

Spatium Fugit.

An Alternative Approach to Understanding the Meaning of Space and Time in Architecture

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This epistemological study addresses the theme of the meaning in architecture from an artistic and phenomenological perspective by investigating the experience of space and time, questioning whether the multiple horizons (spatial and temporal) of modern space have led to the concept of place becoming antiquated – prioritising to address the abstract nature of space. The immateriality and transparency of today's architecture contribute to the acceleration of passing images, alienating us from ourselves. M. Augé suggests that the spaces of super-modernity create an excess of an overabundance of events and an acceleration of time, making understanding the modern spatial experience challenging. Revising Augé's concepts in current time, S. Holl suggested that vocabulary has the risk of *jettisoning* the authentic experience; words are inherently abstract, and the true meaning comes through sensation. As spaces and places are undoubtedly encountered as multisensory lived experiences, a Phenomenological framework has been implemented to exemplify the importance of lived experiences and the understand the dynamic interplay between the perceiver and the perceived.

All direct quotations in languages other than English have been translated into English by the authors, unless stated otherwise.

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Introduction. Unbounded space and non-place

We treat space somewhat the way we treat sex. It is there but we do not talk about it. (Hall 2001, 14)

Is space escaping us? To begin this epistemological study, it is imperative to outline the mystical and intangible nature of the word space. Space, traditionally, was a topic of philosophy and natural sciences, but, surprisingly, it emerged in architecture in the late 19th Century as an abstract concept exclusive to metaphysics (Van de Ven 1987). The term *space* in modern architecture has an ambiguous meaning because it overlaps with a broader philosophical concept of space. On one hand, it refers to the physical object that architects can manipulate, while on the other hand, it is also a mental construct that helps us understand the world (Forty 2000). The term *space* in the discipline of architecture emerged from Gottfried Semper's theories of volumetric space, in which he suggested that architecture was the enclosing of space, where the material component – the tectonics – creates an enclosure, making it an integral part of architectural aesthetics (Van de Ven 1987). Volumetric space is formed through the containment of solids within a given area, whereas modernist space is established by positioning solids within a space, emphasising spatial stratification and layering, and being antithetical to Semper's ideas (Condon, 1988). Van de Ven (1987) describes Semper's concept of volumetric space as a container; Zevi (1993) similarly likens architecture to a hollow sculpture. Perhaps Semper's concept of space better suits the literal definition of the word space with its approach to the thoughtful arrangement of enclosed volumes rather than focusing on the meaning of the lived experience in today's world.

While Augé (1995) suggests that modernity and supermodernity have led to a vacuum of unbounded experience, modern space has completely changed these boundaries in the globalised world of non-places. They are no longer finite experiences, enriched with the *genius loci* – the spirit of place (Norberg-Schulz 1980); these non-places have led to an experience of a spatial continuum, or in the words of Augé, an *excess of time* (1995). Therefore, understanding the haptic experience of space in a globalised world's chaos and modernism's abstractness has become increasingly important.

Augé's concept of non-place (1995), which once effectively highlighted the alienating and homogenous nature of modern environments, now faces challenges, and requires refinement in contemporary contexts. The evolution of spaces, particularly with digital technologies and social media, has blurred the distinction between physical and virtual realms. The latter have become significant arenas for social interaction and identity formation, challenging the traditional division between places and non-places and altering how we perceive belonging and connection. Furthermore, his characterisation of non-places as homogeneous and devoid of identity disregards the unique qualities and local meanings these spaces may possess. While Augé's concept of non-place still holds relevance in shedding light on certain aspects of modern spatial experience, it necessitates reconsideration and refinement considering the aims of this paper.

It must be acknowledged that attempting architectural discourse cannot deliberate from stating that: «there is no space without event,

[and] no architecture without program» (Tschumi 1994, 139). Regardless of the boundless and abstracted experience of the built environment, «architecture becomes the discourse of events as much as the discourse of spaces» (Tschumi 1994, 150). Furthermore, instead of labelling the modern conception of space as a non-place with boundless experience, reflecting on Tschumi, the event of architecture inevitably implies the movement of the observer. The same author (Tschumi 1994, 162) states: «the meaning in architecture is derivative of the relation between Space, Event [Experience] and movement». Furthermore, when discussing the triad of sequences Space, Event and Movement (SEM), perception and body sensations must be considered equally approaching the meaning of architectural experience, as perception involves the whole body, which implies that the sequence of SEM experience is inherently expressive. Our movement in the world is intricately linked to our perception, and our effective perception relies on our ability to navigate space; in simpler terms, our understanding of three-dimensional space is fundamentally influenced by how we physically exist and interact within these dimensions (Merleau-Ponty 2002). Thus, meaning cannot be considered statically or univocally: rather, it is *suggested* by the actions that take place in that space.

Observed space. Phenomenological approaches

Considering the aforementioned authors, their discussion of space emphasises the importance of the observer rather than the forms which create it, suggesting that architecture's effervescence comes from a mobile and individualised sense of space (Norberg-Schulz 1980). Hence, perceiving space qualitatively – through our bodies – is quite intriguing. As we penetrate the built environment with our bodies, our body's expression through reaching, rising, descending, sliding, encircling, gripping, tapping, and caressing conveys metamorphic and aesthetic meanings (Bacci & Melcher 2011). These gesticulations of our fluid and erratic bodily actions allow us to create a narrative and gain meaning through our actions that allow us to discover new and unexpected individualised spaces.

As this paper's methodological approach is through the lens of phenomenology, it allows us to reject the idea of perception as constituted by independent senses – rejecting Cartesian rationale and offering a valuable perspective for comprehending the intricate interplay between individuals and their encounters with spaces. Phenomenology in architecture emphasises how our perception shapes spatial experiences, underlining that architectural space and its environment are interdependent. This approach highlights the intertwined relationship between space and its context, significantly influencing our experience of the built environment. This philosophical approach accentuates the subjective experience of phenomena and underscores the importance of lived experiences within space. By embracing a phenomenological framework, we can unravel the complex relationship between the individual and their spatial environment.

Within the realm of architecture, we confront a tangible phenomenon where individuals traverse through a structure, encountering successive vantage points. As articulated by Bruno Zevi (1993, 27), these individuals actively shape these perspectives, effectively generating what could

be construed as the *fourth dimension*, [1] thus bestowing a cohesive actuality upon the space. While it could be argued that human presence imbues architectural space with vitality over time, the essence of architecture transcends the limitations imposed by a mere four dimensions. Zevi underscores the inherent ambiguity regarding spatial dimensions, affirming that architectural space eludes confinement within the confines delineated by painting and sculpture. Instead, architectural space manifests as a distinct and palpable reality (Zevi 1993).

Summarising the authors mentioned above, architecture, unlike other arts such as painting or sculpture, introduces an experiential dimension through human interaction. ^{CD} This dimension, which transcends traditional dimensional measurements, is a testament to the significance of human presence in architecture. It challenges the notion of quantifying architectural space solely through mathematical dimensions. Furthermore, while volumetric space makes the demarcation of inside and outside the box explicit, they are linked by a transitional element – the body. Modernism's boundless, infinite flow can exist without closure or containment, even where everything is in the same geometric orientation.

Chronotopes. A theoretical framework on space and time

Chronotope. A term employed by the Russian literary theorist Mikhail Bakhtin (1895–1975) to refer to the coordinates of time and space invoked by a given narrative; in other words to the 'setting', considered as a spatio-temporal whole. (Oxford Reference, 2024)

The chronotope, a concept introduced by Mikhail Bakhtin (1981), finds a compelling application in architecture, merging the dimensions of time and space into a singular, expressive framework. In architectural terms, the chronotope emphasises how buildings and spaces encapsulate historical moments, cultural narratives, and the passage of time, thereby shaping

[1] Krauss discusses the influence of the fourth dimension on modern art, mainly focusing on its treatment of space and time. Krauss argues that Cubism challenged traditional notions of perspective, space, and time in art, ultimately leading to a fundamental reconfiguration of these concepts (see Krauss, R. E. (1985). *The Originality of the Avant-Garde and Other Modernist Myths*. MIT Press).

^{CD} CARLO DEREGIBUS:
Nevertheless, many arts have a performative dimension and, therefore, an experiential one. As evident as it is in music or dance, without mentioning "oriental" arts, this could also be true for other arts, in the sense that, in any case, they happen in the experience. Paradoxically, here, it would seem that the term "architecture" could denote any space or building before the experience itself, thus being independent of it.

FEDERICO RUDARI:
I would also argue that, without interaction, there would be no artistic experience at all. Here painting and sculpture are mentioned, but they always embody the traces of another human consciousness and behaviour and therefore mediate intersubjective interactions (as much as it is the case with architecture).

JAMES ACOTT-DAVIES, MICKEAL MILOCCO BORLINI

The performative dimension spans across all forms of art. However, it can be argued that modernism has disproportionately emphasised vision, creating a visual hegemony. While seeing – such as viewing a painting – helps establish a connection with the world, other sensory modalities are often neglected. In the context of experiencing architecture today, it is crucial to recognise that the tactile dimension plays a vital role. Touch is a straightforward, reciprocal sense: when we touch something, we feel it push back, providing us with essential haptic feedback. Without this sensory interaction, the experience would lack depth and character.

This reciprocal relationship between the object and our haptic sense not only reveals the nature of the object but also deepens our understanding of our bodies as we engage with it. While it could be argued that architecture can exist independently of experience, modernism's boundless flow has arguably distanced architecture from its environment, diminishing the recognition of the importance of haptic experience in shaping how we perceive and engage with built spaces. Therefore, reflecting on the experiential dimension brings us closer to a meaning in architecture.

the experience of those who inhabit or interact with them. It suggests that architecture is not just a static backdrop but a dynamic participant in the storytelling of human life, where every design element and spatial configuration tells a story of temporal progression and spatial experience. Through the lens of the chronotope, buildings transcend their physical boundaries to become living chronicles of human existence, reflecting the intertwining of time and space in the fabric of our daily lives.

Contextually, Jean Baudrillard disrupts traditional views by proposing that time should not be seen as a straightforward march forward but as a series of simulated realities that intertwine and overlap, blurring the lines between the real and the constructed (Baudrillard 1981). In contrast, the architectural scholars Bloomer and Moore emphasise the temporal aspects inherent within our physical spaces, suggesting that architectural forms are not just inert structures but active participants in the narrative of culture, evolving and influencing societal memory over time (Bloomer & Moore 1977).

Alberto Pérez-Gómez ventures into the realms of history and phenomenology to argue that our experience of space is indistinguishably linked with our perception of time, proposing a view of architecture that embraces this dynamic interaction as central to understanding human experience (Pérez-Gómez 1983). Building on this notion, Henry Plummer champions a forward-thinking approach to architectural design, one that is cognizant of the current spatial needs while also being adaptable to future changes, thereby embracing the temporal dimension of architecture (Plummer 2010).

From an interdisciplinary stance, David Seamon draws upon environmental psychology to illustrate how our spatial and temporal experiences

are deeply intertwined, with certain environments capable of triggering profound temporal emotions and recollections, thus enriching our engagement with the world (Seamon 2014). Rounding out this discourse, Pierre von Meiss sheds light on the temporal challenges within architectural design, advocating for structures that stand the test of time and adapt and evolve, reflecting the ongoing dialogue between space and time (von Meiss 2013).

In *Où est passé l'avenir?* (Where has the future gone?), Marc Augé (2011) explores the themes of time and space, examining their interplay within architectural and urban contexts. Augé delves into the temporal dimensions of architectural spaces, considering how they reflect the passage of time and influence human experiences. He also explores the evolving nature of urban spaces, tracing their historical development and cultural significance over time, and explores how buildings and landmarks embody historical narratives, serving as repositories of collective memory. Augé examines the spatial dynamics within architectural and urban spaces, considering how they shape human interactions and experiences, contemplating the temporal continuum of architectural spaces, and exploring how they evoke nostalgia while also projecting aspirations for the future. According to the author, space and time delve into the complexities of modern spatial experiences, reflecting on the interplay between physical environments and human perceptions.

In addition, in quantum mechanics, Werner Heisenberg's uncertainty principle [2], asserts a fundamental limit to the precision with which certain physical property pairs, like position and momentum, can be concurrently ascertained. This principle elegantly captures the essence of indeterminacy—asserting that a heightened accuracy in measuring one property inherently compromises the precision of the other. To understand space, in accordance with discussing the meaning of architecture, while acknowledging Heisenberg's uncertainty principle, the experience of space must not be measured through singular quantitative means, as when measuring a single position of experience abdicates the crucial characteristics of the lived experience. The *body-as-subject* [3] is required to occupy space, as only then can it give it meaningful direction towards understanding the dynamic interplay between the perceiver and the perceived. Our perception of time and its relationship with spatial experience holds significant importance in architecture, as it shapes how we inhabit and comprehend spaces, or, in other words: « [...] we do not live in physical settings like being on a stage; the space creates a continuum with our mental space and our very sense of self. As I occupy a space, the space occupies me forming a chiasmatic singularity» (Pallasmaa 2011, 595).

Drawing a parallel to the realm of art, particularly in the analysis of Cubist paintings, this principle illuminates the nuanced portrayal of experience within the canvas. Cubism, much like the uncertainty principle, challenges traditional perspectives, suggesting that a singular viewpoint does not suffice to encapsulate the entirety of an object or event. It echoes Paul Laporte's assertion that «the object of the painting is no longer an infinitesimal point in time manifest in an infinite space, but an event in

[2] Heisenberg's uncertainty principle, asserting the inherent limits in measuring a particle's position and momentum simultaneously, parallels architectural theory by suggesting that perception of space is subject to variability and interpretation, underscoring the fluid nature of experiencing architectural forms. <https://plato.stanford.edu/entries/qt-uncertainty/>

[3] The concept of body-as-subject in phenomenology, notably discussed by Merleau-Ponty, emphasises the body's central role in experiencing the world. This approach views the body not just as an object in space but as an integral aspect of consciousness and perception (Merleau-Ponty 2002).

time manifest in a finite space» (Vargish & Mook 2000, 86). This shift in perspective, akin to the quantum leap in understanding through Heisenberg's lens, underscores a profound reevaluation of how events and objects are experienced. By dissecting and reassembling multiple viewpoints within a finite space, Cubism transcends the mere representation of objects, instead capturing the essence of experience as it unfolds over time. This conceptual overlap between quantum mechanics and Cubist methodology underscores a deeper, interconnected understanding of reality, where the limitations of precision and perspective open new avenues for interpreting the complexity of time and space.

These scholars collectively provide a nuanced lens through which to view the relationship between space and time, advocating for the same holistic approach we use for our phenomenological investigation.


Duration: bodily experience of space and time

The discipline of architecture transcends the mere assembly of structural components like walls, roofs, and floors; instead, it embodies a living entity wherein human engagement cultivates an exceptional dimension. Our spatial accommodation, or the point of arrival begins with the body, your body, my body, according to Tschumi (1994, 111). As this investigation is undertaken through the phenomenological lens, this paragraph examines the notion of bodily experience entrenched within architectural spaces. Central to this exploration is how individuals discern, traverse, and establish emotional bonds with the constructed *milieu*. The investigation herein scrutinises the intricate interplay between the tangible characteristics, spatial configurations, and sensorial facets inherent in architectural design. This academic endeavour seeks to unravel the profound implications of how architecture's physical attributes, spatial arrangements, and sensory constituents intricately interface with the human physique, shaping our cognitive and emotive encounters within these crafted spaces.

According to Finnish architect Juhani Pallasmaa (2011), architecture frames structures, reorients, scales, refocuses and even slows down our embodied experience of the world. The action of simple spatial orientations, as mentioned earlier give us the ability to grasp the physical world, as ourselves are in conjunction with the flesh of the world Pallasmaa (2011). In the following quote, the phenomenological approach expresses the importance of understanding the movement through architecture, and the reciprocal nature of the body in space:

I confront the city with my body, my legs measure the length of the arcade and the width of the square; my gaze unconsciously projects my body onto the facade of the cathedral, where it roams over the mouldings and contours sensing the size of recesses and projections, my body weight meets the mass of the cathedral door, and my hand grasps the door pull as I enter the dark void behind. I experience myself in the city, and the city exists through my embodied experience. The city and my body supplement and define each other. I dwell in the city and the city dwells in me. (Pallasmaa in Soltani & Kirci 2019, 2)

Based on Pallasmaa's previous statement, the body gains a sense of weight and perception from itself and has a binary connection with space. This

relationship, along with our senses of experience, provides a basis for Bruno Zevi's (1993) argument that the experience of architectural space transcends the objective idea of thinking in four dimensions, as the body experiences the intangible dimensions of space and time. These genuine architectural experiences cannot be reduced to a single entity or a series of visual impressions. When encountering a building, its meaning is derived from the intangible experience of approaching, confronting, and engaging with the space concerning one's body (Holl 2007).  Referring to the

 CARLO DEREGIBUS

In my opinion, this is an oversimplification. Our experience, too, mainly relies on something else, that is, our preconceptions and typifications. Partly, it depends on what we know (or think we know) about things and places; partly, it depends on the expectations from previous experiences and cultural background.

AUROSA ALISON

Totally agree!

JAMES ACOTT-DAVIES, MICKEAL MILOCCO BORLINI

Our preconceptions, typical expectations, and previous encounters do largely shape our experiences. It is essential to acknowledge that gaining perspective often comes at the expense of physical engagement, as György Kepes has noted. Furthermore, modernism's focus on space has led to a distant, two-dimensional worldview. To address this issue, Pallasmaa's suggestion – that genuine and meaningful architectural experiences do not arise from simply viewing a door but from how it facilitates interaction between inside and outside – reminds us that architecture brings us back to a pure encounter with the world. Therefore, as suggested, the true meaning is derived from the intangible experience of approaching, facing, and engaging with the space about one's body.

As much of our knowledge is shaped by past experiences, the concept that authentic architectural experiences originate from physical engagement reminds us that phenomenology is particularly well-suited to understanding everyday existence. It emphasizes the importance of understanding the context in examining places and their relationships with other elements rather than isolating them from their surroundings. In doing so, it strives to unify the relationship between the body and the environment.

CARLO DEREGIBUS

I agree in general: what I meant is that you cannot consider physical experience universal or, to be more precise, more than personal. And this means that we architects can just hope for experiences, and design on the basis of this hope. But nothing more than that.

introduction, where Steven Holl (2007) suggested that vocabulary has the risk of jettisoning true spatial meaning, as words themselves are inherently abstract and are used as association to describe objects and emotions can be related to Henri Bergson's idea that measuring experience (time) through clocks or chronometers objectifies experience into a linear idea. Bergson's concept of duration (*durée réelle*) can help us understand time and experience in space. For the Author, the concept of duration, a continuous and intuitive experience of time that intertwines past, present, and future, allows a rethinking of measurable space in terms of becoming and duration. Duration (*durée*) is a multiplicity of succession, heterogeneity, and qualitative differentiations; it is continuous and virtual. Duration is divisible, but division transforms it: a mode of hesitation, bifurcation, unfolding, or emergence; thus, space should not be treated invariably, but through the lived experience of time, it is oriented towards emergence and eruption, movement, and action (Grosz 2001). From this, we can understand the importance of a lived understanding of the meaning of architecture. The idea of duration as a qualitative understanding of time (lived experience) suggests that space and the body should not be treated as static or measured by quantitative means. In the act of spatialising, we unfold architectural space through motion, and through this experience, we collect memory.

The meaning of architecture emerges through the sequence of space, event, and movement. From the points of entry to arrival, the spatial sequence of events creates a narrative where the transition or sequences of spaces become more important than a singular facet of experience (Tschumi 1994).

Art and Architecture. Divergency of convergence

Bruno Zevi argued that the distinction that separates art and architecture (sculpture and painting) is the experience of depth. Sculpture creates surfaces standing in space, while architecture is the art of surfaces around space. However, while this distinction between architecture and art presents itself as an obvious distinction, the reduction of the experience of architectural space to the dimension of depth does not account for the corporal's autonomous nature.

Mitchell W. Schwarzer (1991, 54-55) argues that while human traits such as height or length can be understood independently, the dimension of depth relies on bodily movement through space for its comprehension. Unlike height or length, the perception of depth emerges only through the body's locomotion within specific spaces, leading to a genuine spatial awareness. The author mentions Schmarsow (Schwarzer 1991), who, in line with optical theories emphasising spatial understanding's reliance on movement, suggested that moving through space in the third dimension is what allows us to experience our immediate extension. Schwarzer also refers to Hermann Lotze (1991, 51), who conceptualised space as the kinetic expansion of bodily impulses while moving. For instance, navigating through building results in a continuous flow of visual impressions, generating a constantly evolving understanding of spatial relationships in mind.

Our perception of depth in space relies on bodily movement through particularised spaces, unlike the independent comprehension of

height or length, which highlights twofold optical and movement in tandem for shaping our spatial understanding. Both Schmarsow and Lotze envision space as an extension of bodily movements, exemplifying how navigating through environments continuously shapes our evolving perception of spatial relationships.

This idea of the body as the kinetic extension to space brings back the importance of the role of the body as a central coordinate, where architectural space is given meaning through the actions and gestures of the occupant – existentially speaking, «[...] it fuses three kinds of space, tactile, mobile and visual; thus, incorporating all the human senses exposed to simultaneous and successive experiences in space and time» (Van de Ven 1987, 90).

Psychologist James J. Gibson (1978) acknowledged that the body and vision work together to experience architecture. However, according to Pallasmaa (2011, 590) the true meaning of experiences cannot be solely described by these five sense modalities; architectural spaces surpass the standard five senses, incorporating various sensations: perceptions of gravity, the interplay between horizontal and vertical elements, notions of movement and balance, along with a sense of centre and equilibrium, and feelings of tension, ease, and time's flow. These sensations evoke mental imagery linked to bodily perceptions, engaging bodily awareness, memory, and imagination. Profound architectural design profoundly influences our comprehensive understanding of existence. Architecture is not confined to an abstract sphere; it is an integral part of our daily reality, primarily evaluated through our core awareness of being.

Thus, it solidifies our artistic/phenomenological approach that architectural experience/meaning cannot be deduced to categorisation or measurability. The essence of being-in-the-world comes from the lived experience of the corporeal, but «the art of architecture is fundamentally not about creating objects of visual beauty, but about the mystery of human existence and how to understand our very being in the world» (Pallasmaa 2011, 597).

The kinetic vision of space

While it has been argued in the previous section that the true experience of space is predominantly encountered through the body, we suggested that vision must be treated equally to the discussion of the meaning in architecture. In this section, to help the understanding of these matters, we interpret and report some concepts discussed by Cornelius Van De Ven in his book *Space in architecture: the evolution of a new idea in the theory and history of the modern movements* (1987).

According to Van De Ven (1987), Hildebrand, an art theorist, significantly impacted the theoretical exploration of spatial concepts in art through his book *Problem of Form* published in 1983. His theory primarily focused on the spatial relationship between the viewer and the artwork as an artistic encounter; in his writings, Hildebrand introduced the correlation between space and form, proposing that form delineates and establishes the intrinsic essence or reality of objects. He distinguished two modes of perception: one involving static vision, where the eyes and body remain immobile, and the other, kinetic vision or vision-in-motion,

where the viewer's eyes converge and adjust while the body moves, enabling different perspectives or closer proximity to the object (Van de Ven 1987, 84). Hildebrand's exploration emphasised the significance of dynamic visual engagement in perceiving and understanding art within space.

According to the same author, perceiving architectural space occurs while navigating it, giving a sequential sense of its three-dimensional form. He refers to Hildebrand's idea that our understanding of objects' physical forms stems from touch – either by hand or visually. Artists, therefore, should intentionally replicate these touch-based and visual perceptions when shaping art, aiming to present a unified distant impression alongside a sequence of closer ones. Ultimately, the goal for artists is to convey a comprehensive concept of space (Van de Ven 1987).

Summarising, Hildebrand's notion of kinetic vision significantly impacted 19th Century concepts of space, highlighting space as foundational to all artistic expression and introducing time as a crucial element in shaping visual perception. The author also differentiated between actual form (*daseinsform*), representing physical reality, and perceptual form (*wirkungsform*), influenced by variables like light, surroundings, and the viewer's perspective (Van de Ven 1987, 87). While *daseinsform* pertains to physical reality, typically of scientific interest, the arts focus on *perceptual form*, aiming to represent and evoke the concept of space.

The task at hand involves visualising natural space in three dimensions – a void partly occupied by objects and air. This dynamic emptiness, not externally confined, relates to an object's shape delineating both its volume and the enclosed air volume. Essentially, an object's boundary demarcates the surrounding air body.
(Forty 2001, 260)

Finally, Hildebrand's ideas suggest that space was animated from within, marking a departure from Semper's notions of volumetric space (Forty 2001). Additionally, Hildebrand's concept of vision-in-motion provides a perspective on understanding space and time within architectural settings. As a result, it is proposed that the diverse perspectives within a spatial experience play a crucial role in presenting a comprehensive understanding of space and the entirety of the experience it encompasses.

Cubists multiple horizons and unfolding's

As this investigation is predominantly an artistic investigation into the meaning of architecture, it is essential to investigate the experience of space and time in a qualitative (phenomenological, artistic) sense, as the problem with thinking of the experience of space and time in mathematical terms dismisses the intangibility of the corporeal experience; going against the grain of the existential nature of being. Juhani Pallasmaa (2011) suggests that our reality extends beyond the material world to mental realms, where experiences and time merge. Navigating built environments creates a flow of images in our minds, shaping how we perceive space, influenced by past and present encounters (Schwarzer 1991). This is where understanding space through Cubism can benefit us in understanding the quintessence of experience, as: «Cubism does not want a banal description of the psychological meaning of bodies and events from a specific external standpoint, rather it

wants life itself!» (Mertins 2011, 33); thus, directing our understanding of the meaning in architecture through the kinetic images of the Cubists emphasises the importance of our lived perception of space.

When we walk around architecture, the invariant structure of our experience creates a narrative of our experience. For example, James J. Gibson's (1978) theory of ecological perception emphasises the concept of invariants, where visual stimuli change dynamically due to movements in the environment or the observer's position. Within architecture, as one moves, various aspects of the building become apparent through a sequence of unfolding images. The adumbrations of our experience of the spaces in architecture synthesise and pertain to our total knowledge of the experience of architecture. As time passes, an observer stores perceptual information about an object in their memory, creating an archive of knowledge. This prior knowledge becomes the foundation for the observer's conceptual understanding of the object. Parallel to a Cubist painting, this understanding involves both past and present memories, experienced through the body's movement, resulting in a layered and transparent sense of time (Pedregosa 2014). These past and present moments of the experience of the object are what phenomenologist Edmund Husserl calls *retentions* and *protentions*.

While Husserl explains this through the analogy of a cube, the thinking of the determinate aspects of the object is relative to the viewing of architecture. By understanding the determinate aspects experience of architecture (*retentions* and *protentions*) as a Freudian series of segments [4], where Tschumi states: «architecture, when equated with language, can only be read as a series of fragments that make up an architectural reality» (1995, 95).

As we can only experience a single facet of an object/experience at any given moment if we consider the factors contributing to an architectural experience, the complete collection of specific elements within architectural space defines the overall intended experience through the *objects horizons* [5], [FIG. 1]. This suggests that the various horizons within modernist architectural space encompass the entirety of experiences.

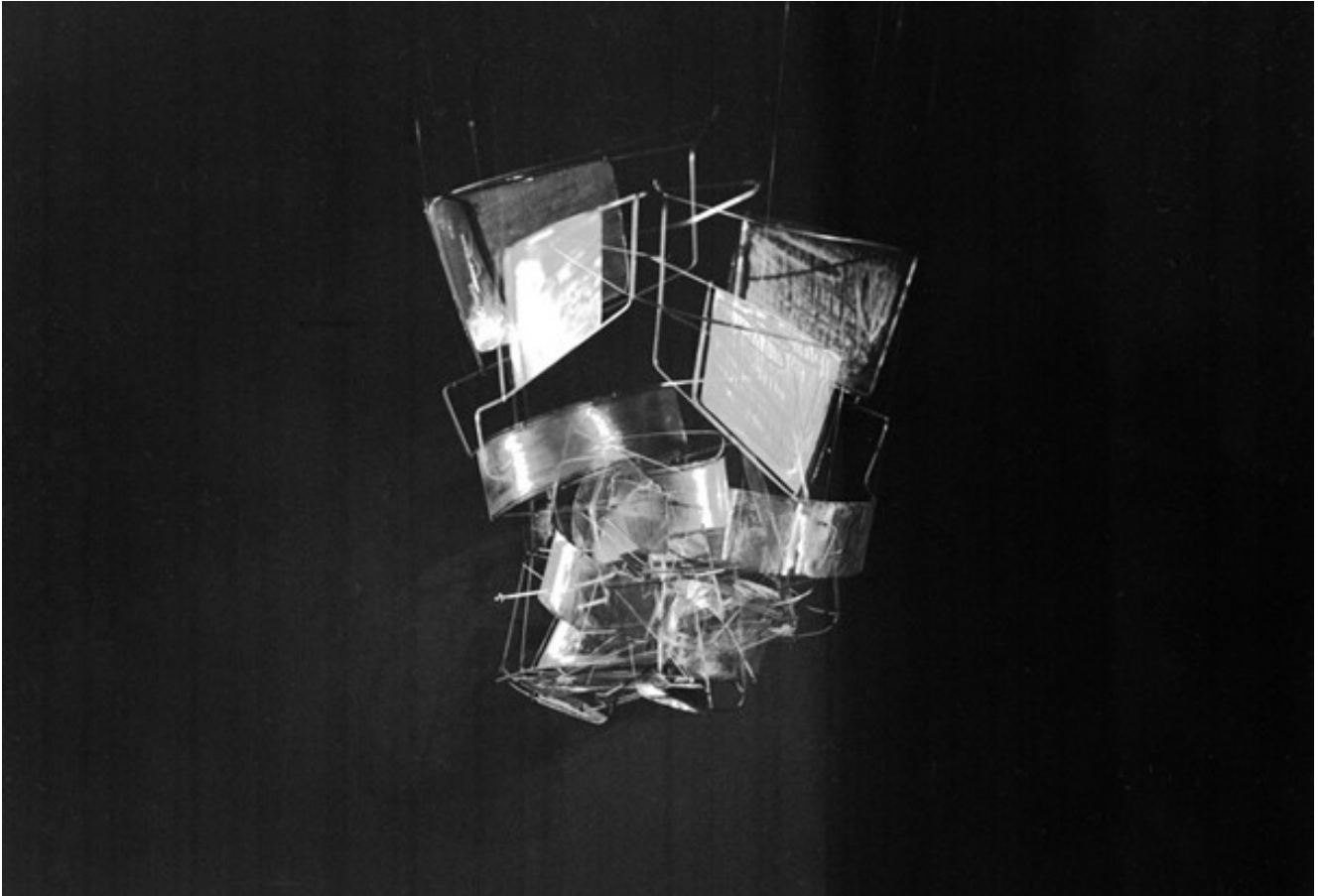
However, this becomes problematic as:

all spatial-temporal Objects have nested horizons, each objects horizons opening out on to many other objects' intertwined horizons. The infinite reach or extent of all nested object horizons is the world horizon. Like the horizon between sea and sky viewed from the beach, it is not itself an object, but rather what makes the appearance of objects possible.
(Macdonald 2005, 262)

According to Macdonald (2005), all objects hold horizons, and spatial-temporal entities contain interlinked nested horizons—culminating in a world horizon that facilitates the manifestation of their appearance. In describing the spatiotemporal experiences of horizons, we need to think of something other than the perception and experience of space objectively, as perception is not a momentary act but a spatiotemporal act (Pedregosa 2014).

[4] Freud's concept of fragments suggests not the breaking of an image or totality but a complex, multiplicative process, indicative of the deeper workings of the unconscious mind. Freud also introduces the idea that dreams are fragmented expressions of unconscious processes, offering insight into the psyche's underlying mechanisms (see S. Freud, 1900 *The Interpretation of Dreams*. <https://psychclassics.yorku.ca/Freud/Dreams/dreams.pdf>).

[5] In Cubism and architecture, horizon metaphorically signifies the expansion of perspective and understanding beyond traditional boundaries. It embodies the Cubist endeavour to depict multiple viewpoints simultaneously and the architectural pursuit of integrating time and space, thus transcending conventional perception.



[FIG. 1] Author (James Acott-Davies), *Duration* (2023). Multiple exposure of Sculpture, 5X4 camera

These momentary (spatiotemporal) fragments can be referred to as «beginnings without ends» (Tschumi 1994, 95). Moreover, he proposes a division among fragments of reality, virtuality, memory, and fantasy, indicating that these divisions exist solely as transitions from one fragment to another; they are traces, they are in-between (Tschumi 1994). These traces, or palimpsest of the in-between, are presented to the viewer of a cubist painting, where the superimposed fragments on the canvas inform one another, and the retentions of the past are faint but still visible through the juxtaposition of traced events. The experience of lived time can be further made apparent through Moholy-Nagy's (1947, 12) words:

Vision in motion

vision in motion

is simultaneous grasp. Simultaneous grasp is creative performative – seeing, feeling and thinking in relationship and not as a series of isolated phenomena. It instantaneously integrates and transmutes single elements into a coherent whole. This is valid for physical vision as well as for abstract.

vision in motion

is a synonym for simultaneity and space-time; a means to comprehend the new dimension.

vision in motion

is seeing while moving.



[FIG. 2] Georges Braque, *The Portuguese (The Emigrant)*, 1911. Wikiart

Vision in motion can be interpreted for the horizons of experience in a cubist painting, for example Georges Braque, *The Portuguese (The Emigrant)*, 1911 [FIG.2]. The fragments and lines on a cubist canvas we consider are not to be the object itself, but the nested horizons exemplify the act of perception not being static in space or time. Therefore, the multiple horizons of Cubism and our experience in architecture are the act of the kinetic experience or vision in motion; it is a means of comprehending the lived sense of time.

In summary, the past and present sequences are depicted in a typical Cubist image that reminds us of the temporality of experience and depicts the impossibility of being in multiple positions at any given moment. The multiple horizons, or in other words, *frames*, derive significance from juxtaposition – establishing memory of the preceding frame and the cumulative events of space. The cubist painting as a transformational device (repetition, distortion) presents the viewer with an aggregate of horizons at a single glance in a «painting that is no longer an infinitesimal point in time manifest in an infinite space, but an event in time manifest in a finite point» (Vargish & Mook 1999, 86). We can assert that the experience of space unfolds through the duration when the body extends into space and tries to make space palpable (Lippert 2019): *spatium non fugit?* Cubism is a documentation of the artist's experience of the object in space and time, and the folds of matter and time can be compared to modern architecture's experience.

Therefore, like the cubists, which broke away from a linear perspective, and architecture being the demarcation of finite arrangements of space, as the viewer is actively experiencing the building, buildings in spacetime can only be comprehended by an observer moving.

We can find similarities with some Futurism work, as, for example, the work *Development of a Bottle in Space* by Boccioni [FIG.3] allowed him to explore the idea of a disembodied intelligence in an ideal space to grasp the object through a conceptual journey of seeing the sculpture at a single instance, a kind of spatial thinking. The encounter provides an enriched experience, pregnant with past and future becoming reciprocal between viewer and object (Krauss 1996). This notion of a disembodied intelligence reflects the experience of modernist architecture, an acceleration of time from the duration of multiple spatial experiences, which leads to an enriched understanding of the viewer's relative position to the object (Krauss 1996); an intersection of visual access to the interior and exterior form; exemplified architecturally in Van Der Rohe Barcelona Pavilion [FIG.4].



[FIG. 3] U. Boccioni. *Development of a Bottle in Space*, 1913. Wikimedia

113



[FIG. 4] M.Van De Rohe. *Barcelona Pavilion*, 1929. Wikimedia

Philosophy Kitchen. Rivista di filosofia contemporanea
#21, II/2024, 101 — 117

Spatium fugit: an alternative approach to viewing space

We believe that modern art, such as sculptural artist Anthony Caro and his work *Emma Dipper*, [FIG.5] (1969), is analogous to the viewing of architecture, where it encourages us to rely on our memory of what we have seen from other viewpoints beforehand; aiding an understanding of the whole.

While Caro's work is not architectural in the sense of a place of dwelling, instead, his works are allegorical to the modernist aesthetic. Caro's sculptures' arrangement of voids questions the limit of the start and end of the interior and exterior spaces of the sculpture; the loosely defined interior volumes of the work rely on an engagement of Space, Event and Movement. By reflecting on the movement of the observer in relation to space and event, understanding the cumulative sequences of multiple spaces allows us to assert that their *frames* derive significance from the juxtaposition of past and present experiences – thus, arriving at an understanding of the meaning of architecture.

To summarise the journey in this essay, the proposed alternative approach to viewing space advocates an artistic and phenomenological reflection, transcending conventional architectural considerations to embrace the lived experience within transgressing through spaces. Rather than reducing space to measurable dimensions and a singular event, this

[FIG. 5] Anthony Caro. *Emma Dipper*, 1977. Wikiart



approach underscores spatial encounter's subjective and qualitative aspects. © Juhani Pallasmaa champions this perspective, contending that

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To me, this approach to architecture and meaning seems to confine the interpretation within a solipsistic realm, just as people wouldn't derive meanings from other phenomena and transfer them onto buildings and architecture. But they (and we) do it, indeed. We continuously (mis)understand things exactly for that reason. This is perfectly right for private homes and user perspective but quite problematic for public buildings and designer perspective.

JAMES ACOTT-DAVIES, MICKEAL MILOCCO BORLINI

You're drawing attention to the potential pitfalls of overly subjective interpretations of architectural forms. Our personal experiences and cultural perspectives play a significant role in how we attribute meaning to spaces, and this is an intrinsic part of our engagement with our built environments.

By their very nature, public buildings are designed to communicate on a broader, more universally accessible level. However, these public spaces – such as shopping centres and airports – often fall under what Marc Augé describes as “non-places” or, as Rem Koolhaas might argue, “junk space”: they tend to be generic, fragmented, and largely devoid of architectural integrity or more profound purpose, serving primarily as vessels for consumerism.

In this context, seeking meaning within these “non-places” becomes even more crucial. By reflecting on our individualised, mobile experiences within such spaces, we can reclaim or reinterpret their significance, ensuring they serve more than just a functional or consumer-driven role.

CARLO DEREGIBUS

I would agree at a moral level. But discussing meaning, the “public” buildings you're referring to – airports and shopping centres are – not public at all: they are just “open to public”, which is completely different. Hence, I feel architects should just admit that their meaning is precisely the consumer-driven dimension, and it is absolutely «designed to communicate on a broader, more universally accessible level»: that is why you go in commercial centre in Dubai as well as in Milan or New York.

But about public buildings, can they be designed on purpose «to communicate»? That was the main question of this issue and, looking at all contributions, it seems quite difficult to say they can. So why architects (or rather, scholars of architecture) continue to believe that changing space design will change society as a whole, just mistaking desires for meanings?

architecture encompasses more than visual aesthetics, emphasising the depth of lived experiences within architectural spaces akin to Bachelard's *Poetics of Space* (1969).

The transition from traditional to modern and supermodern spaces has reshaped the boundaries of conventional spaces. Modernity and supermodernity have shifted from static, compartmentalised spaces towards dynamic, fluid, and technologically driven environments. Zygmunt Bauman's concept of liquid modernity (2000) encapsulates this evolution, signifying the fluidity and constant flux of contemporary spaces that challenge the fixed boundaries of traditional spaces, ushering in a globalised and interconnected spatial experience.

The architecture of the globalised world will continue to accelerate an excess of (new) non-places [6]. As mentioned, space is inherently more abstract, so understanding how to transform space's intangibility into something more perceptible is more critical than ever. If space is the protagonist of architecture, the meaning comes from, as discussed, the bodily engagement with its horizons, as, in the words of Tschumi (1994, 85): «neither the pleasure of space nor the pleasure of geometry is (on its own) the pleasure of architecture». Thus, the lived and kinaesthetic experience of space and movements is interpreted as an aesthetic idea, where architectural fragments collide and merge in delight – making the meaning of architecture palpable.

Finally, the concept of place, and its meaning in architecture, is not necessarily becoming antiquated; rather, it is evolving and becoming more complex in the contemporary context due to numerous factors such as globalisation, technological advancements, and shifting cultural dynamics. While traditional notions of place as static, bounded, and stable entities still hold significance in many contexts, they are increasingly challenged by the fluidity and interconnectedness characteristic of the modern world.

As societies become increasingly interconnected through trade, migration, and communication technologies, traditional boundaries between places are blurred, leading to the emergence of transnational spaces and hybrid identities. As sociologist David Harvey notes, globalisation disrupts the fixity of place by facilitating the flow of capital, goods, and ideas across geographical borders, thereby transforming the economic, social, and cultural landscapes of localities (Harvey 1989). As Manuel Castells argues, the rise of digital communication networks has engendered a new form of *space of flows*, characterised by the instantaneous exchange of information and the formation of virtual communities that transcend traditional spatial boundaries (Castells 1996). As societies become more diverse and inclusive, traditional understandings of place as homogeneous and bounded entities give way to more fluid and heterogeneous conceptions that accommodate multiple perspectives and experiences (Massey 1994). In summary, while the concept of place is not becoming obsolete, it is undergoing significant transformation in response to the forces of globalisation, technological innovation, and cultural change. Traditional understandings of place as static and bounded entities are being challenged by the fluidity, interconnectedness, and diversity characteristic of the contemporary world.

These are the reasons why space is escaping us: *spatium fugit*.

[6] Non-places, contrary to being obsolete, have adapted to technological progress and shifting social interactions, blending with digital and virtual environments. This evolution underscores the fluidity of contemporary identity and connectivity, reflecting the ongoing transformation of society's spatial and social landscapes.

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