DOI: 10.23817/2026.defarch.1-2

CLAUDIA BATTAINO
0000-0003-0297-1719
University of Trento, Italy

COMPOSING THE PERCEPTION OF PLACE: DESIGN AS AN INSTRUMENT OF KNOWLEDGE AND URBAN TRANSFORMATION

KOMPOZYCJA PERCEPCJI MIEJSCA: PROJEKTOWANIE JAKO NARZĘDZIE POZNANIA I TRANSFORMACJI MIASTA

Abstract

This paper investigates architectural design as an instrument for understanding and transforming place within the relationship between form and perception. By confronting urban morphology with the phenomenology of experience, design is understood not as the mere outcome of preliminary knowledge, but as an operative practice capable of interpreting and modifying existing relationships. An experimental investigation of the archaeological landscape of Cagliari tests this perspective, interrogating permanence, void, boundary, and path as both perceptual and compositional devices.

Keywords: *form, perception, permanence, place, transformation*

Streszczenie

Artykuł podejmuje problem projektowania architektonicznego jako narzędzia rozumienia i przekształcania miejsca w relacji między formą a percepcją. Konfrontując morfologię urbanistyczną z fenomenologią doświadczenia, projektowanie można ująć nie jako jedynie rezultat wcześniejszej wiedzy, lecz jako praktyka operacyjna, zdolna do interpretowania i modyfikowania istniejących relacji. Eksperymentalne badanie krajobrazu archeologicznego Cagliari służy weryfikacji tej perspektywy, poddając analizie trwałość, pustkę, granicę i ścieżkę zarówno jako narzędzia percepcji, jak i środki kompozycyjne.

Słowa kluczowe: *forma, miejsce, percepcja, transformacja, trwałość*

1. BEFORE FORM

Perception constitutes the primary relationship between people and urban space. Before interpreting the city through maps, historical archives, or disciplinary frameworks, we recognise it through its physical configuration. While walking along a street, crossing a square, or observing a neighbourhood's silhouette, forms, relationships, and spatial qualities allow us to identify a place.

However, perception represents only the first level of urban knowledge. What we see results from successive transformations that are not necessarily or immediately intelligible.

Urban form does not coincide merely with its visual image; it is also the physical trace of a process. Studying morphology – interrogating urban form to understand its genesis, its persistences, and its transformations – is fundamental for design interventions of replacement, densification, and the reconfiguration of the existing fabric.

The initial question is: how can design intervene in what is not yet fully known? Every architectural project confronts an entity that precedes it: a site, an urban form, a topography, a memory, buildings, and open spaces. A place exists as a physical reality, but also as a perceptual one – an assembly of images, experiences, and meanings through which it is inhabited.

Site analysis, historical research, and the assessment of potential are often considered preliminary stages in formulating a design proposal. This seemingly linear sequence, however, conceals a more complex issue: can a place truly be known before it is transformed? Or is it design itself, through interpreting and modifying existing relationships, that generates new knowledge of place?

The argument developed here proceeds from the second hypothesis: design operates as an instrument of knowledge through which existing conditions are selected, interconnected, made intelligible, rendered walkable, and perceived anew. This stance requires integrating two dimensions that architectural culture has frequently kept distinct: the study of site form, its structure, and its history on the one hand; the perception and bodily experience of space through movement on the other.

2. THE MEMORY OF FORM

One theoretical tradition we can draw on comprises studies aimed at recognising settlement principles: morphology, geography, history, and the idea of the city constituted the central themes of twentieth-century Italian architectural research. The city is interpreted not as an aggregate of isolated objects, but as the result of a formative and transformative process in which buildings, urban fabric, open spaces, and infrastructural networks are closely interrelated.

The morphological reading of urban form thus assumes a fundamental epistemic role. Understanding the morphology of a place means identifying the historical processes through which it took shape, tracing within its present configuration the enduring structures, relationships, and permanences that define its identity. Urban form is therefore not understood simply as a relic of the past, but as an analytical tool for interpreting the present and establish conditions for future transformation. To know a place means, in this sense, understanding not only what exists, but also the processes through which it became what it is.

In Aldo Rossi's work, the concept of *locus* assumes a decisive role in clarifying the relationship between architecture, the city, and collective memory[1]. It does not merely coincide with geographical location; rather, it constitutes a specific urban and spatial condition forged over time – a focal point where spatial forms, memories, and meanings condense. Crucially, it is not immutable. The concept of *locus* is closely linked to permanence and transformation: specific structures and relationships remain recognisable and operational even when modified, establishing a continuity with the past that actively shapes the present.

[1] A. Rossi, *L'architettura della città*, Marsilio, Padova 1966, pp. 117–121.

The architectural project of urban transformation resides precisely within this tension. In this regard, Vittorio Gregotti proposes considering the territory not as a neutral background for architecture, but as a relational field where architecture operates by establishing connections across different materials and scales[2]. By intervening in an existing system, architecture identifies existing relationships while introducing new ones. The dialogue between built volume and open space, infrastructure and fabric, topography and settlement, as well as between permanence and transformation, becomes the very matter of urban composition. Morphological reading is therefore essential to transcend the opposition between preservation and innovation, since transformation is an intrinsic condition of the urban phenomenon. The central problem is how to transform: an urban project can ignore existing relationships, or it can acknowledge and reinterpret them, instituting a deeper structural continuity.

3. THE BODY OF FORM

A city is not known solely through morphological analysis or territorial-scale surveys, which capture its structural evolution over time; it is also perceived, traversed, and lived.

Phenomenological inquiry into architecture expands this framework to include sensory and experiential dimensions. Maurice Merleau-Ponty provides the philosophical foundation for observing space not merely through geometric and objective terms, but through the bodily experience of the subject[3].

Kevin Lynch addresses urban perception by focusing on the mental image of the city. His categories – paths, edges, districts, nodes, and landmarks – delineate the primary elements through which the urban environment becomes legible[4]. Through the concept of imageability, Lynch identifies the capacity of a physical configuration to evoke a coherent and recognisable mental image. It is therefore not sufficient for an urban relationship to exist materially; it must be recognised and constructed through experience. Perception likewise underpins the concept of serial vision, which interprets the city as a sequence of successive views[5]. A rhythmic, fragmented experience of urban space becomes a tool for deciphering the built landscape, allowing observers to recognise places through motion and serial succession.

These studies demonstrate the fundamental link between form and perception: an edge is not merely a boundary separating two urban fabrics, but the threshold across which difference is perceived; a path is not solely a circulation route, but a trajectory of experience; an urban element is significant not merely for its physical presence, but for its capacity to participate in the perceptual construction of place.

Steven Holl, together with Juhani Pallasmaa and Alberto Pérez-Gómez, challenges the reduction of architecture to the visual sphere, proposing instead an architecture experienced through all the senses[6]. Holl demonstrates how architectural perception emerges through

[2] V. Gregotti, *Il territorio dell'architettura*, Feltrinelli, Milano 1966, pp. 83–85.

[3] M. Merleau-Ponty, *Fenomenologia della percezione*, [1st ed. 1945]., trans. Andrea Bonomi, Bompiani, Milano 2003, pp. 151–152, 326–327.

[4] K. Lynch, *The Image of the City*, MIT Press, Cambridge, MA 1960, pp. 46–90.

[5] G. Cullen, *The Concise Townscape*, Architectural Press, London 1961, pp. 17–20.

[6] S. Holl, J. Pallasmaa, A.Pérez-Gómez A., *Questions of Perception: Phenomenology of Architecture*, A+U, Tokyo 1994, pp. 27–37.

shifting vantage points and moving bodies, transforming a physical concept into a dynamic, perspective-driven theory of spatial perception[7].

In Pallasmaa's work, the critique of ocularcentrism becomes even more radical. Perception does not necessarily stem from the conscious analysis of individual forms; it is often preceded by an immediate, peripheral, and atmospheric response. We perceive place through the totality of the body and the integrated engagement of the senses[8]. Architecture thus acquires a tactile and multisensory dimension in which materials, ground planes, and scents contribute to the production of experience: materiality holds and conveys memory, while light and shadow introduce depth and mystery, inviting bodily exploration[9].

These positions introduce a critical distinction regarding legibility. A place can be perfectly legible and yet remain experientially flat; it can be recognisable as a visible form without being meaningful. Peter Zumthor extends this inquiry into the concept of atmosphere, defined as an overarching environmental quality generated by the precise interplay of material, light, proportion, sound, temperature, the presence of objects, and the observer's body[10]. Because atmosphere emerges from this complex nexus of conditions, the perception of place cannot be reduced to identifying individual components; it becomes the encounter with an all-encompassing spatial presence.

The transition from morphology to phenomenology does not imply abandoning form. On the contrary, it compels us to examine how form – through its spatial, material, and perceptual attributes – actively generates lived experience.

4. THE THICKNESS OF RELATIONSHIPS

Urban form and architectural perception do not occupy separate spheres; they constitute two complementary modes of engaging with place. While the former interprets structure and history, the latter constructs experience through the body and the senses. Place thus simultaneously encompasses knowledge, form, and experience. Composing urban space therefore means structuring relationships capable of transforming how a site is perceived and navigated. Between city and landscape, architectural design can establish gradations and transitions, avoiding abrupt separation by introducing intermediate spatial conditions.

Drawing upon the theoretical principles of our predecessors – particularly those of Gianugo Polesello regarding the relationship between history and urban design – we can identify essential design principles: the boundary as the measure and definition of urban form, and the network of relations between the various components of the city and landscape[11]. Boundaries and voids do not simply isolate parts; they allow those parts to establish an urban figure. Operating on the edge – and on the spatial thickness that emerges between elements – offers an opportunity to articulate relationships, introduce spatial depth, and establish varying degrees of proximity and distance.

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[7] S. Holl, *Parallax*, Princeton Architectural Press, New York 2000, p. 26.

[8] J. Pallasmaa, *Space, Place and Atmosphere. Emotion and Peripheral Perception in Architectural Experience*, "Lebenswelt. Aesthetics and philosophy of experience" 2014, no. 4, pp. 230–245.

[9] J. Pallasmaa, *Gli occhi della pelle. L'architettura e i sens*i, Jaca Book, Milano 2007, pp. 62–67.

[10] P. Zumthor, *Atmospheres: Architectural Environments. Surrounding Objects*, Birkhäuser, Basel 2006, pp 11–17.

[11] A. Dal Fabbro, A. Mozzato (eds.), *Gianugo Polesello. La costruzione di una teoria. Scritti 1964–2002*, 2 vols., Anteferma, Conegliano 2026, vol. 1, pp. 12–19.

In the stratified city, the void emerges as one of the densest components of the urban system: it can hold distances, memories, topographies, and vegetation, acting as a space capable of connecting disparate conditions. Designing the void as a defined presence without saturating it means establishing precise relations of proximity and distance. Considering architecture as an integral fragment of the city within a broader relational framework, spatial geometry and figure concur in defining the urban project, in which the void separates, connects, establishes orientation and hierarchy, and ensures continuity across heterogeneous components. The spatial configuration of the void becomes an indispensable condition under which disparate parts of the city can confront one another, overlap, and establish a renewed sense of belonging, while also fostering unexpected social interactions. It is precisely this rigorous attention to the relationships between figures, parts, and intermediate spaces that preserves the contemporary relevance of Polesello's teaching as an instrument for interpreting and guiding urban transformation.

Nevertheless, boundaries and voids become fully legible only through movement. Circulation transcends its purely functional distribution role when configuring a place: it shifts scalar relationships between large and small, near and far, framing the dialogue between individual objects and the territorial system. Movement thus constructs a progressive understanding of place, wherein space is grasped not simultaneously but through succession. In the *promenade architecturale*, architecture orchestrates dynamic perspectives and temporal framings. The sequence of shifts in direction, spatial constrictions, and topographical variations structures spatial experience into successive episodes, revealing thresholds, panoramic views, and perceptual shifts. Movement thus becomes a compositional device through which design establishes the relationship between body, space, and place.

5. THE TEST OF PLACE

Design represents the moment when theoretical principles are tested against a real site. The experimental research developed for the archaeological landscape of Cagliari highlights the complex relationship between form, memory, perception, and transformation. Confronted with archaeological vestiges and a complex topography – the remains of a necropolis, a vast quarry void, abandoned industrial structures, and unresolved interstitial spaces – the design process began with a broader territorial observation of the urban and natural landscape to assess how design could effectively achieve urban regeneration.

How can we modify relationships between surviving elements, render the hidden intelligible, and introduce new architecture without erasing memory? How can a large void and the threshold to the park be transformed into a new civic core and relational anchor?

Design pedagogy did not proceed through prescriptive formulas but through a sequence of design inquiries: How can we define the boundaries of a place? How do we measure an excavation or void? How can continuity be established between quarries, ruins, and the urban fabric? How can architecture integrate with topography? How do we calibrate scale to introduce a new civic landmark?

The studio yielded diverse responses, yet this variety of outcomes did not result in dispersion: a public square foregrounded the monumental structure of a void; the mass of a linear building, reduced to sheer depth, generated unexpected public spaces; isolated or clustered architectural units successfully established orientation and created a new perception of the place. These varying solutions reflected distinct design responses to the site: grounded in

morphological readings, students selected specific elements to transform, reimagining the site through the deliberate montage of historical references – viewed as timeless architectures capable of defining this sector of the city and its landscape while fundamentally altering its perception.

6. KNOWING THROUGH FORM

Architectural design is an instrument through which place is interrogated. Knowledge does not wholly precede the project; rather, knowledge is generated through the ongoing dialogue between analysis, perception, representation, and transformation. On the one hand, design interprets the structure of place – its form, its history, its surviving traces, its fabric, and its relationships. On the other hand, it establishes the very conditions of its experience: paths, thresholds, sightlines, sequences, proximities, and distances.

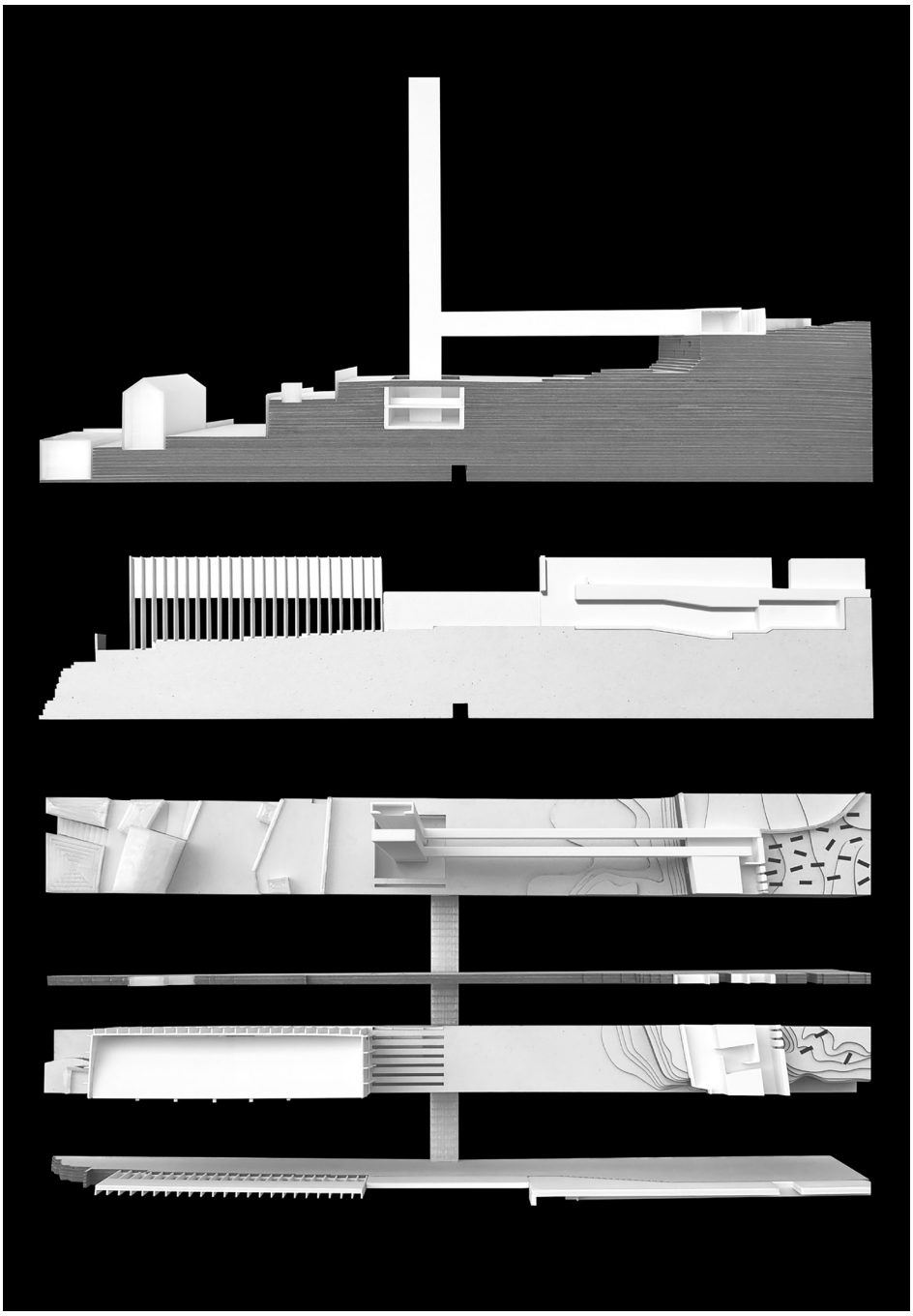
Composition is the nexus between these distinct registers. Transforming and composing the perception of a place does not mean scripting an experience; it means establishing spatial conditions from which urban relationships can emerge.

The design studio provided the testing ground where theoretical propositions confronted contextual complexity, allowing these principles to be reopened and critically verified. If perception is the mode through which place is experienced, architecture can intervene in the conditions of that experience by revealing what is concealed, lending depth to the marginal, conferring a monumental character upon the void, and curating what is vital to the comprehension of place.

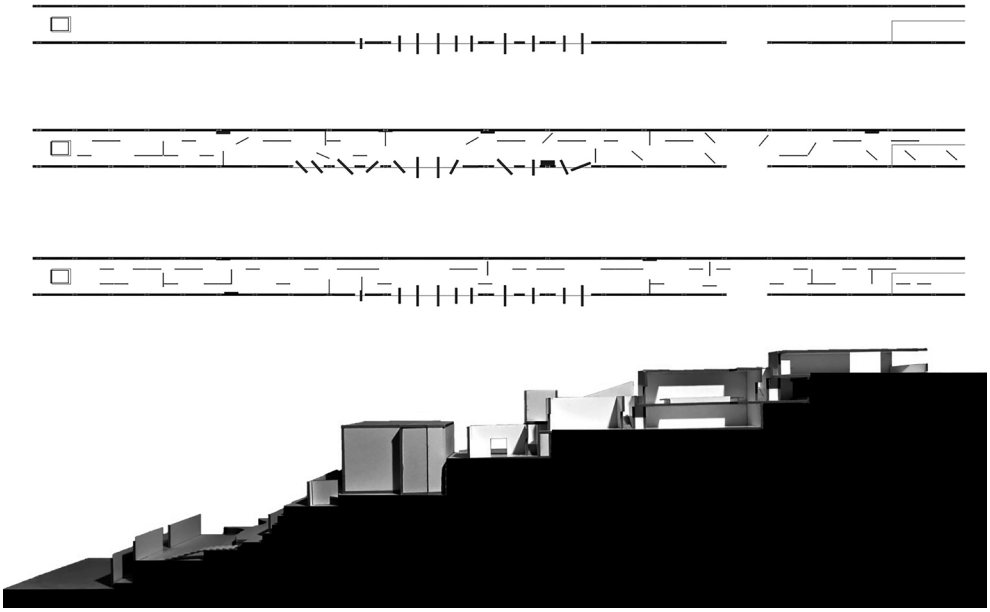
Composition thus becomes more than the mere production of form. The architectural project does not arise after the analysis is complete; it is itself a form of knowledge. Its efficacy depends on its capacity – through form – to activate precise relationships with the scale, morphology, and character of the city's stratified palimpsest.



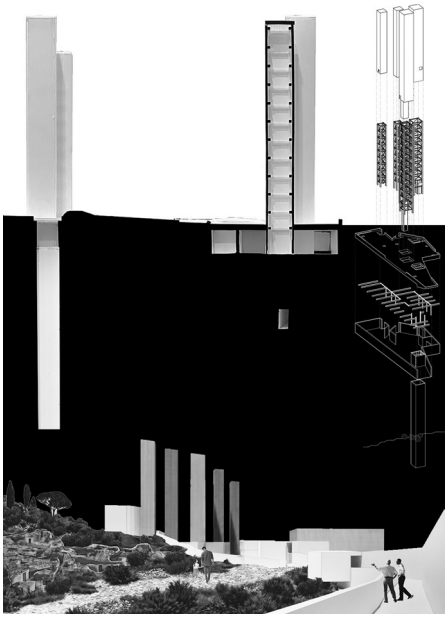
Ill. 1. Architectural elements of the Tuvixeddu landscape, Cagliari. Composition by the author



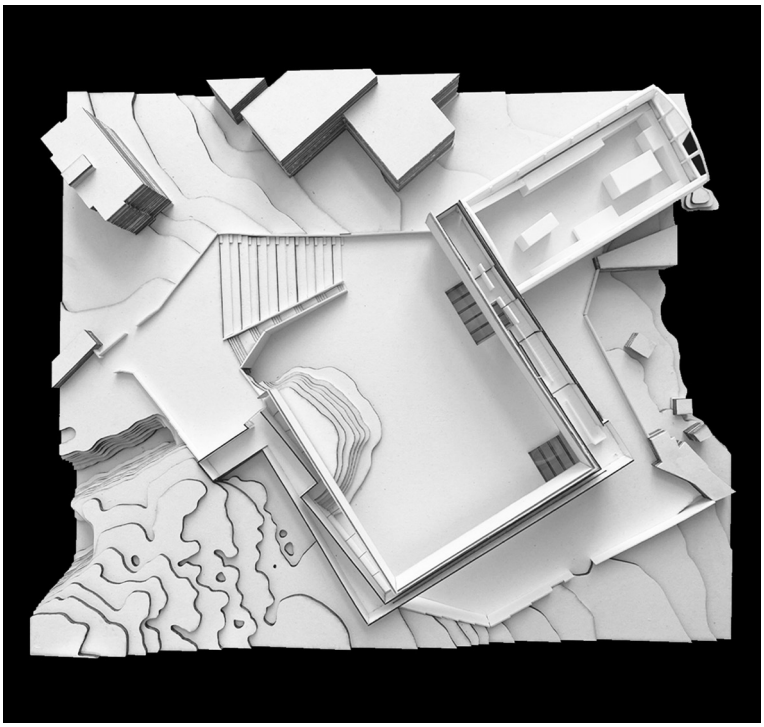
Ill. 2. The boundary as spatial thickness: design studio experiment. Author's graphic elaboration of student projects developed in the Architectural and Urban Design Studio, taught by Claudia Battaino, University of Trento, academic year 2025–2026



Ill. 3. Designing the void: design studio experiment. Author's graphic elaboration of student projects developed in the Architectural and Urban Design Studio, taught by Claudia Battaino, University of Trento, academic year 2025–2026



Ill. 4. Perceptual devices: design studio experiment. Author's graphic elaboration of student projects developed in the Architectural and Urban Design Studio, taught by Claudia Battaino, University of Trento, academic year 2025–2026



Ill. 5. Permanence and transformation: design studio experiment. Author's graphic elaboration of student projects developed in the Architectural and Urban Design Studio, taught by Claudia Battaino, University of Trento, academic year 2025–2026

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Author's Note

Assoc. Prof. Claudia Battaino, PhD, Architect

Associate Professor of Architectural and Urban Design at the University of Trento, Italy. She has previously taught at the IUAV University of Architecture in Venice and the University of Udine. She has worked and published extensively on the state of contemporary cities, with a particular focus on territories in crisis, exploring the potential of architectural-urban and landscape design to transform these places.

claudia.battaino@unitn.it