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ARCHITECTURE OF EMPTINESS – CONCEPTION, POETICS AND PRAXIS

Abstract:

The Architecture of Emptiness is an urban-architectural approach that focuses on the qualities and possibilities of unbuilt space, giving it primacy over built space. The proposed approach explores how emptiness can act as a generative force for urban-architectural pieces and how, in return, it echoes its built and natural environment. It highlights the relevance of what is conformed, surrounded, defined, and delimited, shifting the focus away from the material elements that delineate them. Starting from theoretical conception of emptiness based on four lines of thought: Buddhist, Taoist, Atomist, and phenomenological—this paper explores a possible application of these concepts through the work developed by CADO architectural studio.

Keywords: Architecture of Emptiness, Buddhism, Taoism, Atomism, Phenomenology, CADO studio

АРХИТЕКТУРА ПРАЗНИНЕ – КОНЦЕПТ, ПОЕТИКА И ПРИМЕНА

Сажетак:

Архитектура празнине је урбанистичко-архитектонски приступ који се фокусира на квалитете и могућности неизграђеног простора, дајући му примат над изграђеним. Предложени приступ истражује како празнина може деловати као генеративна сила за урбанистичко-архитектонске целине и како, заузврат, кроз њу одјекују изграђено и природно окружење. Истиче се важност онога што је обликовано, окружено, дефинисано и ограничено, померајући фокус са материјалних елемената који те просторе дефинишу. Утемељен на теоријским дефиницијама урбано-архитектонске празнине кроз четири школе мишљења — будистичку, таоистичку, атомистичку и феноменолошку — овај рад истражује примену ових концепата кроз рад архитектонског студија CADO.

Кључне речи: Архитектура Празнине, Будизам, Таоизам, Атомизам, Феноменологија, CADO studio

1. TOWARDS EMPTINESS IN ARCHITECTURE

The idea of Emptiness has an existential echo in architecture, as inhabitable space is, by definition, a void that the body can penetrate and occupy. Unlike a classical sculpture, and similarly to music, architecture must be physically or mentally inhabited. Emptiness in architecture, therefore, renders matter permeable, allowing the body to pass through, occupy space, and find shelter.

Emptying, as a process of creating inhabitable space, can be traced back to prehistory, when fire was used to manipulate landscapes by opening woodlands. The cave, as an archetype, is the earth's emptiness which, like a womb, has the capacity to accept, protect, and embrace the human body. These processes of acknowledgment and clearing—as the premeditated recognition and intentional design of emptiness—are the first acts of intuitive spatial creation, prior to construction and building. Like rests in music, emptiness in urbanism and architecture has a generative function—it accommodates utilization and frames built form. It provides places for occupation, as well as for the experience and comprehension of architectural pieces, their scale, and perspectives. In urban space, these rests are places for sojourning and meeting, lines and grooves for traffic and walking, green areas and pockets, and intervals between different urban areas that commonly correspond to different eras. Urban-architectural emptiness (UrbArch emptiness, as defined by Čavić [1]) permits objects to exist as discontinuous entities and allows spatial episodes to be experienced as such. It is a framework within which 'tone' emerges as individual sensation and 'musical episodes' are structured as singular spatial entities.

Apart from its inhabitable quality, emptiness is seen as a broader urban-architectural approach which permits a shift in focus from materiality and formality towards the unbuilt part of our environment. As stated by Cruz Pinto [2], emptiness can be applied at all levels of architectural production and reception: from the inner idea, through the latent realm of geometry, to architectural flesh and skin. Emptiness can be further explored as a carrier of implicit spatial qualities that transcend the form through anti-consumerism, contextual dependence, moving beyond materiality towards the 'other'. As a generative force that defines form—rather than being its consequence—emptiness can be expressed through formal restraint, non-excessive construction, ethics, resilience, and the search for the indispensable. The approach emphasizes what materials have molded and points towards the varieties of poetic and creative interpretations that continue to inspire and drive contemporary artistic and architectural practices.

2. ARCHITECTURAL EMPTINESS AS REFLECTION OF WHOLENESS

0

$0 = -1+1$

$0 = -2+2$

$0 = -3+3$

$0 = -4+4$

[...]

$0 = -n+n$

Figure 1. Number zero as a balanced state of all possible values. By Ljiljana Čavić, 2025.

Buddhist thought is claimed to be "the home of the most developed philosophy of emptiness" [3, p.31]. It accounts for emptiness as the ultimate home of everything, whose fullness is reflected in

the impossibility of it being determined or separated from anything. The fertility of eastern emptiness is expressed in an important notion of the Buddha's teaching—*paticca samuppada* or 'dependent origination'—which highlights the importance of everything in the generation of something. In Buddhist reality, there is a condition of absolute inseparability between apparently separated elements; everything is part of the whole and, as such, is unified through impermanence and constant change.

In Buddhist tradition, the void refers to the emptiness of the solid sense of self, which is otherwise seen as disconnected from the wholeness of 'dependent origination'. Separation and artificial independence occur through individualization and self-glorification. In the early Buddhist texts translated by Ñāṇamoli and Bodhi, the process of emptying the imposing self is understood as a path to liberation; it frees the essence from the illusion of "permanence and certainty that can never be achieved" [3, p.38]. It is within this emptiness of individual boundaries that the self becomes part of the entangled matrix of reality. Emptiness is thus seen as the ultimate reflection of wholeness.

By avoiding traditional building processes and using the spatial interpretation and recognition of fertile emptiness as a construction tactic, the 'architecture of emptiness' explores the capacity of the unbuilt to embrace a variety of potential usages (figure 1) and afford stages for diverse ways of inhabiting. Through its lack of constraints, emptiness is capable of triggering inspiration for diverse use-cases. By not directing usage, emptiness provides a gate to multiple possibilities.

An example of an intervention built upon the idea that architectural gestures should give priority to their surroundings by restraining formal expression is the Hisar Fortress revitalization by architectural studio CADO, designed by Riste Dobrijević in 2018 and constructed in 2024. The project is situated within the Hisar Fortress—a medieval stone structure on Hisar Hill in Prokuplje, Serbia, built in the late 14th century over Byzantine and Roman remains. The fortress occupies a strategic point overlooking the city of Prokuplje and the Toplica River and is a significant historical site. The Citadel area within the old fortress walls, which was the main subject of the revitalization project, belongs to a unique natural and historical landscape, forming a dialogue in time involving cultural heritage, nature, the sky, and the sun (figure 2).

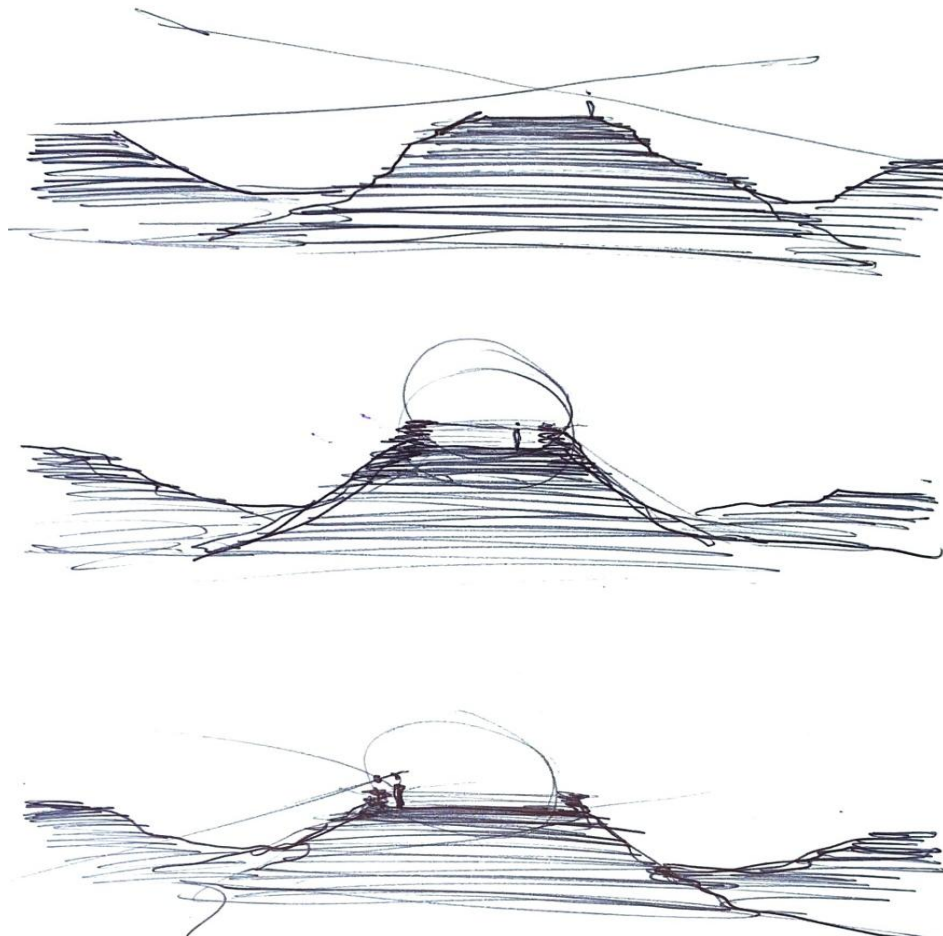


Figure 2. Hisar Fortress. Landscape perception, by Ljiljana Čavić, 2025.

The project recognizes the landscape positioning of the Fortress and its Citadel and ensures that the proposed structures for a multifunctional cultural space are not dominant, thereby preserving the presence and ambiance of the cultural landscape. The core concept is 'lightness', as any intensive intervention could disrupt the existing values of the site. The design aimed to preserve the visual balance of the Citadel plateau, allowing new interventions to be noticeable but not overwhelming. The design protects and repairs the Fortress through minimal interventions: conservation and partial reconstruction of walls, ramparts, and the Donjon tower. Moreover, it fulfills the city of Prokuplje's long-standing need for a multifunctional cultural space – summer stage and outdoor auditorium. The stage is non-dominant, subtly integrating into the Citadel plateau. The auditorium remains minimal by utilizing the natural slope of the site. New metallic elements – the auditorium rows – are integrated into the terrain, creating parallel lines that respect the historic ramparts, define the space, and create a subtle dialogue with the sky and surroundings. The wholeness of the space is left empty, allowing it to be reinterpreted and occupied freely in diverse ways (figure 3).

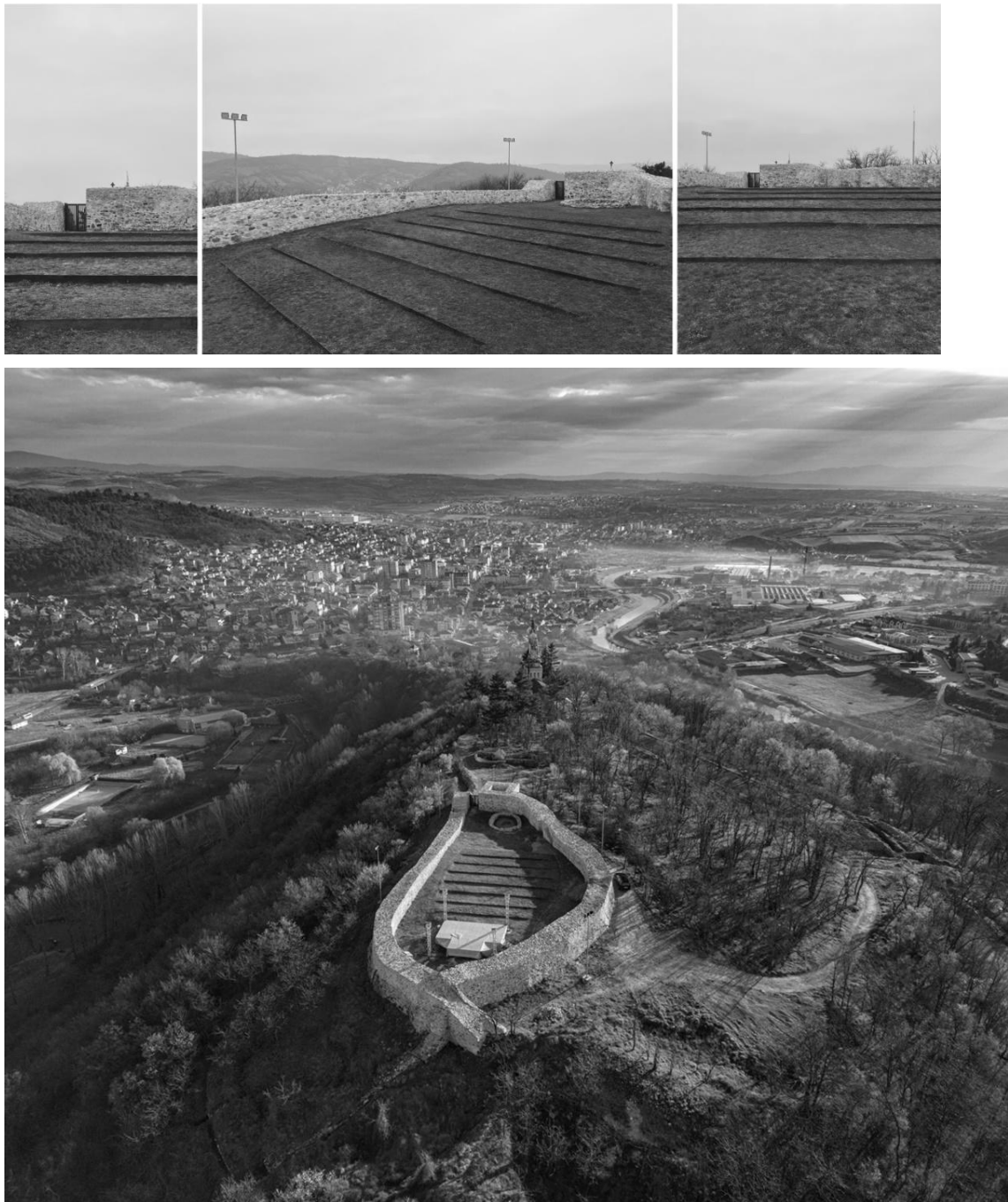


Figure 3. Hisar Fortress after revitalization. Top photos by Riste Dobrijević; bottom photo by Svetlana Dingarac, 2024.

3. ARCHITECTURAL EMPTINESS AS FULLNESS' ANTIPODE

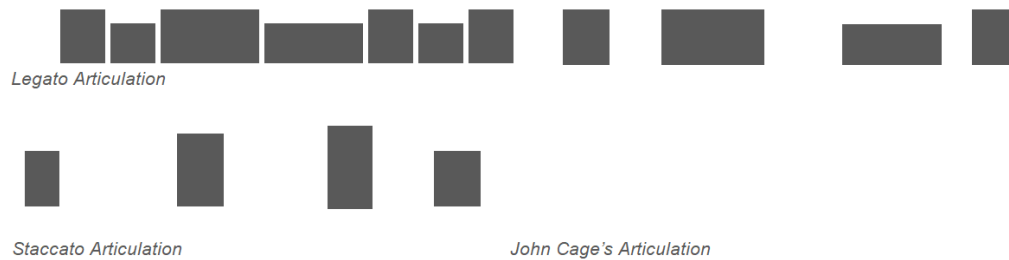


Figure 4. Full-Empty urban articulation based on an analogy with music. By Ljiljana Čavić, 2017.

In contrast to Eastern perspectives, the concept of emptiness in the history of Western philosophy has been a subject of significant contention, tracing back to the classical atomism of its three primary figures: Democritus (ca. 460 BC – ca. 370 BC), Epicurus (341 BC – 270 BC), and Lucretius (ca. 99 BC – ca. 55 BC). Their conceptualization of ‘atoms and the void’ established these as the fundamental components of existence, roughly corresponding to the binary of ‘something and nothing’ [4]. Developed from this foundation, Western thought often perceives emptiness and fullness as distinct, independent blocks of matter. These elements function as the building blocks of the physical and conceptual worlds across all scales. Just as the material world is composed of solid objects situated within an ambient void, our cognitive system is built upon distinct concepts that are isolated from their surroundings, making them identifiable and comprehensible.

In architecture, the alternation between emptiness and fullness defines the environments we inhabit. Emptiness is to space what a pause is to music; it is to matter what silence is to sound. Just as it is impossible to perceive a musical note without its cessation or differentiation through a pause, one cannot grasp the built environment without the unbuilt interval essential for its experience. Urban-architectural space relies on this interplay of ‘bits’ that penetrate our consciousness, providing the structure for spatial sensation. While the solid antipode determines the quality of the ‘tone’, the empty pause allows that tone to be heard. The rhythm as melodic exchange between emptiness and fullness results in phenomenological compositions that define the unique character of different environments.

“Architecture and music are arts generating environments in which emptiness, pause and rhythm define the ability of being respectively inhabited and listen to” [2, p.49]

As musical tones re defined by pitch, duration, intensity, and timbre, UrbArch spaces are characterized by morphological attributes such as scale, proportion, openness, enclosure, etc. Just as a musical note has its complement in the rest—the silent interval between two tones—architectural space finds its equivalent in emptiness. The rest and emptiness serve as the underlying condition for both musical and urban-architectural structures, as they sustain each element and allow for their individualization and apprehension.

By providing the necessary distance for observation, emptiness establishes the standpoint from which architectural pieces can be understood; it is the background from which sonorous and spatial ‘tones’ emerge. The vital importance of silence and emptiness lies in their receptive capacity to echo and unfold the surrounding fullness. Without these intervals, tones would lose their distinction, dissolving into an undifferentiated continuity.

Furthermore, the musical rest performs a generative function—it marks the threshold where a sound begins and ends, and where a musical episode is framed. Within this framework, a tone can emerge as a singular sensation, and musical passages are structured as coherent entities. Ultimately, the rest serves as evidence that a composition has occurred. In the same way, urban-architectural emptiness permits objects to exist as distinct, discontinuous entities, allowing spatial episodes to be experienced as such.

The experience of urban-architectural space is composed of smaller fragments whose sequencing and articulation define the broader city composition. Thresholds between these elements can be sharp and easily perceived, creating a punctual, clearly demarcated space that resembles a musical *staccato* (figure 4). Conversely, other spatial units possess a subtle inner fluency, where boundaries are softened and tied together, transforming the experience into something akin to a musical *legato*

[5]. Ultimately, articulation in both the urban realm and music depends on the singular quality of individual ‘tones’ and the rhythmic relationships they establish with the elements that precede and follow them.

In the ongoing project Co.Habitar SCM, by CADO studio, the interplay between fullness and emptiness is applied across multiple scales (figure 5). At a broader urban scale, the intervention aims to improve the network of voids within the Lisbon fabric. On the urban level, the project proposes an enclosed emptiness that functions as a green public space, enhancing the city’s overall offer of accessible and permeable environments. On the site level, the relationship between the new architecture and existing buildings is resolved through perimetral emptiness, utilizing a green outer ring as both a visual and functional buffer zone. Furthermore, regarding site integration, the project employs an elevated ground floor on pilotis, facilitating a seamless inner-outer flow and enhancing spatial publicness. At the architectural scale, the full-empty interplay generates smaller-scale elements that respect the bodily and communal experience. Socially, the project responds to the specificity of its context by offering a program tailored to a neurodiverse community.

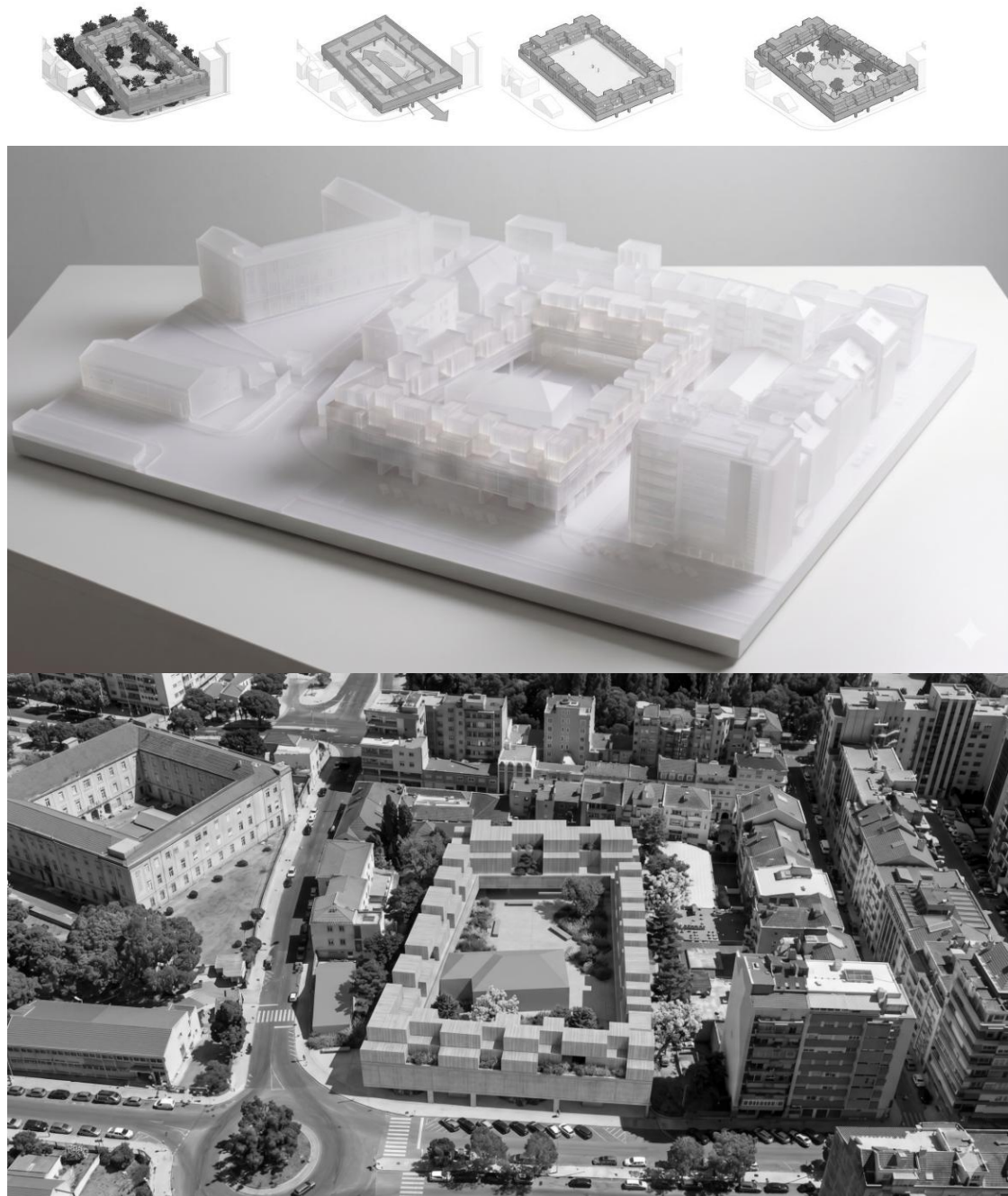


Figure 5. Co.Habitar SCM, Lisbon. By CADO studio, 2026.

4. ARCHITECTURAL EMPTINESS AND STRATIFICATION OF MEANING

In contrast to Western frameworks—where reality is partitioned into solid, impenetrable corpuscles set against an absolute void—Taoist philosophy posits that fullness and emptiness possess an equal ontological nature. They are not opposing forces but a complementary pair, defining one another much like *yin* and *yang*, being and non-being, or the feminine and the masculine. This dynamic unity is sustained by a continuous flow between the two states, a reflection of *qi* (or breath-energy). This vital energy facilitates the transitions between the apparent opposites through a process analogous to breathing-in and breathing-out [3]. It is within this intermediate process that the common origin and essential sameness of all oppositions are revealed. Through a nuanced gradation of the ‘full-empty’, their inseparability is made manifest. In this Taoist view, the emptiness is as full, stable or robust as fullness, and fullness is equally impermanent and fertile as its empty opposite.

The Taoist concept of cyclicity in the built environment offers insights for this research, particularly in understanding how places and materials age through continuous formulation and reformulation. Certain sites and structures are ‘young’, being within the initial cycle of their existence. Others, however, have undergone multiple transformations, accumulating diverse historical layers that thicken their material strata and deepen their significance. By hosting various functions across successive eras, these multi-cycled spaces demonstrate a capacity for reinterpretation and an inherent ability to adapt to evolving urban-architectural demands.

In his essay “Function and Sign: The Semiotics of Architecture”, Umberto Eco [6] points out that the significance of an architectural piece is layered through the various functions that architecture, as a cultural sign, acquires over time. He provides the example of a prehistoric cave which, originating as a simple shelter that offers protection from surrounding threats, evolves into a sign vehicle representing concepts like family, community, and security. Through this historical stratification of functions, architectural spaces accumulate both denotative (functional) and connotative (symbolic) meanings.

The Taoist notion of cyclicity, paired with Eco’s stratification of meaning, highlights the constant transformation embedded in urban-architectural pieces as their functions shift through time. The process of building-unbuilding-rebuilding acts as a rhythmic cycle of full-empty breathing-in and breathing-out, through which the built environment assimilates meaning. Through emptying, the potential for new construction is created. Moreover, by removing layers of this stratification, we gain access to the deeper, hidden strata of history that would otherwise remain concealed. In this context, removal and unbuilding serve as a poetic approach to uncovering deeper layers of significance and hidden memory.

In the case of the Saint Christ Chapel in Lisbon, CADO studio has been exploring the qualities of both present and absent layers since 2022. This work has been conducted through conservation studies, historical research, and project development in collaboration with architect Cristina Mantas and the NGO Telas Elementares - Estudos em Línguas e Artes Sacras. This Manueline Chapel, dating from the beginning of the 16th century, was once part of the Jerónimos Monastery enclosure. It was rediscovered in the 1950s and shortly thereafter classified as a Property of Public Interest. Today, the Chapel is dedicated to Orthodox Christian services and hosts cultural and religious activities organized by the local Serbian community.

During the conservation and historical analysis, a lack of various decorative elements was noted: such as a section of the tile panels and a portion of the stone doorframe, which likely once held the altar doors. Rather than being viewed as defects, these missing elements serve as markers of human intervention understood as a cultural phenomenon. Each absence points toward a potential story of how the space was adapted, used, or even stripped over centuries, transforming the building from a static monument into a living record of cultural shifts (figure 6).

In this light, the ‘lack’ of certain decorative parts is framed as a cultural narrative rather than a physical void. Instead of attempting a speculative restoration to replace what was lost, the conservation approach honors these gaps as authentic evidence of the Chapel’s lifecycle and the diverse human agencies that interacted with it.



Figure 6. Saint Christ Chapel, Lisbon. Photogrammetry survey by ArchHC3D, Lisbon School of Architecture, 2024.

5. ARCHITECTURAL EMPTINESS AS PHENOMENOLOGICAL CHANNEL OF LIGHT AND MOVEMENT

“Canalised by boundaries of landscape, topography and buildings, natural light travels through space occupying emptiness and rejecting fullness. It is present only when materials are absent. Light unifies full and empty blending them into experiential one. Because of the light, the full is reflected in the empty and the empty is rendered habitable, concrete and visible. In architecture, penetration of natural light is an evidence of the existence of a liveable place possible to be occupied. This interplay between architectural emptiness and natural light reveals their ontological dependency and phenomenological unity.” [7]

Natural light begins its journey at the aggressive surface of the Sun and arrives at Earth somewhat domesticated and toned down. At midday, the sun provides 32,000 to 100,000 lux, depending on the time of day, the year, and the specific context [8]. From its source, natural light is transformed by a succession of environmental filters. Passing through the atmosphere, it is altered by clouds and humidity, becoming an unsteady entity further shaped by the landscape and natural textures.

Through natural light, materiality ‘trembles’ as it is perpetually reshaped by the vibration of illumination and the shifting seasonal and daily context. These variations render the phenomenological atmosphere of inhabitable space singular and ever-evolving. This unique

atmosphere is defined by Böhme [9] as an ‘in-between’ space where human and environment intersect and unite. Similarly, Norberg-Schulz [10] identified atmosphere as the most comprehensive property of a place—a phenomenological space that stands in contrast to the static, isotropic abstractions of geometry. This atmosphere is substantiated by natural light and its trembling quality, as the passage of clouds, shifting humidity, and the play of foliage act as dynamic environmental filters. Passing through these filters the abstract and intangible light emitted from the Sun turns into specific and phenomenological light molded by place, architecture and condition of human eye (figure 7).

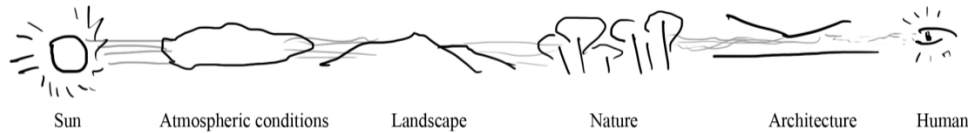


Figure 7. *From abstract/intangible to specific/phenomenological light, by Ljiljana Čavić.*

When designed as intentionally empty, architecture acts as a receptive canvas for this environmental process. By remaining vacant, the space becomes a medium that captures the subtle phenomenological output of environmental filters. Rather than asserting a dominant presence, the architecture yields to the atmospheric shifts of the outside world, rendering the experience singular and unrepeatable.

This approach is evident in the reconstruction of an apartment at Makedonska 21 in Belgrade, designed in 2017/18 by Riste Dobrijević (CADO studio). The apartment is situated within an edifice designed between 1927 and 1929 by the Belgrade architect Dimitrije M. Leko. The building exemplifies the essence of Academicism through its clarity of form, rational spatial organization, and restrained ornamentation—elements that contribute to the ‘timeless’ monumentality Leka sought to achieve. As a synthesis of these period-specific characteristics, the structure stands as one of Belgrade’s preeminent examples of interwar Academic architecture.

The interior intervention honors the values proposed by the building's original architecture (figure 8). Though minimal, the intervention significantly impacts the visual and lighting axes of the apartment. Furthermore, the minimalist surfaces serve as a receptive medium for the shifting, temporal textures of natural light, perpetually filtered and modulated by the surrounding environment (figure 9).

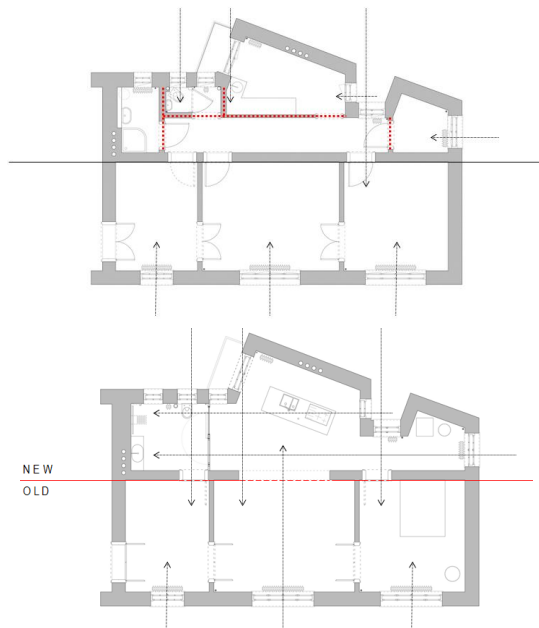


Figure 8. *Apartment at Makedonska 21, Belgrade. Upper drawing: original state; lower drawing: state after intervention. CADO Studio.*



Figure 9. Apartment at Makedonska 21, Belgrade. Photos by Relja Ivanić.

6. SYNTHESIS

The creation of space through the definition of emptiness is an intuitive approach utilized widely by the architect throughout the design process. Emptiness is incorporated into UrbArch creation whenever the formal recedes into the background. From the diagrams of constitutive order by Tschumi that initiate his creative process, to Loos's *Raumplan*, Mies's collages of empty spaces, Zumthor's drawings of light and atmosphere, and Kongjian Yu's 'Sponge City' as a set of empty chambers—these approaches articulate the power of the unbuilt in UrbArch genesis at various levels. In dialogue with these paradigmatic perspectives, this work aims to contribute to the recognition and systematic synthesis of the 'architectures of emptiness' within contemporary UrbArch discourse.

Beyond its generative strength in the architectural creative process, we suggest that emptiness might be utilized as the UrbArch element that promotes the decision 'not-to-act' and 'not-to-respond' immediately to the impulses of occupation and continuous expansion. Beyond the approach of growth over time, which assumes an accumulation in the development process of the built environment, the 'architecture of emptiness' proposes the acceptance of the diminishing process of UrbArch space as a possible paradigm for evolution and cultural transformation. When Souto de Moura [11] speaks of Luis Barragán's architecture as profoundly human, he points to its quality of reflecting the passage of time. Instead of designing for growth, the future architect must be inspired to think about 'not-acting', and even shrinkage or deconstruction. Given the overpopulation and excessive construction surrounding us, the future architect will need to know when 'not-to-build'—or even how, where, and when 'to-demolish'.

7. AI USAGE DECLARATION

This manuscript was refined with the assistance of Gemini by Google, which was utilized for linguistic optimization and the visual improvement of figure 5. Full human oversight was maintained throughout the process to verify all outputs for technical accuracy and the preservation of the original research intent.

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