BRUTALIST ARCHITECTURE AND THE AESTHETICS OF MAKEABILITY: MATERIAL, CONSTRUCTION AND EXPRESSION

L. Hartog
Faculty of Architecture & the Built Environment, Delft University of Technology
Julianalaan 134, 2628BL Delft

ABSTRACT

This research explores the architectural aesthetics of brutalist architecture through the lens of its makeability. The study is divided into two chapters: the first examines brutalism from a technical perspective, focusing on how materiality and construction methods, specifically in-situ and prefabricated concrete, influence its visual and spatial language. The second chapter offers an abstract viewpoint, analyzing how critics have perceived brutalism's aesthetic across different decades. The results show that in brutalism, architectural aesthetic, material and method are inseparable and can be seen as one unity. The aesthetic is not applied but directly shaped by the way the building is constructed, thereby celebrating the material properties of concrete. The research concludes that comprehending the ideological motivations behind brutalism is essential for a deeper understanding—and, ultimately, appreciation—of the architectural style.

KEYWORDS: *Brutalism, Makeabikity, Concrete, Materiality, Construction Method, Architectural Aesthetics, In-Situ Concrete, Prefabrication*

I. INTRODUCTION

Brutalist architecture, or brutalism, emerged in the postwar period between the 1950s and 1970s as an evolution from modernism. The term is derived from the French saying *béton brut*, meaning 'raw concrete,' reflecting the unfinished, exposed aesthetic typical of many brutalist buildings (McLaughlin, 2023). Characterized by heavy forms and bold geometric compositions, the aesthetic of brutalist structures has long been the subject of public and professional debate (Van Mead, 2019).
In recent decades, numerous brutalist buildings have been demolished and many structures continue to face similar risks today. At the same time, there is a growing movement within the architectural field that acknowledges the importance of preserving the existing building stock and advocates for the conservation of brutalist structures (Van Rijs, 2023; Rijksdienst voor het Cultureel Erfgoed, 2024). As a result, transformation is increasingly regarded as a viable approach to securing the future of these buildings.
Although various brutalist structures have undergone transformation in the past, it is worth asking whether these interventions maintain the core characteristics of brutalism. Projects such as PI59 in Amsterdam and the Ministry of Finance in The Hague (figures I.I and I.II) demonstrate a shift towards transparent, lightweight additions, thereby contrasting with the visual weight and material rawness associated with brutalism.


Figure I.I and Figure I.II. PI59 (left) and Ministry of Finance (right). Sources: V8 Architects; Scany, I.

This highlights a significant issue: there appears to be uncertainty within architectural field regarding how to appropriately transform brutalist architecture while integrating its architectural aesthetics. To engage with brutalist buildings in a meaningful way, particularly in the context of transformation, a deeper understanding of what defines brutalism is essential.
This research aims to contribute to that understanding by examining brutalist architecture through the lens of its makeability. The term makeability refers to various construction-related aspects—such as materiality, building techniques, and types of work (brickwork, plumbing, carpentry, etc.)—that inform the design and expression of architecture (Bax, M. F. T., et al., 1996). For this research, the focus lies specifically on construction methods and materiality. This leads to the central research question:

"How can brutalist architecture be understood through its makeability?"

To gain insight into this main question, it is divided into five sub-questions:

- *How has brutalist architecture evolved from the 1950s to the 1970s in relation to its makeability?*
- *How does the materiality of brutalist architecture contribute to its aesthetics?*
- *How do the construction methods of brutalist architecture contribute to its aesthetics?*
- *What is the perception on the aesthetics of brutalist architecture during its emergence (1950s-1970s)?*
- *What is the perception on the aesthetics of brutalist architecture nowadays (2010s-2020s)?*

II. METHODOLOGY

This research is structured in two chapters, each presenting a distinct perspective on the aesthetics of brutalist architecture: one is technical, while the other is more abstract.
The first chapter, *Makeability and Architectural Aesthetics*, addresses the first three sub-questions and explores the aesthetic qualities of brutalist architecture through its material and construction techniques. It begins with a literature study on the evolution of the use of concrete during the 1950s to the 1970s, primarily from architectural books. This is followed by a literature review on the two construction methods associated with brutalism, namely, in-situ and prefabricated concrete techniques. This review combines academic texts with architectural publications and is supported by visual images. For each construction method, a case study will be presented to facilitate the analysis of the interplay between construction techniques and architectural aesthetics.
The second chapter, *Perceptions on the Architectural Aesthetics*, addresses the final two sub-questions by examining how brutalist aesthetics have been interpreted and discussed within the architectural discourse. This chapter is based on a literature study of essays and critical articles written by architecture critics, primarily sourced from *The Architectural Review* and *Architect Magazine*.

III. MAKEABILITY AND ARCHITECTURAL AESTHETICS

III.I CONCRETE

Brutalism is closely related to its materiality, particularly through the predominant use of concrete. Although brutalist architecture can also include materials such as brick, concrete remains the main material associated with this architectural style. Accordingly, this paper centers its analysis on concrete due to its central role in brutalist architecture.

Between the 1950s and 1970s, concrete evolved into a material with enhanced and more reliable properties (MacDonald, S., 2003). Advancements in construction management, such as better quality assurance and certification methods, as well as new materials and techniques, have made concrete lighter, stronger and more durable (MacDonald, S., 2003).
Firstly, the methods for densifying concrete have seen significant improvement. Initially, mechanical densification was achieved using vibrating tools to compact the mix, which required additional water for fluidity. In the 1960s, chemical admixtures such as superplasticizers were introduced. These admixtures provided chemical densification, thereby improving workability without the need for extra water, resulting in stronger and less permeable concrete (Mendes, C., J., et. al., 2021).
There were also technological advancements in aggregates and concrete cements. In the late 1950s, lightweight concrete was developed using aggregates such as Lytag, reducing concrete weight by about 30%. This innovation decreased structural weight, lowered foundation costs and improved thermal insulation. Additionally, Pier Luigi Nervi introduced ferrocement, a concrete mix reinforced with fine wire mesh, providing a smooth, strong and lightweight surface.
Together, these advancements contributed to the development of high-performance concrete, which became stronger and could be poured in large quantities into more complex formworks, thereby improving the structural capabilities and possibilities of the material.

III.II *BETON BRUT* AND IN-SITU CONSTRUCTION (1950s-1960s)

Following World War II, Europe faced a significant need for rebuilding and affordable housing (Giouriu, A., 2024). Concrete, initially regarded as unsuitable, gained acceptance due to its low cost and wide availability (Pardo Redondo et al., 2021). These factors led to the emergence of brutalism, pioneered by architects such as Le Corbusier and the Smithsons, who focused on providing cost-effective and accessible housing solutions. This architectural approach reflected the ideals of the socialist welfare state, emphasizing equality, accessibility and functionality for the collective benefit (Redko, G., 2025).

II.II.I In-Situ Construction Technique

The term brutalism emerged in the 1950s, originating from the French expression *béton brut*, meaning "raw concrete". Le Corbusier utilized this term to describe the rough surface texture resulting from the construction methods applied in his post-World War II structures. These structures would later be recognized as the fundamental first examples of brutalist architecture.
During this period, many brutalist buildings were constructed using the in-situ technique, where concrete was cast directly on site. It was a labor-intensive process: first, reinforcing bars were assembled, whereafter the formwork into which the concrete was poured was nailed together, typically constructed from wooden planks (Biber, J., 2022). During this era, system formwork made of steel and wood was also utilized, incorporating not only boards but also panels. The concrete was subsequently poured into the formwork and allowed to cure. Upon completion of the setting process, the formwork was carefully removed.
Despite the substantial labor demands of cast-in-situ construction, it was economically viable at the time. Concrete was an easily accessible building material and the wood used for formwork construction was also cost-effective (Groaz, 2020). Consequently, cast-in-situ construction facilitated the rapid, economical and efficient construction of large buildings (West, N., 2024).

The *beton brut* way of constructing had become a practiced craft in his own (Henley, S., 2017). The in-situ pouring required a lot of labor: formworks had to be assembled and the concrete was roughly casted in high quantities. The method allowed for a relatively high margin of error in the process and once the concrete had set, alterations could not be made anymore (Biber, J., 2022).

III.II.II Texture and Detailing

The in-situ construction method is closely connected to the philosophy of *beton brut*, in which untreated concrete created a raw, rough finish. The core principle is to highlight the concrete's rawness, thereby making the construction method visible as well.
The formwork used in casting serves as a significant visual component. In in-situ casting, the wooden boards that make up the formwork leave an imprint on the set concrete. These boards are not decorative additions applied later but are essential parts of the construction. Consequently, and due to minimal to no surface treatment, the imprint of the wooden boards remain visible (figure II.I and II.II). The imprints on concrete are influenced by decisions made during the formwork design stage, including the dimensions of the shuttering boards, their surface texture and geometric layout (Niebrzydowski, W., 2019).

Figure III.I and Figure III.II. Wooden imprint texture on surface concrete. Source: neil mp; Beton Brut

The wooden formwork used in construction adds texture and detail to the concrete, creating linear patterns from the boards and additional detail from the wood's joints and grains. The natural imperfections in the wood and its tendency to shrink can lead to an uneven surface finish, adding visual depth and material authenticity, as is visible in Figure III.I and III.II.
The rough and labor-intensive construction method gave the surface a human touch. Formwork construction and concrete pouring were done mostly by hand, resulting in visible labor marks. Cavdar (2021) notes that the quality of exposed concrete surfaces depends on timber formwork and carpenter skills. Marks from wooden boards reveal any defects, showcasing the craftsmanship involved (Cavdar, M., 2021).
The process resulted in inaccuracies and irregularities, which were not only tolerated but also expected to some extent (Biber, J., 2022). In the spirit of *beton brut,* these mistakes were preserved rather than corrected. The visibility of construction techniques and these consequent irregularities in the final building was often an intentional artistic decision. The design revealed the building's structure, highlighting its unique features and craftsmanship. Unlike modernism, which often concealed such details, this approach adhered to the principle of truth to materials and structure, as well as the related construction methods (Niebrzydowski, W., 2019).

III.II.III Form

Brutalist architects used in-situ pouring and concrete's plasticity to create sculptural forms. The set concrete provided seamless surfaces and continuous shapes rather than layered, making the structure and exterior finish as one entity. Therefore, cast-in-situ construction resulted in a monolithic, heavy

and integrated structure. Early brutalist buildings often extended one pour from foundation to roof, eliminating the need for separate cladding or materials, resulting in a unified structure rather than consisting of multiple components (Redko, G., 2025).

III.II.IV Case Study – Unité D'Habitation

Unité D'Habitation in Marseille, designed by Le Corbusier, is an example of an early brutalist building that primarily used the cast-in-situ technique. Constructed between 1953-1961, the apartment building's reinforced concrete structure was almost entirely cast-in-situ using a timber formwork (Graf, F., 2019). The façade and balcony elements used precast concrete, which were cast next to the building (figure III.III).
The construction process was frequently delayed due to various factors. One issue was that the construction workers had limited experience with building such a large in-situ structure. Some workers anticipated correcting imperfections later, not being aware that Le Corbusier intended the concrete to remain exposed (Millais, M., 2015).
As pointed out by Millais (2015), the precast elements used for the façade, which were cast on the work site, accelerated the construction process. However, there were very few 'standard' façade elements. Archive drawings reveal numerous different units for a typical façade element, underscoring the challenges faced during construction and the high level of craftsmanship required for the building's completion (Millais, M., 2015).

Figure III.III and Figure III.IV. Construction Process and *Beton Brut* in Unité D'Habitation. Source: Wagner-Conzelmann, S.; Glasgowfoodie

III.III INDUSTRIALIZATION AND PREFABRICATION (1960s-1970s)

III.III.I Prefabrication Construction Technique

Postwar reconstruction in Europe resulted in the establishment of the welfare state and significant advancements in modernization and industrial productivity. Starting in the 1960s, governments undertook the nationalization of industries to aid in rebuilding efforts. Precast concrete became increasingly favored as a construction material due to its time-efficiency and its reduced reliance on skilled labor, unlike the requirements for in-situ concrete construction (Henley, S., 2017).
This construction method involved producing modular concrete elements in large quantities that were later assembled onto the structure. Early implementations often involved casting modules next to the building, as seen in Unité D'Habitation. In subsequent phases, the prefabrication process became more controlled. The concrete was cast in standard, reusable formworks within regulated conditions inside factories and then transported to the construction site for assembly, often using cranes (Thoburn, N., 2022).
Prefabrication met the era's need for efficient construction, as it required less time compared to in-situ methods. This method was also less labor-intensive, needing fewer skilled carpenters and a smaller

crew on-site. Additionally, the implementation of cranes significantly decreased both time and labor requirements (Bhujon, 2011).
In the factory, concrete was cast in reusable modular formworks made from fiberglass-reinforced plastic (FGRP) which proved to be more efficient and durable than traditional timber formwork (Raths, C. H., 1967). These formworks enabled the production of both simple and detailed elements, including curved forms and ribbed panels (Niebrzydowski, W., 2019).
Notably, FGRP was not widely adopted in the Netherlands, where steel and wood remained the dominant materials. Moreover, fiberglass-reinforced formwork was typically used only for surface finishing rather than as a structural component, often requiring a secondary wooden formwork for support.

III.III.II Texture and Detailing

Unlike the rough board-marked patterns resulting from on-site pours, prefabricated concrete features a much smoother finish. There is ongoing debate on whether factory-cast elements in brutalism conform to the ideology of *beton brut*. Architecture critic Rybczynski argues that the use of prefabricated concrete in brutalist structures lacks both the aesthetic and ideological intent of true brutalism. He says that the essence of *beton brut*, characterized by the rawness of concrete, may be undermined when produced in a controlled environment with regulated measures and consistency (Rybczynski, W., 2017).
Setting the debates aside, prefabricated brutalism offers an altered architectural aesthetic. As with in-situ casting techniques, the formwork is essential in this process. The formwork was often made from fiberglass-reinforced plastic, allowing for multiple uses while maintaining a flat and consistent surface on the concrete. As a result, there is minimal detailing on the exposed surfaces (figure III.V).

Figure III.V. Smooth concrete surfaces on precast concrete elements. Source: Miners, N.

Additionally, concrete was poured in smaller quantities under controlled factory conditions, where reinforcement could be optimized. This process improved precision and consistency in the final product, reducing roughness and irregularities. Industrialized construction resulted in a modern aesthetic, reflecting technological advancements and decreasing the need for human work and craftmanship.

III.III.III Form

The use of precast concrete facilitated modular design, allowing architects to construct diverse structures from standardized components, experimenting with different forms and spatial configurations (Henley, S., 2017).
This approach created rhythmic facades and a distinct monolithic appearance compared to in-situ casting, as shown in figure III.VI and III.VII. In-situ casting creates a solid, unified structure, while prefabricated concrete achieves a monolithic look through the arrangement and pattern of modular elements, emphasizing the grooves and sequence between them. The relief is in this construction technique in the joinery of the elements, which gives a certain level of depth (Figure III.VI).


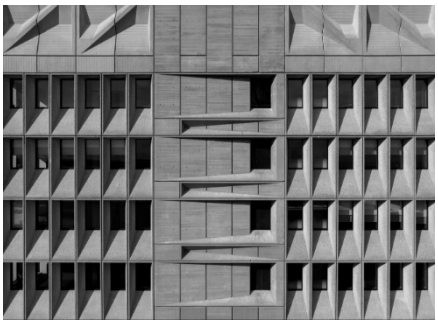

Figure III.VI and Figure III.VII. Precast elements make for a monolithic, rhythmic façade. Sources: Neman, R.; Hommes Studio

Despite not showcasing the raw concrete aesthetic, the modular elements emphasize the material's heaviness, giving the building a fortress-like geometry. The texture is evident on a larger scale, in the sequence of these concrete elements, rather than in the detailing of concrete itself.

III.III.IV Case Study – Preston Bus Station

One notable example of a brutalist structure mainly constructed from prefabricated concrete modules is the Preston Bus Station in Preston. This structure was built in 1969 by British Design Partnership and was the largest bus station in Europe at its time. It is characterized by its curved modular elements and large spatial dimensions (ICP, 2019).
A significant aspect of the construction was the decision to establish an on-site factory for casting. This method utilized the available space at the project site, allowing for accurate, efficient and consistent concrete casting (Historic England, 2024).
The construction of these curved elements necessitated the use of flexible and adaptable formworks. Consequently, glass-reinforced polyester (GRP) was selected as the formwork material. In contrast to traditional formwork materials such as wood, these plastic formworks offered flexibility and allowed for a high-quality finish, resulting in concrete surfaces that appeared smooth (figure III.VIII) (Malathouni, C., 2022).


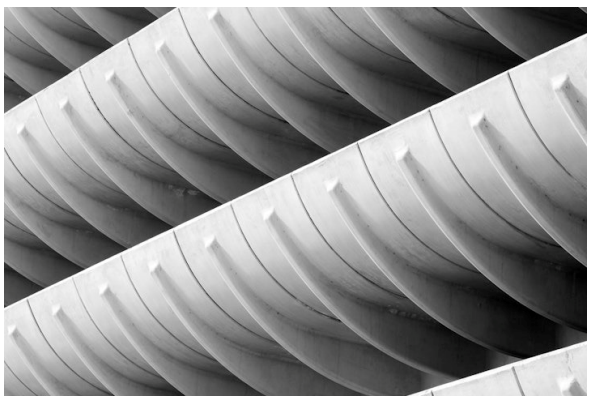

Figure III.VIII and Figure III.IX. Construction Process and prefabricated façade elements in the Preston Bus Station. Sources: John Laing Collection.; Gardner, G.

III.IV HYBRID CONSTRUCTION METHODS

It is important to note that the development from in-situ casting to prefabrication occurred in parallel rather than in strict chronological order. Moreover, the distinction between in-situ and prefabricated construction is not always clear-cut; the two approaches were often combined.
Many brutalist buildings utilized a hybrid construction, incorporating both precast components and in-situ concrete casting. In most instances, the structure's core and framework were cast in-situ, while façade elements or balconies were typically precast, as seen in Unite D'Habitation.
Besides, precast brutalist structures often underwent modifications for a different aesthetic. Construction methods like bush- and pick-hammering and sandblasting were employed to give precast buildings a textured look, creating the impression that they were poured in-situ. This approach combined the prefabricated concrete with human effort and produced a texture that showed a similar level of rawness as *beton brut.*
Pick-and bush-hammering involve the use of hammers and picks to remove near-surface cement, exposing the aggregates used in the concrete (figure III.X) . An example of a structure that utilized the pick-hammering technique is the Barbican Estate in London, where pick-hammering was applied to the exterior walls and columns, while bush-hammering was used for the interior parts to create deep reliefs (figure III.XI) (Barbican Living, 2024).

Figure III.X and Figure III.XI. Bush-hammering employed in the Barbican Estate, London. Sources: Barbican Living.; The Modern House

The method of sandblasting was used to create a uniform level of roughness on the exposed concrete or, similar to pick and bush-hammering, to reveal the richness of the aggregates.
However, these surface modification processes create a paradox by imitating the unfinished look of *béton brut* while differing from its fundamental principle of material authenticity. Although the raw aesthetic of *béton brut* is preserved, the methods of prefabrication and manual alteration deviate from its central intentions. These principles advocate that concrete should be exhibited in its poured state, reflecting all intrinsic attributes, thereby prioritizing honesty over decoration (Niebrzydowski, W., 2019).

IV. PERCEPTION ON ARCHITECTURAL AESTHETICS

From the technical viewpoint discussed in the previous chapter, this section provides a more abstract perspective on the architectural aesthetics of brutalism. It explores how the architectural aesthetics of brutalism were received by critics, focusing on the period from 1950 until 1970, as well as its reception 60 years later, from 2010 to 2020.

IV.1.1 Architecture Critics 1950s-1970s

Discussing brutalism in the 1950s and its perception inevitably involves architecture Critic Reyner Banham. Banham was one of the first to define and promote brutalism, notably in his 1955 article '*The New Brutalism*' published by the Architectural Review. He emphasized that Brutalism was more than a style; it represented an ethical value (Banham, R., 1955).
The ideological intentions of Banham regarding brutalist aesthetics involved the use of raw materials, structural honesty and social commitment. Banham argued that brutalist buildings should represent a new form of beauty, reflecting modern life and materials rather than classical ideals. These structures were intended to be confrontational and emotionally impactful, focusing on creating strong 'images' that are coherent, memorable and meaningful in appearance and feel (Banham, R., 1955).
Over time, Banham eventually observed that brutalism had shifted from an ethical to an aesthetic focus, becoming just another architectural style without its original revolutionary spirit. He criticized architects for using the brutalist *béton brut* expression as mere decoration instead of a meaningful design choice (Vidler, A., 2014).
In addition to Banham's critique that brutalism abandoned its ideological intentions, critics also had differing opinions on the aesthetics of brutalism itself. For instance, prominent art historian and critic Nikolaus Pevsner was strongly critical on the style. Pevsner criticized brutalism for being too aggressive, rejecting any elegance and rational simplicity. Additionally, Pevsner expressed criticism regarding the use of exposed concrete in brutalist architecture. He believed that the style misused concrete, and remarked sarcastically: *"Adjacent to Nash's Regent's Park ... with two square concrete posts in front of a larger square concrete post to indicate the entrance"*. Pevsner's comment underscores his rejection of brutalist minimalism and perceived lack of architectural density (Pevsner, N., 1967).
However, despite the negative opinions at the time, there were also more nuanced voices. Architectural historian Charles Jencks had a slightly supportive view of brutalist aesthetics. While admitting that brutalist buildings could be perceived as confusing and ugly, he believed that this was the intention. He stated that their objective was not to adhere to traditional notions of beauty, but rather to create a new type of public experience, thereby deviating from convention (Vidler, A., 2014).

IV.1.1I Architecture Critics 2010s-2020s

As of today, the discussion on the architectural aesthetics of brutalism continues, with a variety of differing opinions still prevalent. In recent years, brutalism has been experiencing renewed appreciation, as is partly witnessed on social media and photo sharing platforms, where architecture enthusiasts share their interest in the style (Peluso, S., 2024). As Vishwakarma (2024) observes, brutalist architecture makes for 'instagrammable' photographs due to its distinctive aesthetics. The author states that its dramatic lines and raw concrete textures provide a contrast to the polished images typically seen on the platform (Peluso, S., 2024; Vishwakarma, V., 2024).
In addition to appreciation among fans, there is also a renewed interest in the style among critics, who celebrate the architectural aesthetics of brutalism. English writer Jonathan Meades defends brutalism, suggesting that its expression can be considered sublime. He compares the structures to natural phenomena like mountains, rocks, or flames: phenomena that are not meant to be liked, but respected and felt. Moreover, he describes the aesthetics as landscapes in themselves, in terms of their forms

and textures, as he mentions: *"The form is the thing, the appearance. It always is"* (Meades, J., 2014; Brittain-Catlin, T., 2014).
Moreover, there are critics who defend brutalist architecture by arguing that its perception is often a misunderstanding of the original ideology. For instance, in an essay by architecture critics Grimley, C., et al. (2010) in The Architect Magazine, the authors assert that brutalist buildings should not be viewed as architectural flaws but as expressions with deeper ethics. The intention of brutalism was to be rugged, direct, and socially engaged, rather than aggressive or inhumane. The authors emphasize that this style of architecture deserves to be judged with historical awareness and consideration of its intentions, thus advocating for a revised appreciation (Grimley, C., et al., 2010).
Despite the renewed appreciation of brutalism among both fans and critics, there are still voices that criticize the architectural style heavily. In his essay, architecture critic Anthony M. Daniels argues that brutalist buildings stand out negatively and ruin entire townscapes. He challenges the idea that brutalism can be re-evaluated when the original design intent and common misconceptions are understood, thereby necessitating a certain level of sophistication or specialized knowledge. Instead, he suggests that the public's negative reaction is understandable because, in his view, brutalism is visually unappealing. He claims that buildings "*cannot be better than they look"* emphasizing that architecture, as a public art form, should be immediately and visually accessible. If it appears unpleasant, then it may be failing in its primary purpose (Daniels, A., M., 2012).

V. DISCUSSION

A key discussion that arises from this research is whether brutalist architecture built with prefabricated concrete elements aligns with the original *beton brut* ideology. This ideology emphasizes a straightforward expression of material and construction processes in the architectural aesthetic.
While prefabricated concrete may not prominently exhibit the qualities of 'raw' concrete due to its treatments and smooth surface, which lacks the detailed imprints of wooden board planks, it continues to represent the material itself. Prefabricated concrete elements often display geometric forms that celebrate the plasticity of the material while simultaneously emphasizing its massiveness.
Additionally, surface treatments applied to prefabricated elements can accentuate the inherent properties of the material. While this may seem to contrast with the *beton brut* philosophy due to heavy adjustment to the 'raw' concrete, it does achieve a similar aesthetic by exposing the rough nature of the material and revealing its aggregates, as seen in the Barbican Estate.
However, it is essential to note that not every building constructed using prefabricated concrete elements between the 1950s and 1970s should then be automatically categorized as brutalist. As Rybczynski (2017) underscores, *"Brutalism refers to buildings that dramatize the rough character of concrete."* This suggests that brutalism must emphasize the celebration of concrete as central to its aesthetic and that simply using concrete as a construction material is not sufficient.

Another ongoing debate concerns how the aesthetics of brutalist architecture are perceived and, often, misunderstood. As the results indicate, an appreciation of brutalism often relies on a deeper awareness of the style's ideological intentions.
Critics who defend brutalism argue that the style is often misunderstood and that an appreciation of its aesthetic requires an understanding of its original intent: to show the process of construction, highlight honesty in materials and convey social ideals. Viewed this way, brutalism's perceived ugliness becomes a distinctive quality.
The tension between perception and ideology may explain why the style is polarizing: the appearance may not be attractive, but understanding the ideology can reveal the value of the aesthetic, both in form and material. However, this raises a fundamental question: is it necessary to understand the ideology to appreciate a building, or should the structure's aesthetics alone speak for itself?

VI. CONCLUSION

This thematic research paper aimed to develop an understanding of brutalist architecture by examining it through the lens of its makeability. It explored the relationship between architectural aesthetics, materiality and construction techniques inherent to this style. The central research question asked: *"How can brutalist architecture be understood through its makeability?"*

The findings suggest that in brutalism, architectural aesthetics, materiality and construction methods are not separate components but form a unified architectural expression. The aesthetic is not an applied layer or stylistic gesture, but an outcome of how the building is made and what it is made from. In this context, the makeability is the aesthetic, in the spirit of an ideological intent, as is illustrated in Figure VI.I..

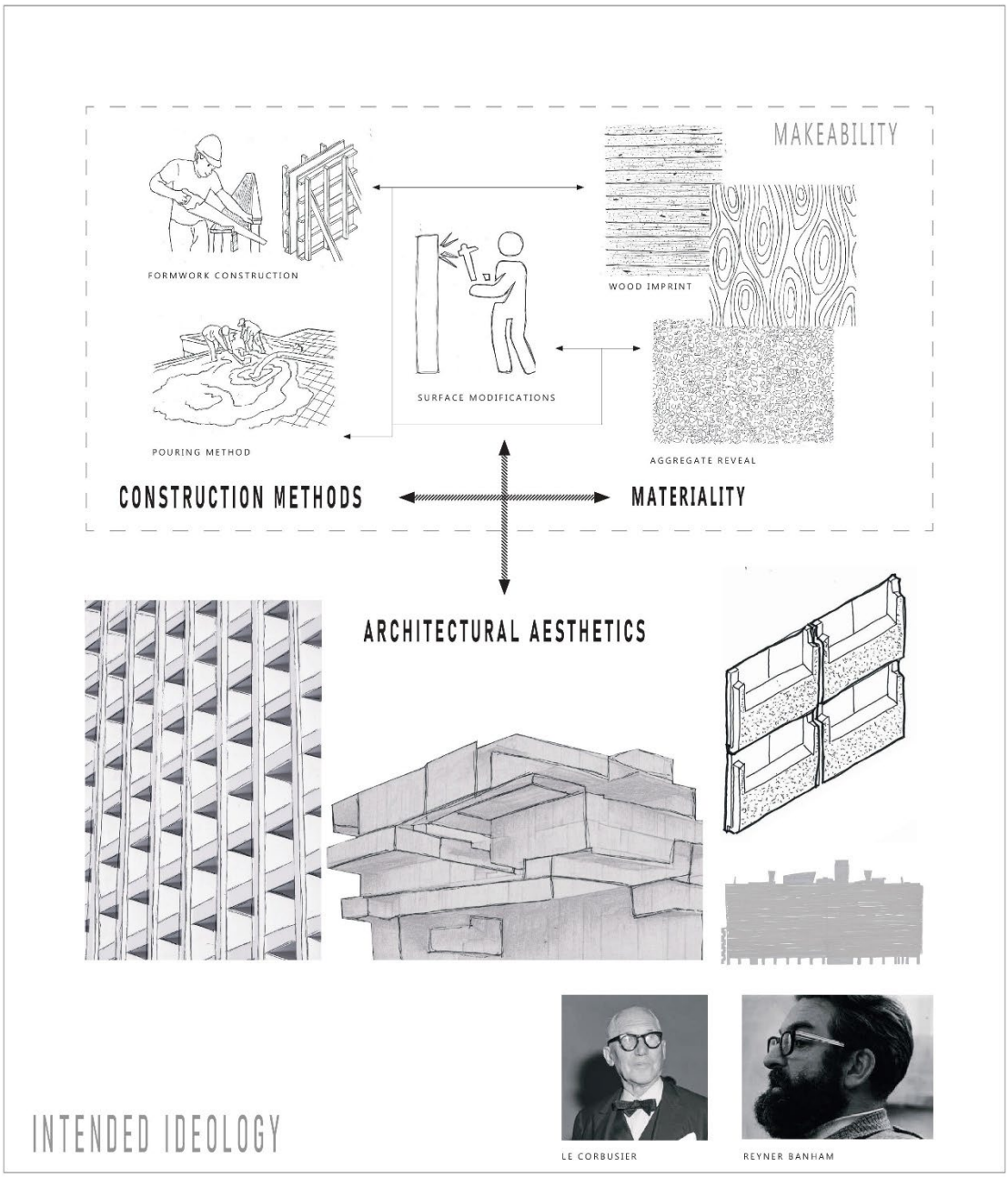

Figure VI.I. The unified architectural expression of brutalism. Own work

Concrete is central to this unity. As a material that is not naturally occurring but manufactured, it inherently reveals the conditions of its production. This visibility is particularly evident in the in-situ technique, where formwork imprints and casting imperfections leave a textured surface, exposing the material's raw, crafted nature. In contrast, prefabricated concrete undergoes a more controlled process, resulting in smoother, more geometric finishes with fewer visible traces of construction. Although differing in appearance, both methods celebrate the inherent qualities of concrete. They produce robust, monolithic structures that express solidity, mass and sculptural form.
This aesthetic is not accidental but intentional: it originates from an ethical ideology, one that values honesty and transparency.

Ever since their emergence, brutalist structures have divided opinion, often due to their raw and sometimes 'aggressive' or 'ugly' appearance. Yet, it is the integrated relationship between materiality, construction, and architectural aesthetic, grounded in a clear ideological foundation, that defines brutalism and gives it its distinct architectural identity. An acknowledgment and understanding of this interwoven relationship may be the foundation for the appreciation of the style and appears to be the driving force behind its revival in recent years.

Ultimately, in a time when building with concrete — especially as a façade material — is becoming less and less common, and will likely decrease even further in the future, the brutalist aesthetic is one that is unlikely to be replicated again. It is therefore all the more regrettable that brutalist buildings are not only being demolished, but that brutalist transformations, as mentioned in the introduction, often choose to replace this robust and textured façade appearance with the opposite: thin, light, and smooth glass implementations.

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