

SPECULATING THE ARCHITECTURE OF NOTHINGNESS THROUGH VOID OPERATIONS

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Abstract

This speculative design study aims to construct the idea of nothingness as an active and generative element of architecture. Nothingness, understood as voids, empty, and negative spaces, can be reinterpreted as a productive condition that opens up new spatial possibilities. Such a productive condition demonstrates the interdependence between nothingness and the spatial existence of something. The project explores how nothingness constructs the perceptibility of particular spatial terrain through void as architectural design operations. Through creating dystopian contextual scenarios where all spaces have been used up, the study identifies various void forms present in existing structures, classifying these voids based on spatial categories and formulating the potential these voids have in shaping perception. As a result, it captures spaces that project nothingness and are lacking definition, to be transformed for spaces usable for any purpose, following the user's perception. This study suggests that architecture can originate from nothingness—to create infinite potential of new architectural proposition in the speculative contextual zones of the Neglected, the Ruin, and the Underground. Through exploring void as architectural operations, this study hopes to reflect on the expanded role of nothingness beyond simply being an overlooked, undefined aspects of space. The study concludes that the idea of nothingness may unlock various potentials in the context where space is limited but full of latent potential, such as in post-disaster or in adaptive reuse situations.

Keywords: nothingness, void, spatial perception, architectural operations

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Introduction

This study proposes the idea of nothingness to become an active and generative aspect in architectural design. Architecture has long prioritised material presence, function, and form as its main approach (Ching, 1979/2007; Frampton, 1995; Rossi, 1966). The study instead explores how absence, emptiness, and destruction—typically seen as negations of architecture—can instead serve as productive design operations. Through this inquiry, the study questions how nothingness—in the form of voids, empty spaces, and absences—might operate as a foundation for creating space, meaning, and form.

This focus on nothingness draws on nihilist and ontological perspectives, particularly those discussed by Brett (2016) and Cunningham (2002), which view nothingness not as a passive void but as an active condition capable of producing meaning. Rather than interpreting nihilism as a crisis of value, the paper aligns with positions that recognise it as a site for creative renewal—where destruction and void enable new ways of thinking about being, space, and architecture. This conceptual lens provides the foundation for the study's speculative design experiment, which tests how the idea of nothingness can be materialised through design operations.

The study employs a design tool called *Slime* as part of a speculative framework that interprets architectural elements as adaptive, liquid, and continuously transforming. Through this approach, the paper explores how the processes of erasure, deformation, and reconfiguration can embody the logic of nothingness as a spatial operation. The intention is not to produce fixed architectural forms but to investigate the potential of voids as an expression of nothingness to inform new methodologies of architectural generation.

This paper is structured as follows; the first section situates the notion of nothingness within architectural discourse and defines the theoretical context of nihilism and void. The second section elaborates on the design methodology and the operative concept of *Slime* as a speculative tool. The third section presents the architectural outcomes and discusses how designing from nothingness can inform both spatial understanding and architectural pedagogy. The paper concludes by reflecting on how void-based operations might extend contemporary discourse on adaptive and critical design methodologies.

Understanding nothingness in architecture

Nothingness as a question of nihilism in architecture

The question of nothingness as part of the nihilism discourse has emerged since humans began applying ontological thinking, such as attempting to understand the world solely through thought (Cunningham, 2002). In a philosophical discourse, there are two distinct ways of understanding nothingness, either as meaningless absence or instead as a generative condition—an absence that enables presence. Brett (2016), a nihilist, describes nihilism as the end of nonsense, where all things must be seen as they are. Humans must see everything without questioning it, as

the world has its own system and will continue to exist whether we question it or not (Brett, 2016). Conversely, Cunningham (2002) views nihilism as a perspective that provides value, knowledge, and an understanding of God. This tension invites reflection within the architectural thought, proposing how nothingness may represent the potential created by absence. The following paragraph expands more on the discussion about nothingness in architecture.

Nothingness is a subjective concept shaped by its context. In architecture, Parmenides describes 'absence' as a state of space that resists philosophical interpretation, whereas Democritus considers nothingness as the void where atoms move (Şimşek, 2019). Therefore, nothingness can have different meanings. In the context of fluid movement, it could signify solidity, while in a solid context, it denotes the empty space that allows movement. In the architectural discourse, nothingness often manifests as voids or unbuilt spaces—areas between or within programs that lack a specific function (Thuer & Nam, 2023). Koolhaas and Mau (1998) suggest that nothingness represents "an opportunity for everything" (p. 199), while architecture defines and limits that opportunity through form and function. Architects typically design specific programs for space, dedicating it to a particular activity. In contrast, nothingness within a space opens possibilities for other programs to emerge, such as void in urban spaces that serve as potential areas for various activities, interpreted differently by each individual.

From this perspective, nothingness becomes a productive condition rather than an absence—it opens up the potential for spatial reinterpretation and new meanings to emerge through occupation and perception. In particular, the void thus operates as a generative field that mediates between absence and presence, the material and the immaterial, and structure and possibility.

Nothingness as the requirements of spatial existence

Nothingness is not mere absence but a necessary condition for identifying the existence of something else. Something is a being that can be defined and possesses existence (Woleński, 2018). According to Sartre (1943/1956), being and nothingness are mutually dependent: the existence of something defines the void, while the void makes being perceptible. This interdependence can be translated into the reciprocal relationship between built form and void. Physical presence gains meaning only through its contrast with spatial emptiness. Voids, gaps, and interstitial spaces act as the silent counterparts that make architectural form intelligible.

The interdependent relations between nothing and something in architecture can be understood through the concept of space consciousness, which is defined when we become aware of boundaries and space. According to Tschumi (1994), defining architectural space means determining its boundaries. Zhang and Fan (2021) add that to prove the existence of a space within a bigger space, we have to consider whether the invisible space is equivalent to nothingness. Existence of space can be recessive

or explicit, and ignoring material boundaries allows space to be explored infinitely. However, when users perceive physical boundaries, they can easily define an area as a space.

Perception validates one's existence in space through consciousness that reflects appearance shaped by memory and imagination (Rowlands, 2011; Sartre, 1943/1956). Through this dynamic, consciousness bridges being and space. Heidegger (1927/2008) stated that consciousness is the origin of thought and its existence can be proven through space as its medium. In architecture, space functions as a medium to validate consciousness, which in turn validates one's existence of its surroundings (Zhang & Fan, 2021).

The first image that appears when perceiving existence serves as a person's subjective validation of that existence (Bachelard, 1958/1964). He argues that memory connects us to past experiences, while imagination allows us to anticipate and reconfigure the future (NoorMohammadi, 2015; Zhang & Fan, 2011). Architectural experience becomes a process of remembering and imagining—of perceiving voids as places of potential, and of transforming emptiness into meaningful presence. In this sense, spatial awareness mirrors the existential relationship between being and nothingness, grounding abstract philosophy in experiential reality.

Space is not merely a container but an active medium that validates both consciousness and existence. Bachelard (1958/1964) highlights how humans need a 'real image' in connection with a place to enhance the person-place relationship and develop the meaning of space. Through repeated reflection and sensory experience in space (Pallasmaa, 2012), the meaning of architecture can be understood (NoorMohammadi, 2015; Zhang & Fan, 2011). Thus, in the architectural context, the existence of something can be understood through the relationships between form and void, memory and imagination, and awareness and presence. Space exists as a medium to validate consciousness and existence. The imagination and memory in creating and understanding the meaning within space highlight the importance of these elements in defining the existence and meaning of something in architecture. The void, therefore, becomes essential in defining how meaning and existence are perceived in architecture.

Constructing the spatial consciousness through void as expression of nothingness

Defining spatial boundaries is an act of transforming nothingness into an imaginative framework for envisioning ideal spatial conditions. Koolhaas and Mau (1998) argue that emptiness in the metropolis is never truly empty; each void space can be functioned for a program to integrate residents' activities and the existing site context. This perspective reinforces the idea that nothingness—spatially manifested through voids—plays a crucial role in defining architectural space. Imagination and consciousness shape the creation and definition of nothingness into spatial consciousness. In this sense, void—or what is often

In constructing space, one approach is to understand the perception of objects, acquired through mechanisms such as movement, thought, received instruction, and social and physical context (Tschumi, 1994). In architecture, this object can be interpreted as space, which, through perception, becomes space consciousness. Through such understanding, an object can be understood as a combination of boundaries and voids. If a boundary is reinterpreted as 'number 1,' its whole existence from combination with the void requires the value of '0' as the void itself, creating an infinite operation of '1 + 0 + 0 ...'. In this sense, void and boundaries are parts of the whole existence of an object.

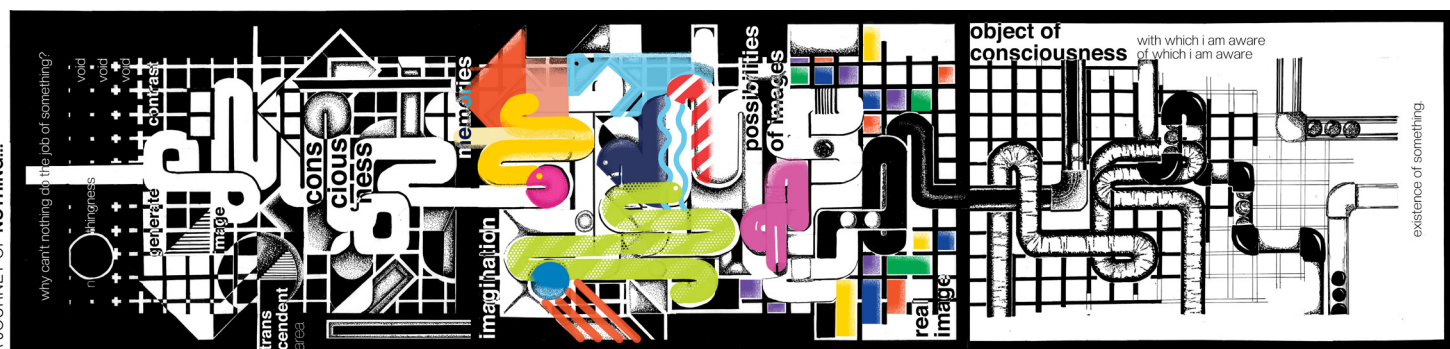


Figure 1. Diagram illustrating the conceptual transformation from nothingness to the spatial existence of something (Image by authors)

The parts-whole deconstruction method is crucial for examining voids within objects and for identifying how the objects and their voids constitute the whole. There are multiple ways to address such method. For example, Shymko and Babadzhanova (2020) suggest considering the fractalisation process to analyse the semantics of space. Tschumi (1994) demonstrates how dislocated fragments of reality can be integrated into architecture, as seen in the La Villette. Thuer and Nam (2023) explain Koolhaas' method of designing the void first to shape the overall design. This part-whole deconstruction reveals that both void and form are fundamental in shaping architectural experience. The void defines boundaries, frames perception, and enables spatial continuity—transforming philosophical notions of nothingness into operative architectural principles. Figure 1 outlines the transformation from nothingness into the spatial consciousness of something.

Designing space with an awareness of space consciousness involves an approach that focuses on individual experience and perception of space. Shymko and Babadzhanova (2020) state that the primary process is used to organise material through the observer's perception of space, employing the cognitive (meaning) and affective (relation) aspects of psychic perception as a dichotomy. Tschumi's (1994) *folly* concept, formed from small architectural components, highlights the importance of these different elements exist as parts that relate to each other in creating a meaningful space as a whole.

This section positions architecture as a process that negotiates the presence of absence. The void, once treated as a by-product of construction, becomes the very site where spatial consciousness and meaning can emerge. This study is followed by the construction of a speculative context—an imagined world in which every space has already been occupied, leaving nothing to build upon. Within such a world, the study speculates on how architecture can evolve from the operation of nothingness itself. The following section outlines the methodological framework through which this speculative condition is explored, translating the concept of void into a series of architectural operations.

Exploring the methodology of nothingness as design operations

This study adopts a speculative design methodology to explore how nothingness—conceptualised as architectural voids—can be operationalised as a primary design agent. The speculative framework functions as a testing ground to investigate how architectural meaning can emerge not from form or program, but from the dynamic transformation of empty space. Through world-building and narrative design, this study constructs a hypothetical condition where architecture must evolve within a fully occupied environment, using this context to critically reflect on architectural adaptability and spatial perception.

Within this framework, a conceptual design tool called the Slime is introduced as an operative agent. Slime symbolises a liquid, adaptive, and responsive entity capable of occupying, deforming, and reorganising voids according to spatial conditions. Its liquid-like characteristics represent the potential for architecture to adjust fluidly to context—mirroring discourses on adaptive architecture, responsive design systems, and architectural metabolism. By translating these abstract ideas into the form of a speculative tool, the study aims to visualise how non-linear, flexible operations might reframe the architectural process itself.

The methodological process unfolds through six sequential operations, synthesising theoretical insight and speculative design experimentation. The first operation is identification, aiming to recognise existing voids and empty spatial conditions within a given context. The second operation is classification—an act of categorising voids based on their typology, boundary, and potential for transformation. The next operation is superposition, layering multiple spatial data to construct a three-dimensional framework of void relationships. In subsequent, the operation of deconstruction creates fragment to the existing structures to reveal latent voids and hidden spatial opportunities. The fifth operation is recomposition, which is an act of rearranging fragmented components to form new, habitable spatial configurations. Lastly, the operation of transformation produces adaptive architectural outcomes defined by perception and user interaction rather than imposed programs.

These operations constitute the core methodological design framework of this research—what is referred to as void-based

architecture. The study creates speculative scenario of the contextual environment in which these operations are enacted, allowing theoretical inquiry to be visualised and tested within a designed world. Through this process, the study transforms nothing into a medium of creation, framing design fiction as both method and critique of architectural practice.

The dystopian context of nothingness

This project creates a dystopian future where every inch of space is already occupied by architecture and objects, leaving no room to build, and humanity must find ways to survive and sustain itself in extreme conditions. The proposed solution is an adaptive architectural tool capable of navigating even the smallest gaps and recomposing existing structures to become habitable. In this transformed world, what was once considered nothing becomes the key to survival and transformation.

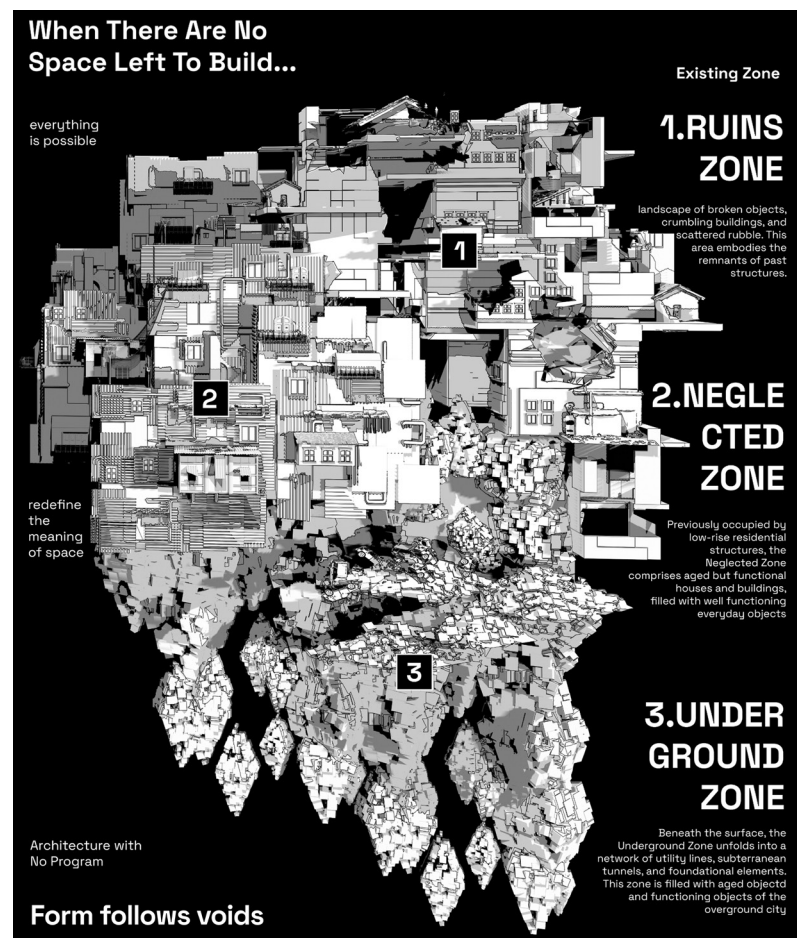
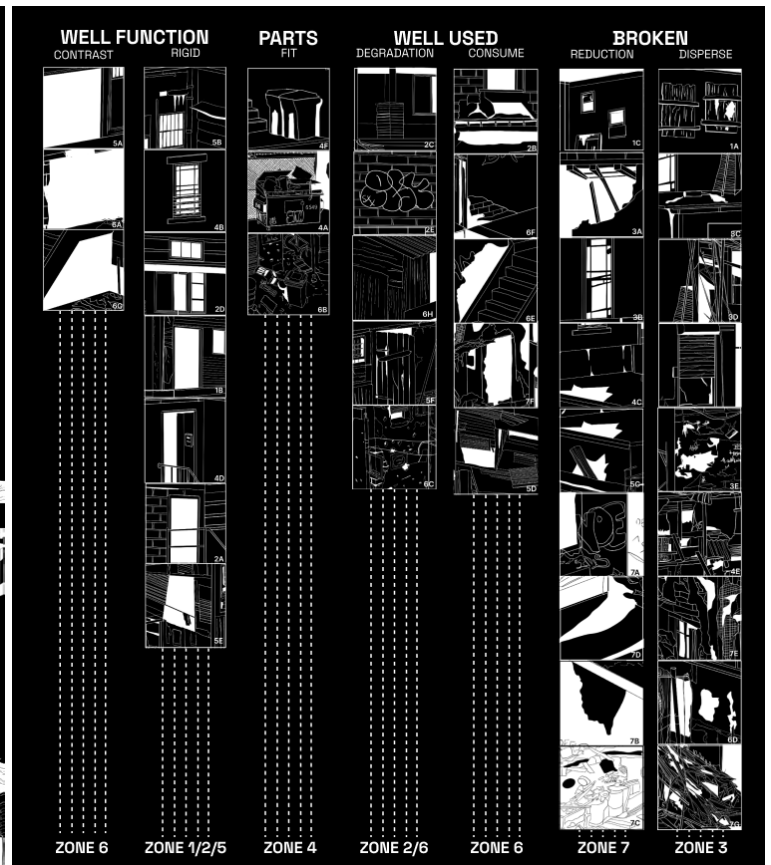
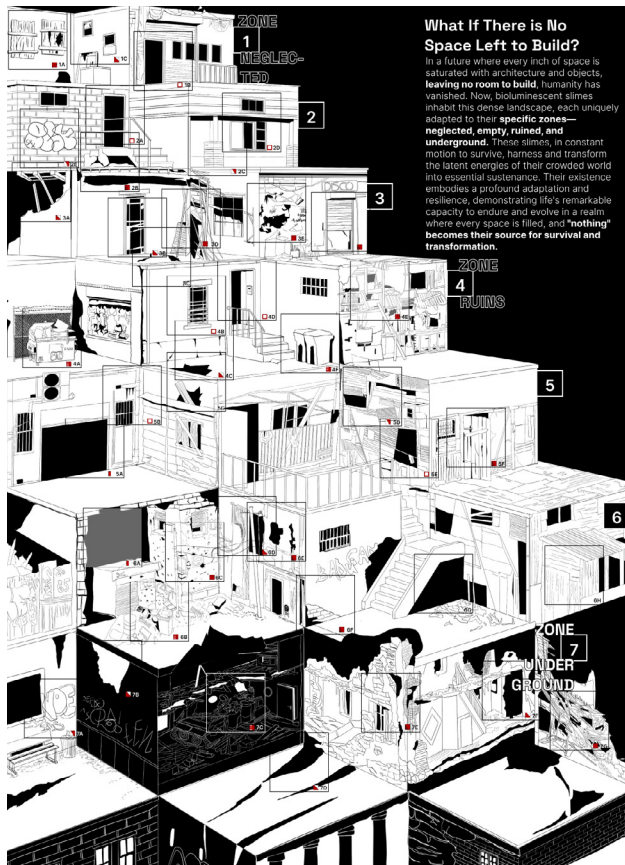


Figure 2. Illustration of existing conditions in the Ruins Zone, the Neglected Zone, and the Underground Zone (Image by authors)

This dystopian context is divided into three zones based on settlement typologies: the Neglected Zone, the Ruins Zone, and the Underground Zone (Figure 2). The Neglected Zone consists of abandoned settlements where most structures and spaces remain functional. The Ruins Zone is dominated by deteriorated buildings and debris, forming a landscape of destruction. The Underground Zone exists beneath the surface, composed of rock formations, with buried, aged objects as its existing elements (Figure 3).



Slime operations of void-based architecture

In this world, the proposed architectural solution for human survival is to design spaces based on the available voids, optimising their potential to create habitable environments. To achieve this void-based architecture, humanity requires a tool capable of recomposing objects and spaces into adaptive forms that can seamlessly adjust to the diverse characteristics of voids. This tool is referred to as Slime. Slime is an entity designed as a tool for executing architectural operations in the scenario. It is chosen for its logical adaptability and the flexibility of its liquid-like properties, allowing it to conform to any void shape.

As the primary subject in this constructed world, Slime's movement designing void-based architecture is crucial in demonstrating how the characteristics of void influence its perception and navigation. Several types of movement exhibited by Slime include oozing, stretching, flowing, splattering, contracting, and pulsating (Figure 4), each serving as a response to different void characteristics (Figure 5).

Thus, mapping the positions and characteristics of voids within the design area serves as the basis for Slime's architectural process. Slime possesses the ability to identify objects within the area it intends to build upon. However, its primary ability lies in deconstructing objects into smaller components as needed. This deconstruction ability is Slime's greatest strength.

This section explains the operational stages of void-based architecture within the speculative world of nothingness, structured through methods derived from the preceding literature

Figure 3. Void characteristic distribution in the study context (Image by authors)

review (Figure 6). The process begins with the identification phase, where the Slime analyses objects and spatial conditions in the design area by observing them in a fragmented manner. This fragmentation allows Slime to analyse the potential of voids that can be further developed (Figure 7).

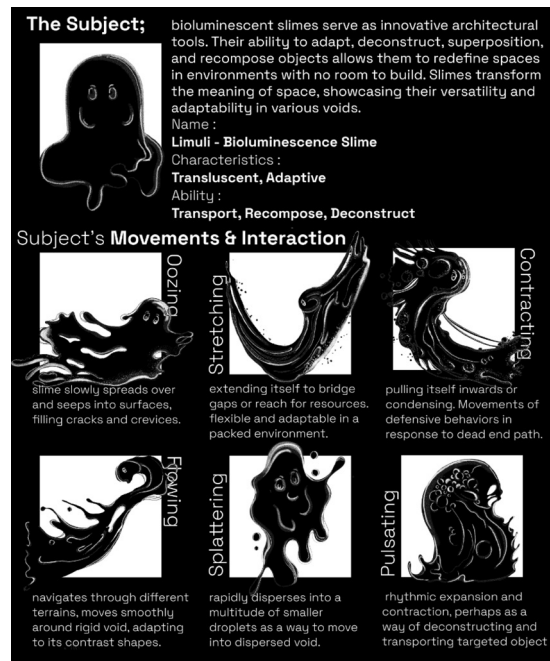
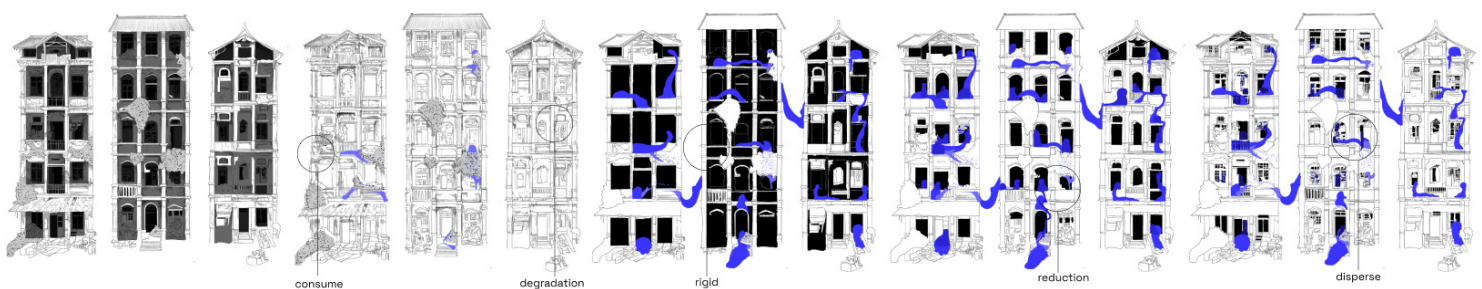


Figure 4. Diagram of the design agent Slime and its adaptive movements (Image by authors)

Following identification, the Slime proceeds to classify the analysed void data according to the characteristics of each void. This classification is conducted through layered two-dimensional cross-sections, which, when superimposed, create a visual perception of three-dimensional void formations. The classification method for fragmented object data is based on the operational approach of Shymko and Babadzhanova (2020), as discussed in the previous section, serving as Slime's way of understanding context.



With a contextual understanding in place, the Slime begins planning its movements by determining the central void area for deconstructing and reconfiguring surrounding objects. In this stage, the Slime determines which objects will be moved, deconstructed, and recomposed, and how its movement patterns will respond to varying void characteristics. The process then moves to the execution phase, beginning with superposition—where the classified void layers are projected onto the actual

Figure 5. Sequential Slime movement within layers of void (Image by authors)

spatial context to generate a three-dimensional void-based framework. The superposition method of layers is derived from Rem Koolhaas' operational approach, as previously discussed, particularly in its use of overlapping data layers to construct spatial meaning.

Figure 6. Speculative scenario: What if there is no space left to build? (Image by authors)

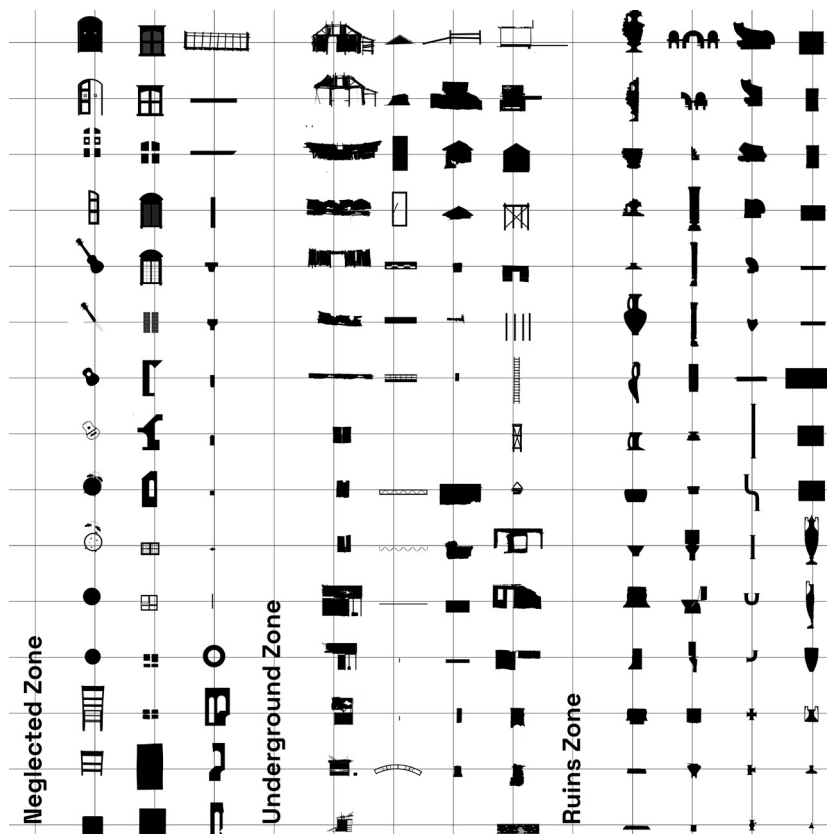
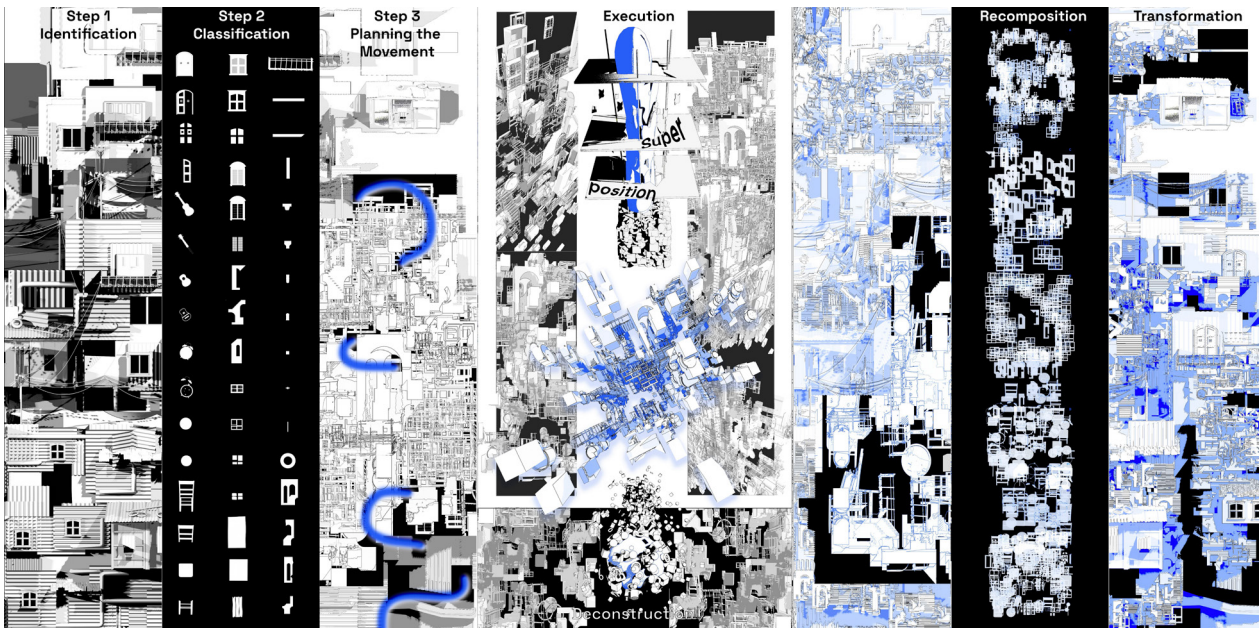


Figure 7. Objects in existing zones (Image by authors)

The next execution step involves deconstruction, in which the Slime modifies the physical environment by adjusting the void dimensions to the planned context. This deconstruction

process aims to either reduce or expand void sizes within the existing structure. Before initiating deconstruction, the Slime performs a pulsating movement in response to the existing void shapes. The methodology here draws from Bernard Tschumi's principles of spatial fragmentation and intervention.

Figure 8. Recomposition phase in layered sections (Image by authors)



Following deconstruction, Slime proceeds with recomposition of the fragmented and modified components to realise a tangible, habitable space emerging from the voids (Figure 8). This process is based on Tschumi's methods of recomposing space to provoke new interpretations and uses. The final stage is *transformation*, in which the void-based architecture takes on a definitive form and meaning, shaped not by imposed programs but by the subjective perceptions and lived experiences of its users—humans adapting to a new spatial condition (Figure 9). Through this process, what was once empty becomes a catalyst for new spatial realities defined by adaptation, perception, and transformation.

Through this framework, the study reinterprets the void not as an inert space but as an active design agent. Each methodological phase produces a spatial response that embodies the transformation of nothing into something. The following

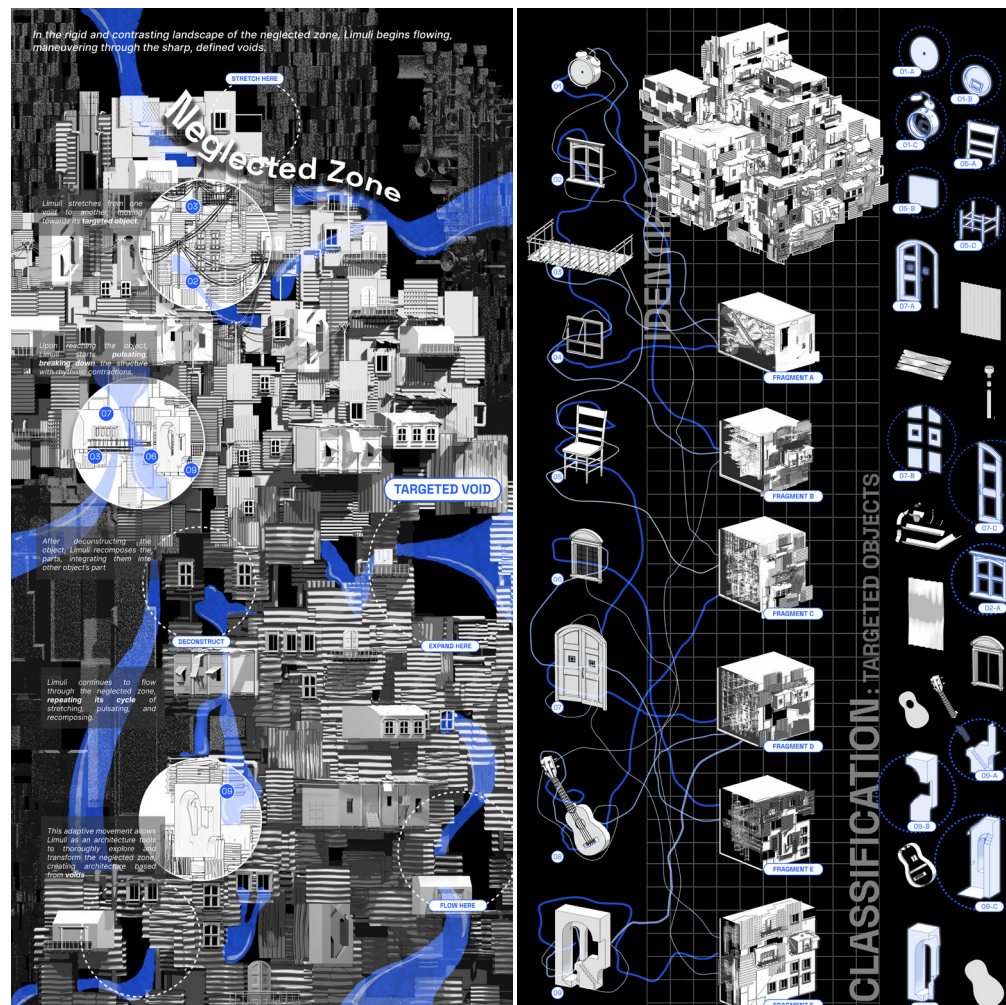
Figure 9. Transformation phase in the Neglected Zone (left), Ruins Zone (centre), and Underground Zone (right) (Images by authors)

section presents these design outcomes. By applying the six operations within the speculative world, the research translates theoretical constructs of nothingness into tangible spatial propositions. These outcomes illustrate how architecture—when freed from its dependence on form—can emerge from the operations of absence itself.

Architecture of nothingness: Presenting architecture based on void

The following section presents the outcomes of the operations discussed in the previous paragraphs. Each phase of the operation is materialised into spatial propositions that translate voids into perceptible architectural experiences. These outcomes illustrate how the act of designing from nothingness generates new forms of architectural value. Within the world of nothingness, the architectural transformation unfolds uniquely across three primary zones: the Neglected Zone, the Ruins Zone, and the Underground Zone—each reflecting distinct spatial conditions and void characteristics.

Figure 10. Diagram of identification and classification phase (left); movement planning phase (right) in the Neglected Zone (Images by authors)



The Neglected Zone is an area composed of objects and spaces that have a well-preserved condition. This zone is dominated by remnants of residential settlements, consisting of 2–3 story

buildings. The objects in this zone are common everyday items with rigid, contrasting void characteristics.

In the designed scenario, based on the data collected through its identification process, the Slime selects objects 01, 02, 05, 07, and 09 (Figure 10, left), which are scattered across different fragments of the zone, to proceed to the execution stage. The Slime targets specific voids for expansion, requiring a combination of flowing, stretching, and pulsating movements (Figure 10, right). Once the selected objects undergo deconstruction, they are then recomposed to transform into a new definition of space. This cyclical process is continuously performed by Slime to fulfil human needs.

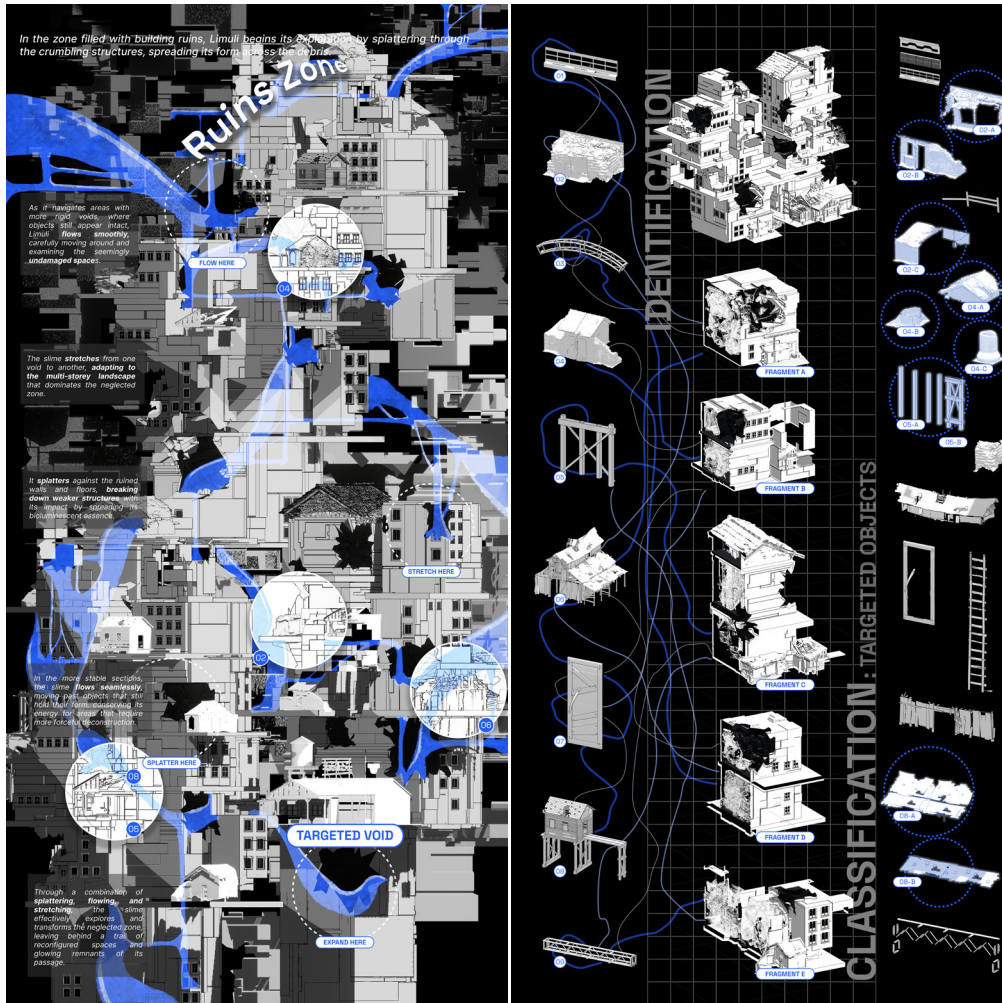
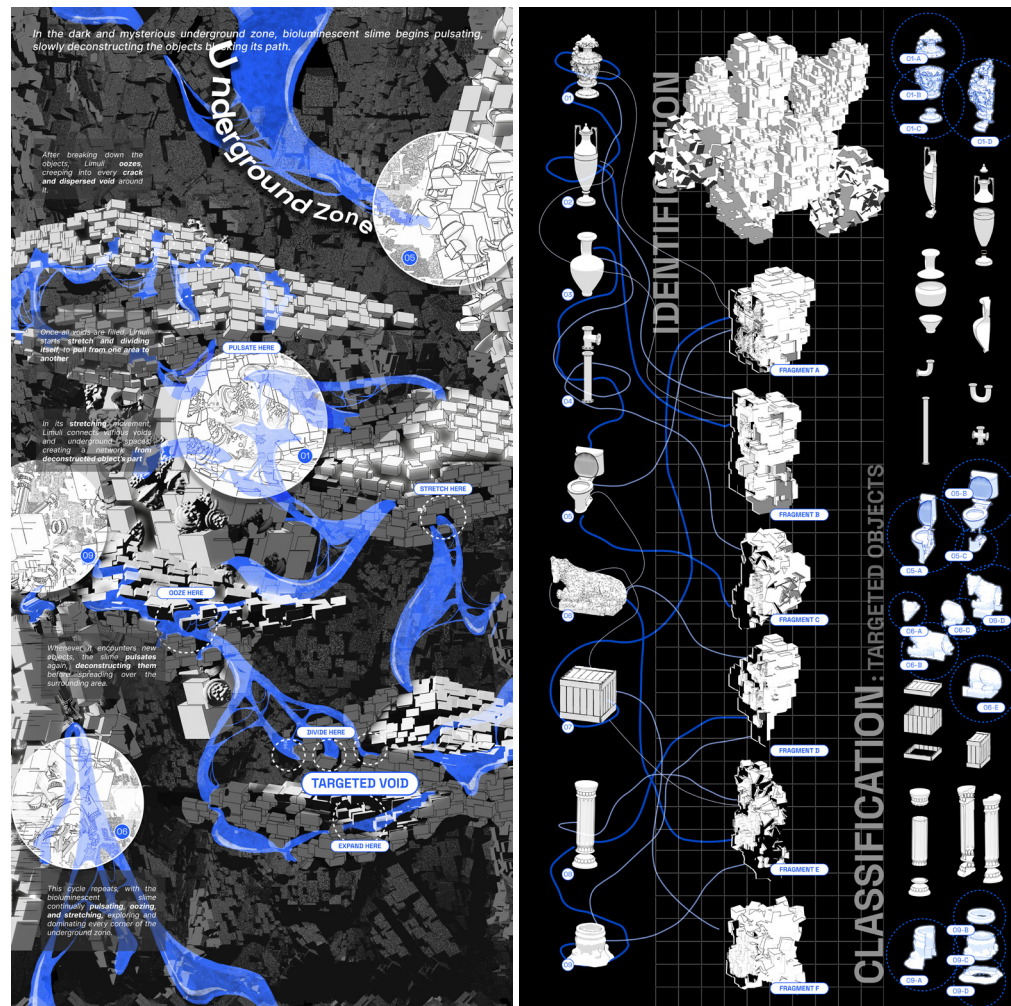


Figure 11. Diagram of identification and classification phase (left); movement planning phase (right) in the Ruins Zone (Images by authors)

In the Ruins Zone, the context shifts dramatically. Here, the area is defined by destruction—consisting of rubble, collapsed structures, and fragmented objects. As a result, the objects within this zone exhibit void characteristics classified as reduction and dispersion. In this scenario, the Slime selects objects 02, 04, 05, and 08 (Figure 12, left) for execution. It identifies voids with potential for expansion and determines their movement based on void size and ease of navigation. Through a combination of splattering, flowing, and stretching actions (Figure 11, right), the Slime reconfigures the Ruins Zone into an open, indeterminate

spatial field—one that users can interpret and occupy according to their needs.

The Underground Zone introduces a terrain deeply influenced by time—an aged and buried world where objects exhibit voids associated with degradation, consumption, and dispersion. Due to the scattered and fragmented nature of voids in this terrain, the Slime primarily uses oozing movements to infiltrate the dispersed voids. Additionally, stretching movements are used to transition between areas, while pulsating movements are utilised to deconstruct targeted objects.

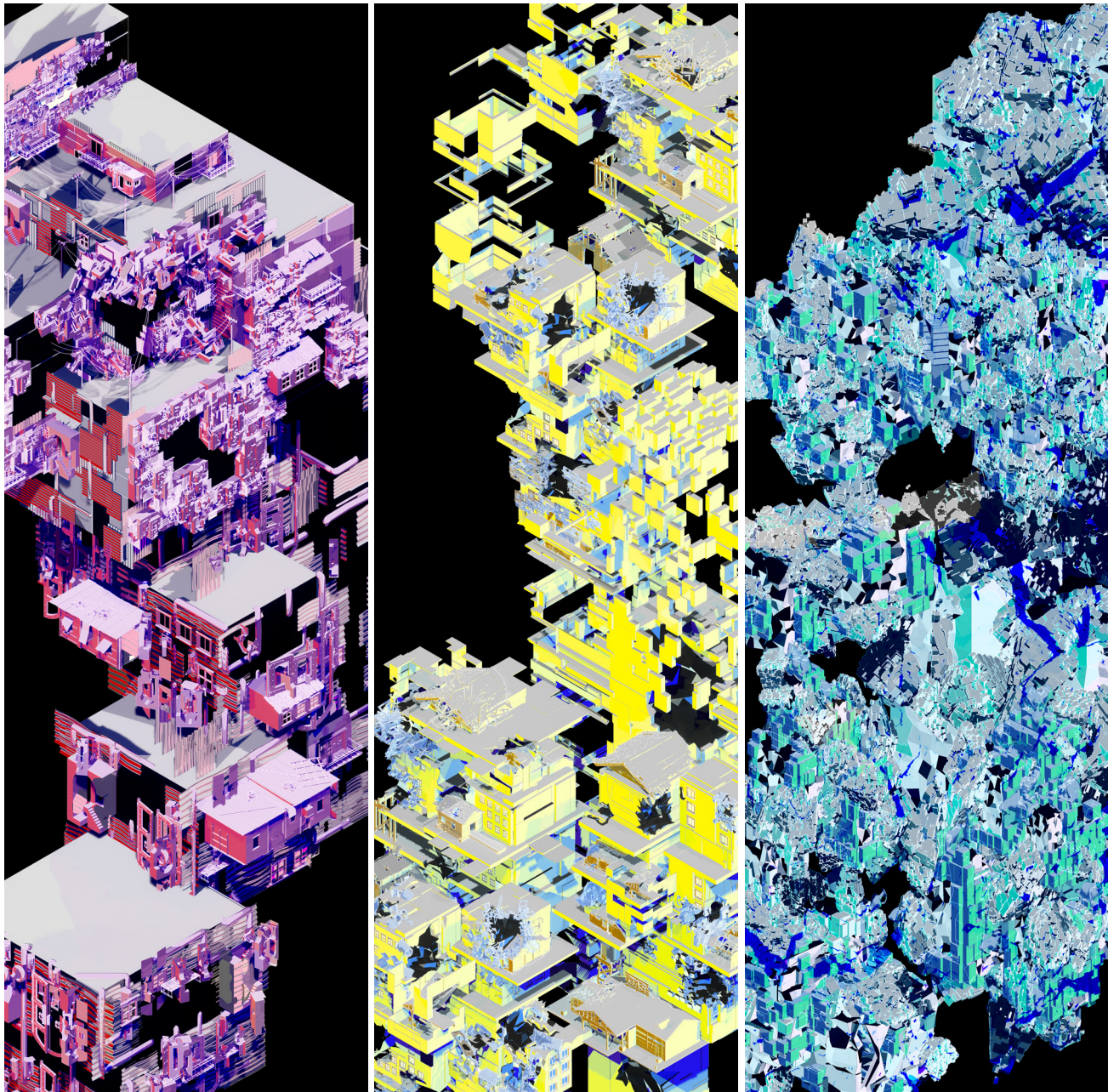


For execution, Slime selects objects 01, 05, 06, and 09 (Figure 12, left). To adapt to the void characteristics, Slime splits into smaller units to move through void gaps. It then deconstructs the targeted objects using pulsating movements, before recomposing them within the designated void areas (Figure 12, right). This repetitive process continuously reshapes the Underground Zone, creating new spatial definitions for its users.

Through the speculative application of these operations, void-based architecture begins to articulate new possibilities for design. Each iteration transforms the perception of absence—revealing how emptiness can host multiplicity, adaptability, and meaning. Designing nothing for something offers a renewed

Figure 12. Diagram of identification and classification phase (left); movement planning phase (right) in Underground Zone (Images by authors)

understanding of architectural methodology and its relation to philosophical discourse.



Conclusion: Redefining the role of nothingness in architectural design

In current architectural discourse and practice, the existence of nothingness, such as the voids, negative spaces, and overlooked areas within living environments is now being reconsidered as critical spatial components rather than gaps to be filled. What was once dismissed as absence is being reframed as presence: a space with potential, meaning, and utility. These 'non-spaces' hold social, emotional, and experiential value when acknowledged as part of the architectural narrative. As density, scarcity, and sustainability become pressing global issues, the relevance of engaging with nothingness becomes ever more urgent.

Figure 12. Neglected Zone (left), Ruins Zone (middle), and Underground Zone (right) after undergoing void-based architectural operations (Images by authors)

Recognising and operationalising nothingness—both as a physical and conceptual design material—allows architecture to move beyond the obsession with addition toward a practice of activation and transformation. The framework proposed in this study offers a systematic way to see, think, and design differently through six sequential operations: identification, classification, superposition, deconstruction, recomposition, and transformation. Together, these operations demonstrate how absence itself can be mobilised as a productive design agent capable of generating form, experience, and meaning.

Generating architecture based on nothingness is not bound by a specific context; it responds instead to the dynamism of context itself. By prioritising what is often perceived as nothing and highlighting its interdependence with the physical existence of architecture, this approach opens space for multiplicity, exploration, and user-driven interpretation. This study serves as a strategic approach to reframe the void, empty, or residual aspect as active components of architectural systems. In the current state of the world, design tends to focus on the continuous occupation of spaces and lands without considering the potential of existing empty spaces. Therefore, the process proposed in this study provides a repeatable method for designing without the need to construct something entirely new. The framework potentially informs design studios, adaptive reuse strategies, or post-disaster scenarios where space is limited yet full of latent potential.

References

- Bachelard, G. (1964). *La poetique de l'espace* [The poetics of space] (M. Jolas, Trans.). Orion Press. (Original work published 1958)
- Brett, S. (2016). *Nihilism: A philosophy based in nothingness and eternity*. Manticore Press.
- Ching, F. D. K. (2007). *Architecture: Form, space, and order* (3rd ed.). John Wiley & Sons. (Original work published 1979)
- Cunningham, C. (2002). *Genealogy of nihilism*. Routledge.
- Frampton, K. (1995). *Studies in tectonic culture: The poetics of construction in nineteenth and twentieth century architecture*. MIT Press.
- Heidegger, M. (2008). *Being and time*. HarperCollins. (Original work published 1927)
- Koolhaas, R., & Mau, B. (1998). *S, M, L, XL: Small, medium, large, extra-large* (J. Sigler, Ed., 2nd ed.). Monacelli Press.
- NoorMohammadi, S. (2015). The role of poetic image in Gaston Bachelard's contribution to architecture: The enquiry into an educational approach in architecture. *Environmental Philosophy*, 12(1), 67–86. <https://www.jstor.org/stable/26169821>
- Pallasmaa, J. (2012). *The eyes of the skin* (3rd ed.). John Wiley & Sons.
- Rossi, A. (1966). *The architecture of the city*. MIT Press.
- Rowlands, M. (2011). Jean-Paul Sartre's being and nothingness. *Topoi*, 30, 175–180. <https://doi.org/10.1007/s11245-011-9099-2>
- Sartre, J.-P. (1956). *L'être et le néant* [Being and nothingness]. Philosophical Library. (Original work published 1943)
- Şimşek, O. (2019). Emptiness and nothingness in OMA's libraries. *Megaron*, 14(2), 173–184. <https://doi.org/10.14744/megaron.2019.57873>

Shymko, V., & Babadzhanova, A. (2020). Space as a semantic unit of a language consciousness. *PSYCHOLINGUISTICS*, 27(1), 335–350. <https://doi.org/10.31470/2309-1797-2020-27-1-335-350>

Thuer, J. E. G., & Nam, S.-T. (2023). Reformulating Koolhaas' strategy of the void. *Journal of Asian Architecture and Building Engineering*, 23(4), 1–34. <https://doi.org/10.1080/13467581.2023.2270008>

Tschumi, B. (1994). *Architecture and disjunction*. MIT Press.

Woleński, J. (2018). Something, nothing and Leibniz's question. Negation in logic and metaphysics. *Studies in Logic, Grammar and Rhetoric*, 54(1), 175–190. <https://doi.org/10.2478/slgr-2018-0023>

Zhang, F., & Fan, J. (2021). The interweaving of consciousness and poetic space. *Proceedings of the 2021 3rd International Conference on Literature, Art and Human Development (ICLAHD 2021)*. <https://www.atlantis-press.com/proceedings/iclahd-21/125964860>

