to the space, inspired by sustainability and sobriety principles. These interventions were designed to have a controlled yet significant technical-aesthetic impact, ensuring minimal resource use while creating lasting improvements. The approach was site-specific, ensuring that each design was practical and relevant to its context.

Phase 3 – Strategy. In the final phase, design actions were scaled up to the micro-urban level. Participants assessed the potential replicability of the micro-projects developed in Phase 2 if implemented on a larger scale, such as across streets, blocks, or neighbourhoods. These projects underwent adaptations and integrations for broader urban applications.

EVALUATION

Evaluation of the projects developed in the workshop was continuous, weekly meetings were held in which the proposals and drawings were discussed between the students and the coordinating teachers.

Evaluation was based on the following criteria:

- Ability to describe and critically analyse the minimal spaces of everyday life.
- Ability to identify problems and develop strategic scenarios.
- Ability to develop and represent design proposals at different scales.

SCHEDULE

- Workshop Online Presentation / 14th March 2025.
- Classes online UOU / Fridays from 9:30 to 13:30 (CET): 21st March 2025 and 28th March 2025.
- Final Presentation, Face-to-face in Alicante and online / 04th April 2025 and 11th April 2025.

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Skin and Scent: softening the Urban Experience

Alexia Ioana Popa; Dina Alloin

Universidad de Alicante, Spain

As we walked through the streets of Alicante, we became increasingly aware of the city's olfactory landscape. Smell plays a crucial role in how we experience public space—some scents, like the aroma of fresh bread from a bakery, are comforting and familiar.

Others, such as the persistent odor of dog urine, especially in summer, can evoke discomfort and amplify urban stress. This sensory awareness became the starting point for our architectural investigation: how might we design with scent to improve well-being in the city?

We began to question how architecture could intentionally engage the sense of smell, rather than treat it as incidental. Could scent become a tool to shape emotion, reduce anxiety, and foster a more nurturing urban atmosphere? Our attention soon turned to a ubiquitous but overlooked element of the city's façade: the air conditioning unit. These machines are everywhere, protruding from building exteriors, humming in the background—and often leaking water onto the street below. That small, persistent drip became a clue: could this excess water be harnessed rather than wasted?

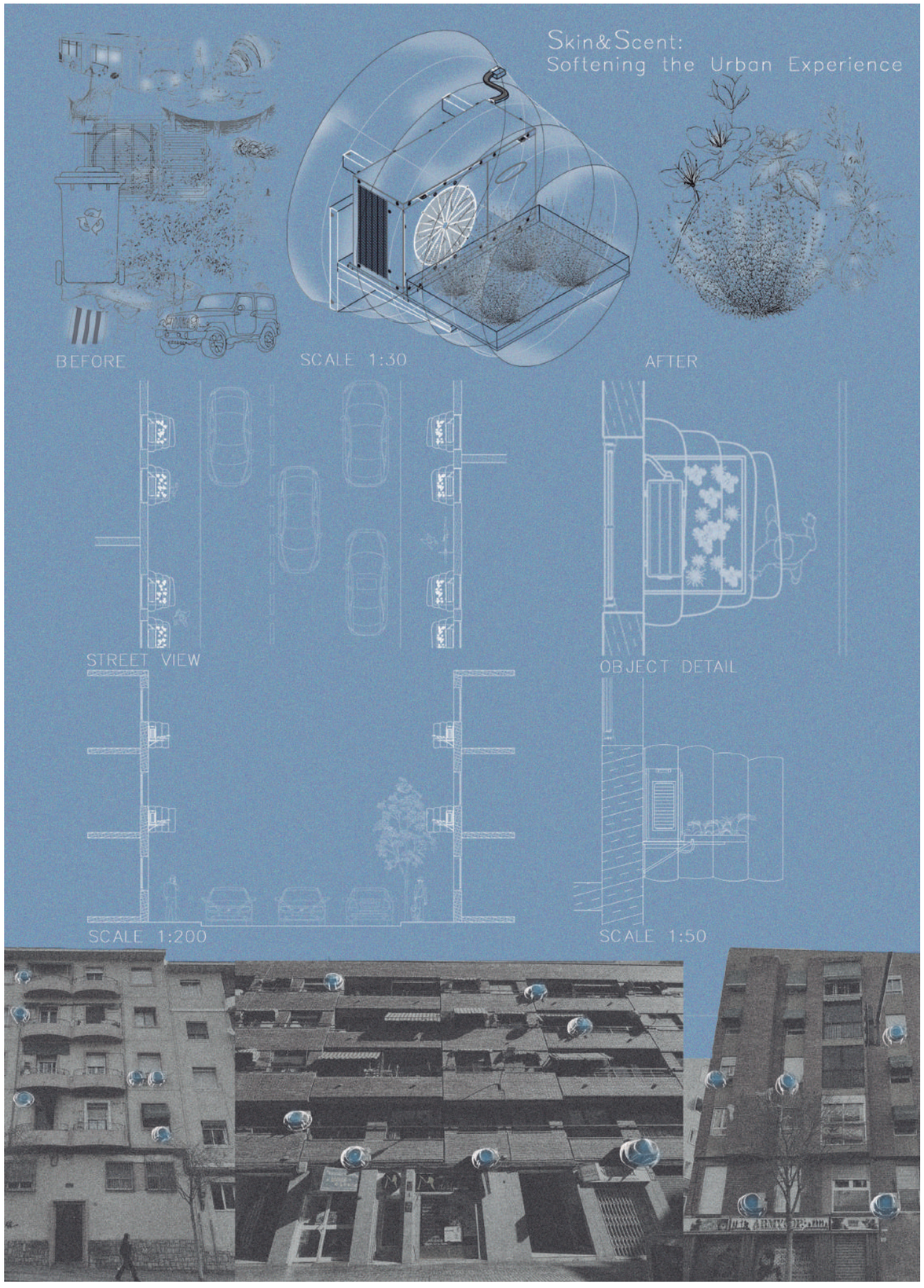
Our proposal reimagines these devices as vehicles for atmospheric care. Encased in transparent, bubble-like PVC structures, these ephemeral micro-installations attach to existing AC units and transform them into sensory prosthetics. Within each enclosure, aromatic plants such as lavender, rosemary, or mint are cultivated, nourished by the condensation and leaked water produced by the units themselves. This creates a self-sustaining microclimate—a closed loop where machine byproducts support natural life, and in turn, scent the city air.

The installation softens both the visual and thermal impact of mechanical infrastructure while introducing a gentle olfactory presence into the urban streetscape. It offers brief, surprising moments of calm—inviting pedestrians to pause, inhale, and feel. Scent, after all, bypasses rational thought and connects directly to the brain's emotional and memory centers, making it a subtle yet powerful design element

By diffusing botanical aromas and integrating greenery into the built environment, our system improves air quality and offers sensory relief. These moments of olfactory pause allow for a more harmonious relationship between body, technology, and city. The installation is lightweight, modular, and adaptable—capable of being implemented in various climates and urban contexts without invasive construction.

Ultimately, our project is a call to expand architectural thinking beyond the visual and structural. It asks us to design for the full range of human perception, to consider care and comfort as essential functions of the built environment.

By transforming overlooked infrastructure—into a source of multisensory engagement, we propose a new kind of urban intervention—one that softens, heals, and reconnects.



Acting/Acted Bodies in the Architectural and Urban Space

Zoia Dolgova; Eva Strobl

Universidad de Alicante, Spain

How does our built environment fuel the subconscious?

The body is us – and our built environment itself contains a dialogue and in that we must question what is being said?

Yet also, how can we use design to integrate people back into the living organism of our cities?

The project began with a simple, repeated experience: our daily tram commute from Alicante to the University. Though nearly identical, our journeys differ by just one stop—highlighting how even shared routines can be subtly personal. This mundane, everyday movement through the city became the lens through which we began to question how the built environment shapes not just our behaviour, but our subconscious experiences.

This point of departure prompted a broader inquiry: in what ways does the built environment engage the body beyond functionality, and through putting our bodies into this space – we could also ask how we could reframe our environment in consideration of the body.

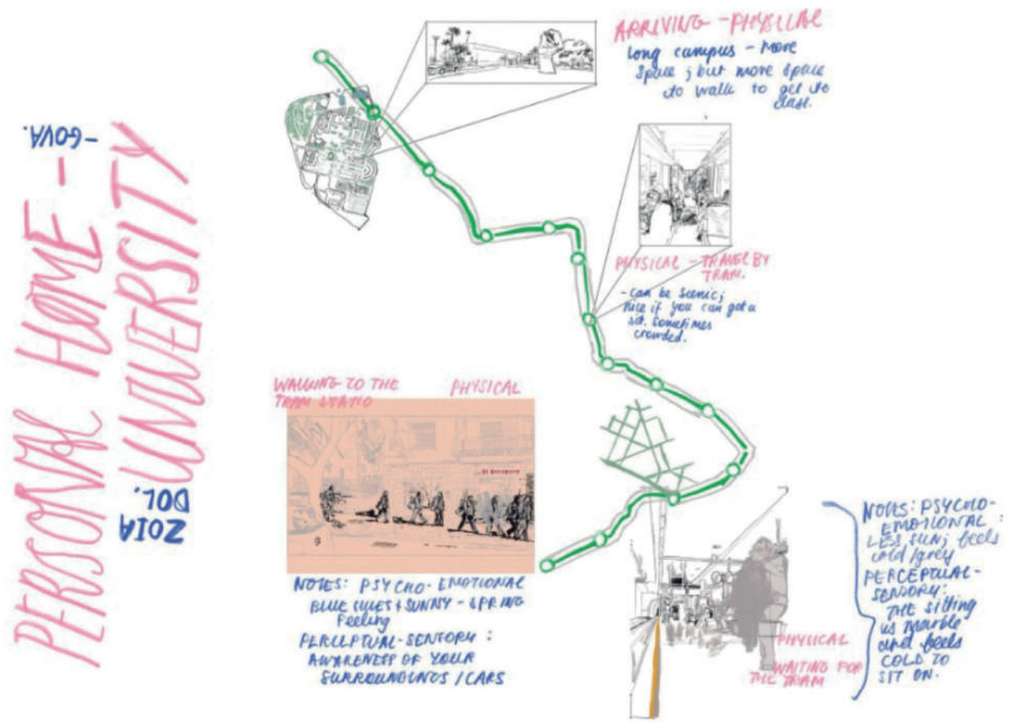
The first site is a tram station underground - enclosed, transitional, possibly isolating, whilst the second site is the restaurant of streets - open, social, possibly chaotic.

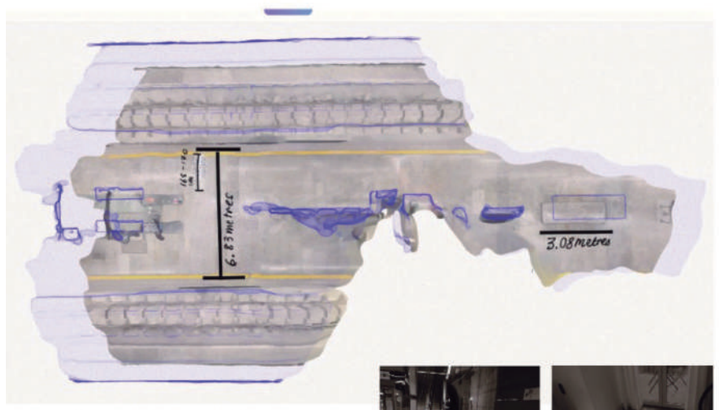
The intention was to explore whether it was possible to create common design strategies that could be used to respond to different body problems in different places in the city, and the need to pick different sites with different issues was to test whether it was possible to respond with mutually inclusive strategies, despite the differences.

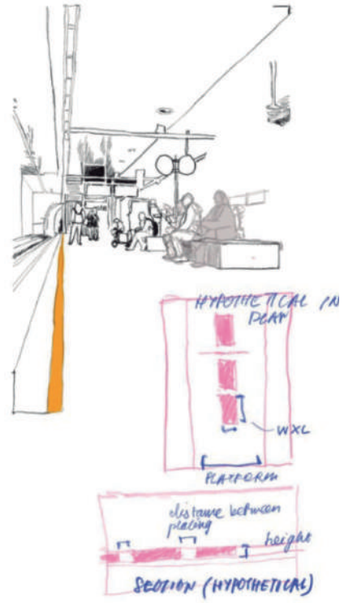
The result of our investigations and response resulted in designing street furniture – our vision and belief that making our public spaces comfortable also makes them feel safer. We firmly believe that the feeling of home and safety are possible in our public sphere - using small, tangible interventions like street furniture to foster broader urban integration and emotional safety.

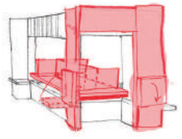
Our common strategies identified to implement into the street furniture design:

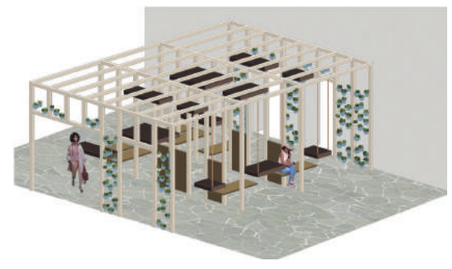
- use of wooden structures to reframe the space and to create human scale
- reating flexible furniture to maximise use of space but creating more opportunities for comfortable seating
- use of greenery to create a sense of calm
- use of warm lighting to enhance a sense of safety in the body
- spaces that contain us.











WIND.that.sculptor

Anaís Asensio; Lola Mourenza; Martín López

Universidad de Alicante, Spain

This architectural intervention draws inspiration from Christo and Jeanne-Claude's iconic project The Gates, where fabric and movement engaged with the natural environment to create a dynamic, ephemeral experience. In this work, the wind becomes a central figure—no longer a passive, external force, but an active participant in shaping space. It animates the architecture, giving life to the fabric elements and transforming the perception of light, form, and atmosphere.

The result is a living, breathing landscape that changes with every gust of air.

The Concept: Fluid Boundaries Between Space and Nature. The project is composed of a series of semi-open pavilions defined by suspended, lightweight fabrics. These elements are not static; they move, bend, and respond to the surrounding environment. As people walk through, they are immersed in a space where boundaries dissolve and reconfigure with the rhythm of the wind. The fabric offers a sense of enclosure without isolation—allowing light and glimpses of the landscape to filter through its translucent surface.

On calm days, it drapes gently, creating a peaceful, contemplative environment. When the wind rises, the fabric comes to life, dancing and reshaping the space around it.

Wind as Sculptor of the Sky. Unlike conventional architecture, which resists change, this project embraces impermanence. The wind sculpts the air, creating waves, ripples, and shifting shadows. The result is not just a visual transformation but a multisensory one. Visitors feel the breeze on their skin, hear the gentle rustle of the fabric, and witness the sky become a canvas of movement. Each moment is unique—each experience shaped by nature's hand.

Interaction and Sensory Perception. The installation invites visitors not only to observe but to participate. As they move through the space, their presence affects how the fabric flows and shifts, creating a dialogue between body, material, and atmosphere. The project encourages:

- A sense of rhythm, as the fabric moves like a natural choreography.
- An awareness of impermanence, where forms are fleeting and constantly changing.
- A deeper connection with nature, by making the invisible forces of wind visible and tangible.
- A spirit of playfulness, as the unpredictability of movement brings surprise and delight.

Materiality and Light. The choice of material is essential: a lightweight, semi-transparent red fabric allows for the interplay of light and shadow, creating a warm, vibrant atmosphere. Red, traditionally associated with passion and vitality, contrasts with the surrounding greenery and accentuates the movement of the fabric. Throughout the day, the mood of the space shifts—from soft, glowing mornings to dramatic shadows at midday and warm, golden hues at sunset.

A Space to Gather and Reflect. More than a sculptural gesture, this is a social and reflective space. It invites people to gather, rest, and connect—not just with each other but with the landscape around them. By celebrating the wind, this project transforms architecture into a poetic medium, where nature becomes co-author and air becomes art.

Street as Artform

Shivam Singh; Fathah Mohammed; Gachechiladze Daviti

Politecnico di Milano, Italy

Home is more than a place, it is a feeling. It evokes safety, freedom, and identity. Yet the moment we step outside, something shifts. The world grows louder, scents change, and the city pulses with movement. With each step, we too begin to transform, we listen with our hearts, see with our feet, and feel with our whole bodies. The daily journey from home to Politecnico di Milano becomes more than a commute; it is a passage through sensory and psychological thresholds. As we move through the urban landscape, it reshapes our perception in subtle, powerful ways.

Transition.

In the linear park, time slows bodies move gently, shadows play through the trees, and voices soften. But as we re-enter the street, the city surges back. Light fractures across glass and stone, the scent of fresh bread spills into the air, and rhythms quicken with footsteps and spinning wheels of cars. The street becomes more than a path, it is a living canvas of sound, scent, and motion. Near the university, this vibrant flow is interrupted. High, unresponsive stone walls and clusters of parked cars dominate the sidewalks. Behind the barriers, construction looms, detached from the life around it. Inspired by the contrast, we reimagine this space, allowing the sidewalk to breathe, removing obstacles, and inviting people to shape the street with their presence.

Proposal.

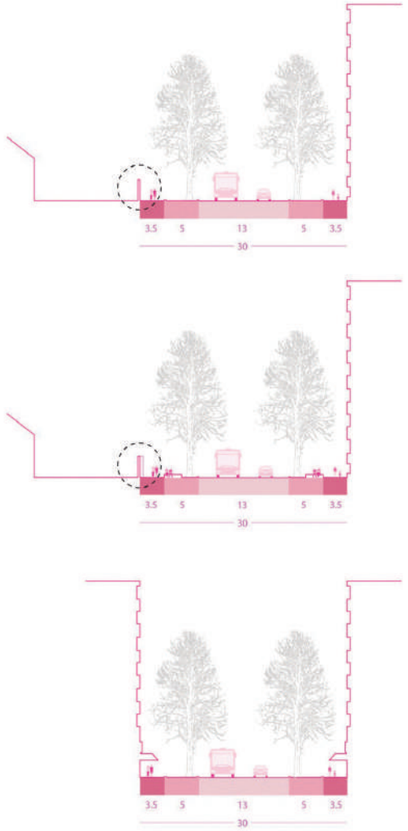
We propose transforming these walls into responsive, interactive surfaces-architectural elements that engage both body and senses.

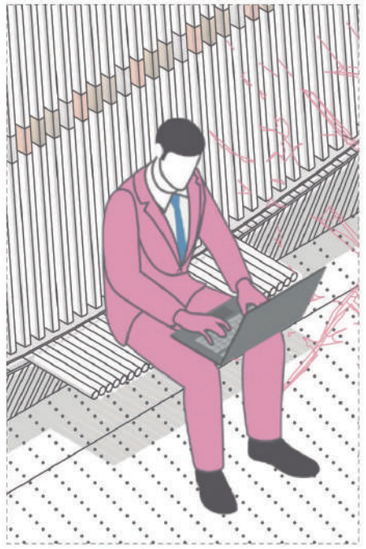
Sound. The walls, embedded with sound-responsive elements, come alive through touch and movement, composing a dynamic and ever-changing soundscape born from everyday gestures.

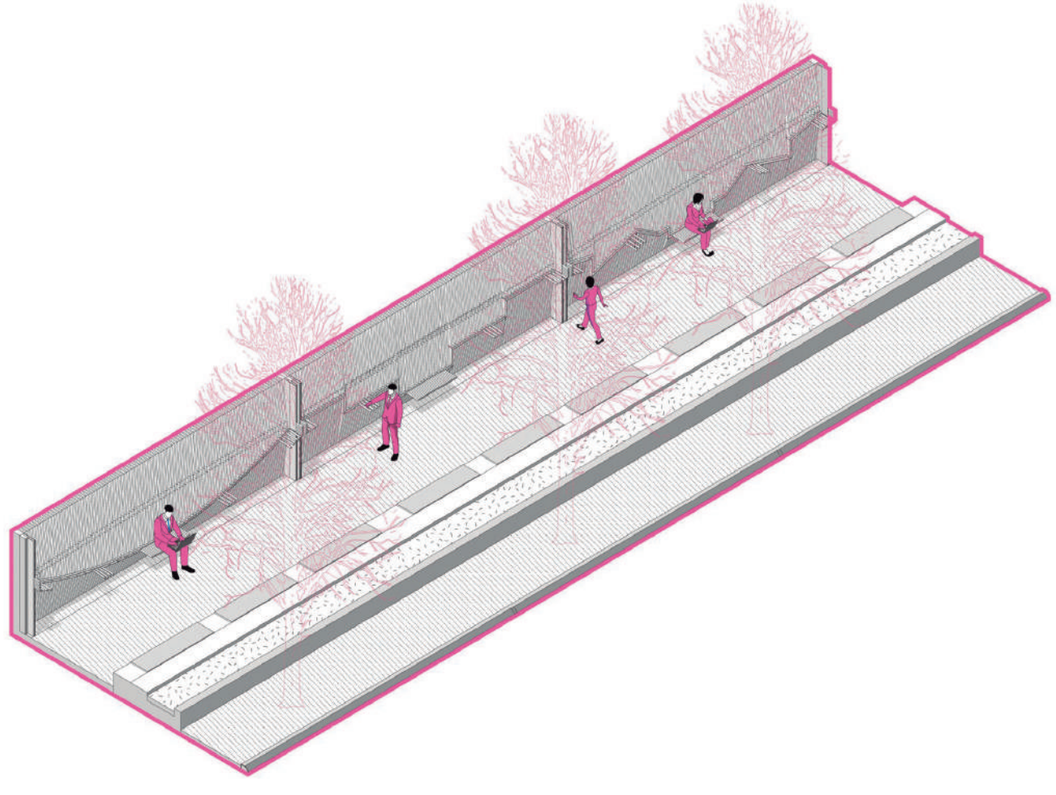
Visual Perception. Contrasting materials and shifting colors respond to light and perspective, captivating the eye and inviting moments of pause, reflection, and discovery.

Physical Activity. Varying wall heights encourage playful interaction across ages, transforming casual movement into a shared, spatial performance, where passersby become participants. To deepen this sensory dialogue, we designed a system of modular segments that host movable rods, slender tools of “participation”. Carried by users and drawn across the walls, these rods animate the surfaces with rhythm and resonance, allowing each person to leave an ephemeral imprint of sound. In designated zones, the rods evolve into public furniture, benches, ledges, and platforms blurring the line between infrastructure and invitation. These elements offer students and local people to sit, gather, eat, or rest, reinforcing the street as a social landscape shaped by movement, memory, and shared presence. Our materials were chosen not only for their appearance, but for the voices they carry—everyday elements found in our homes, often overlooked, yet rich with expressive potential. Aluminum sings in bright, high-pitched tones, light, agile, and playful. Brass resonates with warmth, reflecting both sound and light in golden richness. Copper brings a mellow, grounding depth, a soft tone that invites calm. Bronze, speaks with a deep, ancient resonance.

In this vision, the street ceases to be a passive conduit. It becomes an active partner in urban life, a space that listens, speaks, and plays. A place where architecture transforms walking into a sensory dialogue and a human experience.







Mind:Body:*Space*

Eda Altindağ; Kacper Arkadiusz Pietrzak

Politecnico di Milano, Italy

When we think about our daily route, it's easy to fall into routine - walking mindlessly from one place to another, disconnected from the journey itself. But what if we could reclaim that connection? What if we imagined ourselves not as separate observers, but as part of the spaces we pass through - moving with them, not just within them?

This is where the relationship between mind, body, and space unfolds. It's not just about looking at our surroundings, but engaging with them - feeling the ground, the air, the movement - letting space affect us as much as we affect it.

This idea formed the core of our intervention along the route. Rather than ignoring the subtle disconnections we experience in daily movement, we highlighted them, not by drawing lines, but by softening them. Our project unfolds as moments that invite presence, slowing the pace and drawing attention to texture, rhythm, and silence. We do not aim to redefine the path, but to reawaken the senses within it - to suggest that the boundary between self and space is never fixed, but always in motion, shaped by presence and perception.

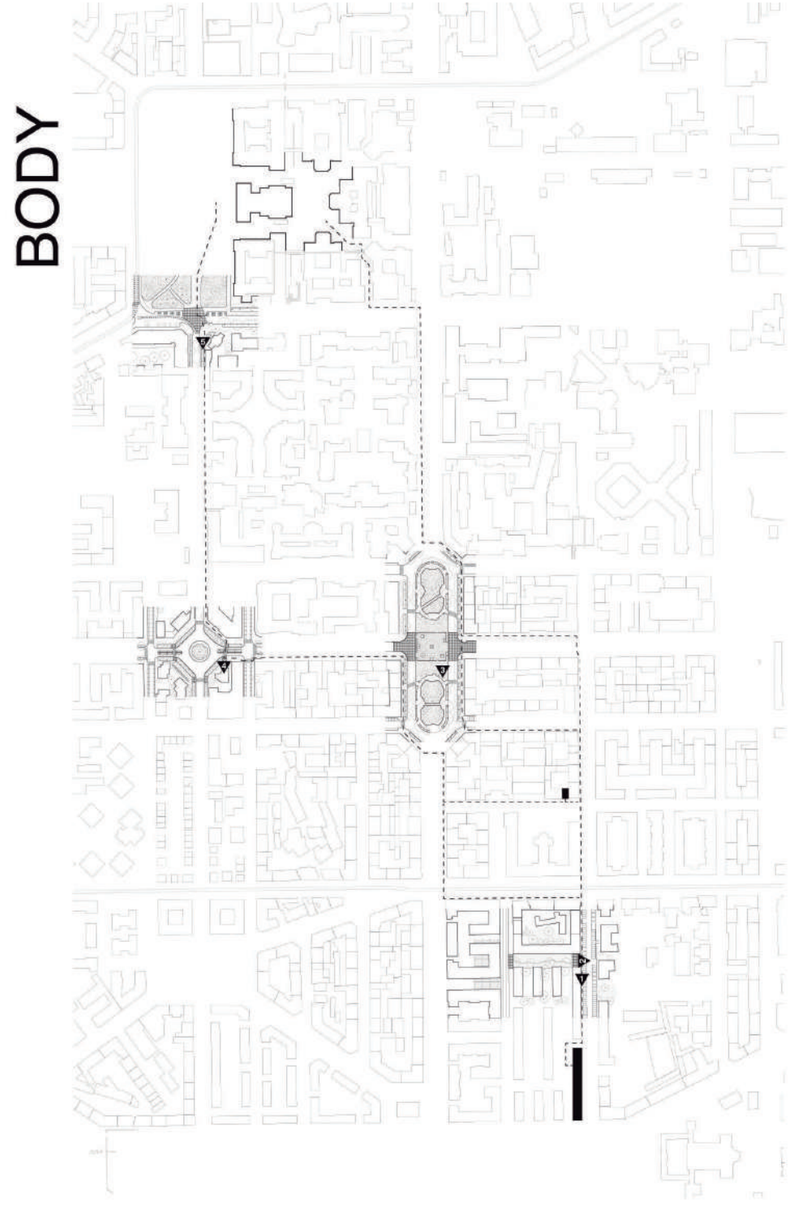
Archetypes are central to this exploration. They are universal symbols and images in the collective unconscious that shape human experience. In our case, they emerged not from theory alone but through walking, observing, and sensing, shaped by emotional responses to the spaces we moved through. From our daily journey, we began to map five archetypes: Current, Transition, Tension, Time, and Gate.

The Current is the boundary stretching along the path - a directional flow by which we are carried. Transition appears in elements like stairs or crossings, where boundaries shift and space moves with us. Tension is felt when movement is interrupted - blocked by views, obstacles, or rhythm. Time is sensed in the changing seasons and conditions - reminders of impermanence. The Gate is envisioned as an open boundary, a threshold signalling a shift in atmosphere or spatial character.

We propose a new archetype: the bridge. More than just a structure, it symbolises connection and fluidity, encouraging a conscious journey that blurs the boundaries between different spatial states. In the context of Milan, this responds to overlooked urban spaces - fragments that fade into routine and lack sensory engagement. We see these moments as opportunities. We aim to awaken awareness through small, intentional interventions - creating points along the path that draw body and mind into presence.

Shifting pavement materials - stone, gravel, or partial depaving - creates a richer sensory experience. Improving road connections releases tension caused by restricted movement. Opening previously gated green spaces transforms barriers into open boundaries. Guided by our archetypes and the symbol of the bridge, these interventions invite a new reading of the route, not as a fixed boundary, but as a continuum of blurred thresholds. With the photomontage technique, we reimagined how the path becomes a site of awareness, where the principle of Mind:Body:Space can be felt, lived, and understood.

BODY



SPACE

MIND

Recycled Meeting Points

Diego Díaz Linares; Esther Molina Burguillos; María Sánchez González
Universidad de Alicante, Spain

Urban routes are often seen as mere paths from one point to another. However, this project proposes viewing them as places in themselves, living spaces where pause, movement, and interaction coexist. Instead of focusing on a building, we began with a forgotten fragment of the city: a narrow stretch between the blank wall of a supermarket and a row of recycling containers. A space defined more by its neglect than by any architecture.

This area, previously associated with unpleasant smells, narrow sidewalks, and a monotonous atmosphere, becomes an opportunity to rethink the urban experience. What was once only a place of passage transforms into a space for connection, between people, species, and materials.

The intervention starts with a symbolic gesture: redesigning the recycling containers. Each one is inspired by the material it collects. The glass container is made of colorful recycled fragments. The paper bin adopts soft, curved forms reminiscent of egg cartons.

The organic waste container is covered in living vegetation, and the plastic one is built from repurposed cans. The waste, once invisible, now becomes expressive and present.

Between these containers, vaulted structures span the sidewalk, creating four distinct segments: a dome of glass, one of plants, another of cardboard, and one of aluminum cans. These are not just recycled forms, they transform the street. They offer shade, filter light, and invite moments of pause. The existing trees become structural columns, and a subtle substructure connects the whole, building a continuous narrative.

The supermarket wall, previously mute and indifferent, is now activated. Small service windows propose symbolic exchanges: bottles for bottles, newspapers for paper. The building, once passive, becomes an active agent, responding to civic actions outside.

This proposal is represented in an axonometric section that reveals the entire sequence: containers, domes, vegetation, and a reimagined façade. The space, once fragmented and neglected, now gains coherence, rhythm, and meaning. No longer a leftover corridor, it becomes a piece of micro-urban architecture where recycling becomes a shared experience.

This project doesn't aim to impose fixed functions. Instead, it generates conditions for new uses to emerge organically. The sidewalk, once ignored, becomes a space to observe, to linger, and to interact.

Recycling shifts from an isolated act to a catalyst for social exchange. And most importantly: the pedestrian regains priority. Through this transformation, those who walk are placed at the center of the experience. The space is no longer a void to be crossed quickly, but a sequence to be explored, inhabited, and enjoyed. Function blends with feeling. Architecture no longer dictates, it invites.

What was once just a path is now a place.

UNISTOP is not just a stop

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UNISTOP is not just a stop. It's an urban manifesto.

A crossroads of architecture, technology, desire, community, and functional madness. Instead of waiting for the TRAM, here you stop to live. Seriously. UNISTOP is a station where time dissolves, and new rules emerge. A capsule of expanded reality where you can train, cry, fall in love, get tutoring, plant a tree, or scream into the void. All at the same time. Or do absolutely nothing. It's your choice.

Feel like moving?

There are punching bags to release your rage, pull-up bars, and calisthenics stations—even weights for those who refuse to pause their physical progress, even at a tram stop.

Want to stop the world and step off?

We've got massage tables, hammocks, and a terrace-style chill zone where you can sip a beer with friends while waiting for... the tram? Life? Nothing?

For those in need of an emotional space, there are capsules. But not just any capsules: The Love Capsule, for intimate or romantic encounters; The Stress Capsule, to let it all out and breathe; The Scream Capsule, to scream, unfiltered; The Read Capsule, to isolate yourself from the noise and read; The Sleep Capsule, if life has hit you too hard; The Weed Capsule, discreetly designed for disconnecting, and finally, the Orgy Mind Capsule – a radical exploration of pleasure, collectivity, and the body.

But UNISTOP is not just about body and emotions. It's about mind, action, and play. You can hold a meeting, study at shared tables, or give an impromptu speech on the stage. You can check out the interactive screen with memes, university news, quick polls, and daily events. Even check the TRAM lines, buy internet access, or book tutoring sessions from the touchscreen.

Want to express yourself?

There's a sticker wall—like a "wailing wall" for thoughts—a suggestion box, a student ephemeral art exhibit, and a giant gong to announce something... or just to make noise for the sake of it. If you're into self-expression and aesthetics, you can use the mirrors, the photo booth, or the Instagram photo printer to capture the moment.

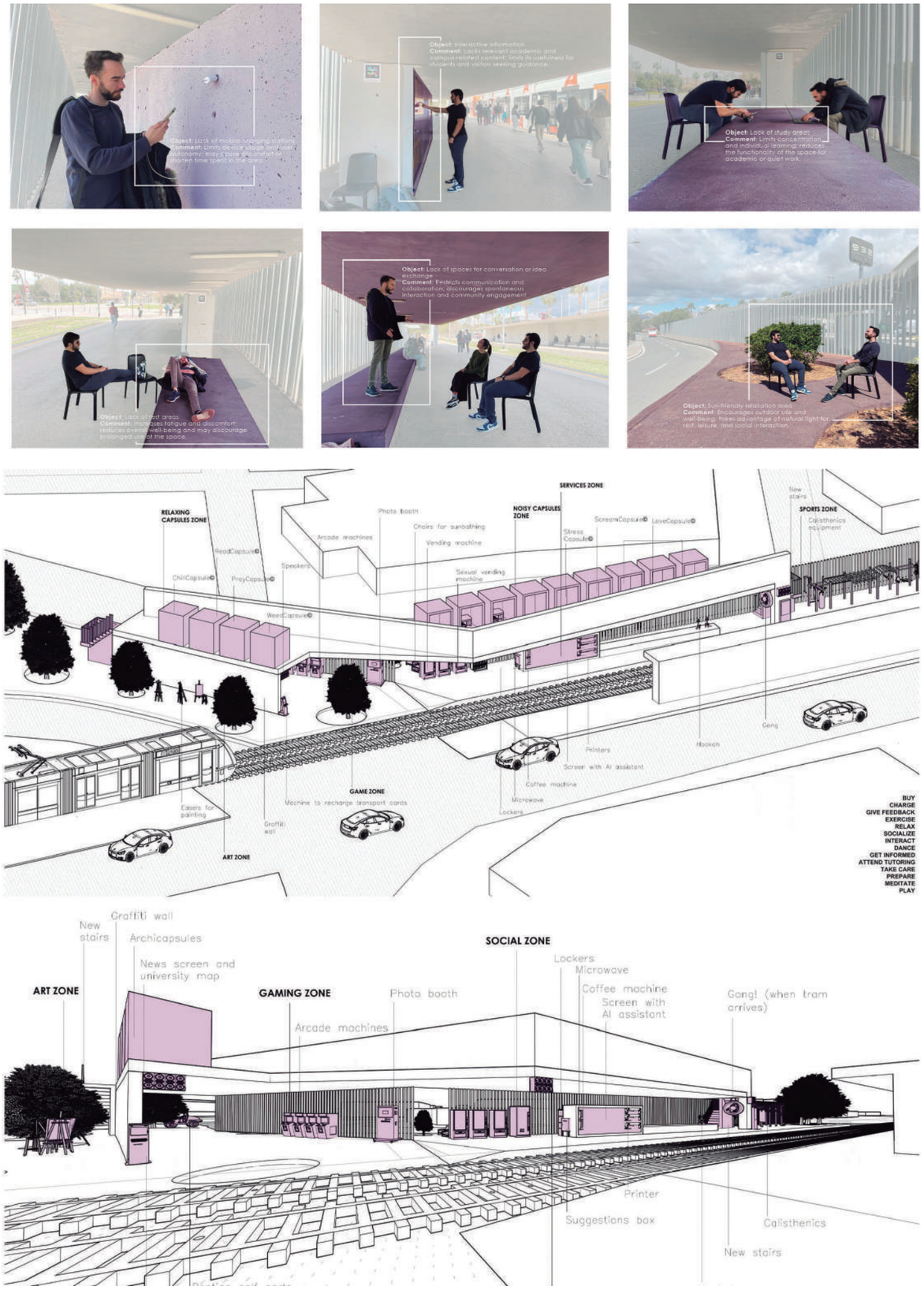
Need something practical?

We've got dispensers for tampons, condoms, toothpaste, educational sex toys, a microwave, lockers, a smoking zone (not just for tobacco), arcade machines, vending machines, and even a clean, dignified, and actually usable restroom.

UNISTOP is all that and more. It's a space where the everyday mixes with the surreal. Where you can pause your routine and activate your life. It's architecture for desire, rest, excess, vulnerability, and connection. It's a living experiment. A station with its own identity, pulsing with the energy of those who use it.

Here, you don't just choose a destination. Here, you choose what kind of person you want to be today.

Which stop will be the next?



UOU scientific journal
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Guest Editor
Angela Kyriacou Petrou / University of Nicosia, Cyprus.

12 June 2025
Call opens.

07 September 2025
Full paper submission.

01 October 2025
Outcome of double-blind peer review process.

01 November 2025
Final submission of completed papers.

This issue explores the complex con-junctions between people, materials and meanings through the micro-scales of architecture. The detail is the point at which things meet –an entanglement between materiality and everyday life. From technical detailing to the materiality of living, the issue seeks to identify the potential opportunities held in junctions, processes and moments of material convergence. Whether matter or data, material moments are not seen as purely static but instead are understood as substances which exist in relation to natural or cultural events or potential interactions.

Seen as part of a bigger story, 'spatial evidence'- artefacts/ seams / openings / assemblages /flotsam /deposits/ leakages/ overflows/ wreckages/ erosion/ disorder- all disclose a story about the corporeality of life through micro moments, acting as a testimony to life lived. In order to make these observations we need examine material details as moments of a larger series interactions and networks. Represented as a slice of space we witness our environment- like detectives - in slow motion, attempting to reveal micro details, opportunities, invisible stories, hidden worlds, and unknown lives- through the potential of the detail.

Sections

1. a slice of time – micro history
2. architectural ethnography
3. the architectural detail – representing material matter
4. the unseen- where material evidence (of life) is prohibited
5. forensic evidence

More information:

https://revistes.ua.es/uou

UOU is the scientific journal of **UNIVERSITY of Universities**. It is born out of the collaboration of international schools of architecture, sharing their intercultural interests.

Every issue underlines a specific topic addressed by one of the universities involved in the Research Project, with a focus on Pedagogy in Architecture.