

A Discourse on Brutalism Architecture: The Forgotten Architecture Style in Architecture Revolution

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ABSTRACT

This paper explores the Brutalism architectural style. This style became popular in the 1950-1970s with the start of experimentation with building materials in line with the social movements of that time. This research uses an exploratory approach based on a longitudinal study of similar studies. The discussion focused on the architects' revolutionary thinking towards unique designs through form manipulation and material exploration. The results of his work show the determination of form seekers, material experimentation, and the enthusiasm of young architects for monumental architecture. Massive and unadorned reinforced concrete frames, simplicity, minimal ornamentation, small windows, and rough surfaces are usually used for government buildings, institutions, and high-rise housing. The popularity of Brutalism spread to the Far East. The formation of Brutalist architecture in Malaysia left its mark on the urban landscape, but developed into a combination of architectural compositions in architectural pedagogy.

Tulisan ini mengeksplorasi gaya arsitektur Brutalisme. Gaya ini marak pada tahun 1950-1970an dengan mulainya eksperimen bahan bangunan seiring dengan gerakan sosial masa itu. Penelitian ini menggunakan pendekatan eksploratif berdasarkan kajian longitudinal terhadap kajian-kajian sejenis. Diskusi berfokus pada pemikiran revolusioner para arsitek terhadap desain unik melalui manipulasi bentuk dan eksplorasi material. Hasil karyanya menunjukkan tekad para pencari bentuk, eksperimen material, dan semangat arsitek muda terhadap arsitektur monumental. Rangka beton bertulang yang masif dan tanpa hiasan, kesederhanaan, minim ornamen, jendela kecil, dan permukaan kasar bangunan biasanya digunakan untuk bangunan pemerintahan, institusi, dan perumahan bertingkat tinggi. Popularitas gaya Brutalisme menyebar hingga Timur Jauh. Pembentukan arsitektur Brutalisme di Malaysia meninggalkan ciri pada lanskap perkotaan, namun berkembang menjadi gabungan komposisi arsitektur dalam pedagogi arsitektur.

1. Introduction

Architecture surfaced according to the progression of technology, the economy and the stability of the government. After the Industrial Revolution and the end of the

Second World War, the growing population and the pace of technological advancement as well as growing rural-urban migration requires more shelter near the workplace (Hitchcock, 2023; Vale, 2014). The job opportunities in the city, where the factories and industries are located became the concentration of the people. Architects in America and Europe were looking for a simplified and fast technique of building with fewer ornaments, boxy shape and good spatial distribution (Curtis, 1986). The styles of architecture that appeared after the Second World War are not directed to the production of the masses. The functionalist promoted the building that is determined by its practical considerations in usage, materials, and structure. The best answer is the brutalism style (Campagna, 2020; Imani & Imani, 2021).

This paper attempts to overview the style of architecture that was almost forgotten and faded away after two decades of monumental glory. During this period the return of the war veterans the restructuring of society and increasing job opportunities led to the demand for more housing and buildings for the industry (Vale, 2014). The discovery of concrete technology initiated by Perrier in 1884 widened the usage of the materials and architects were exploring the best solution. The fifties were considered as the reborn of the nation after the two consecutive wars and the emergence of brutalist style became the ideal image for civic and institutional building (Banham, 1966; Stalder, 2017). The style of architecture spread worldwide until the Far East. The style developed into a transformative form of design that led us hardly to distinguish its origin.

Brutalism architecture is a style of architecture that appeared in England in the early 1950s and spread to America, it was during the period of the second generation of American Architects (Niebrzydowski, 2019). Although modern masters such as Frank Lloyd Wright, Mies Van Der Rohe, Walter Gropius and Le Corbusier distinguished themselves from the architecture race in America and Europe after the war, Le Corbusier was an eminent architect in the development of twentieth-century architecture. Brutalism style in architecture derived its name from the French word 'beton brut' – i.e raw concrete which Le Corbusier was fascinated due to its plasticity and malleability that brought changes in technology which the architect searching for along with other fields of progress such as transportation, especially cars and ships.

An architect attempted to produce the style along with the availability and discovery of the building materials; that is what brutalism architecture is trying to reveal. Raw concrete, as the main play of brutalism, brought innovation to the structure, function, and materials of buildings without ornaments or other embellishment (Curtis, 1986). Nevertheless, the massive, heavy appearance and rough surface do not resemble brutalism anymore, where the transformative form is covered with other finishes. These can be seen in some of the work in the Far East, where the brutalism is not expressed through the bare concrete with hammer-bush finished alone (Scalbert, 2000; Thoburn, 2018).

Corbusier's Jaoul House in Paris, Aalto's Baker House at MIT and Town Hall at Saynatsalo, Finland demonstrate the heavy application of bricks employed in the design. Kahn who was obsessed with the "humble" materials – said that "... you must ask back

what it wants or what it can do. Bricks will say I like arch,” Since arch requires skill and craftsman, hence, concrete is the suitable material across the openings, which is equally good (Weston, 2008). It is here that the focus on form became a major distinctive style of the building that architects are exploring. The era of Art Nouveau expressed by its curved line and long sinuous lines propagated by William Morris Hunt (Fletcher, 1987) expressed through art and craft uplifting the work of art in building design. The 20th-century technology of concrete plasticity is streamlined with the design of cars and cruise ships. This is the beginning of the epitome “housing as a machine” by Corbusier appeared in the elements of arts in a building that is envisioned through the integration of technology and architecture.

In 1957, Malaysia gained independence and a new nation was established (Wahid et al., 2021). The construction of government buildings, such as hospitals, schools, an institution of higher learning and government offices was managed by the Department of Public Works. The first generation of Malaysian architects who returned to Malaysia brought back the modern movement ideology into a new nation (Abel, 1985). The monumental buildings of that nature were very much admired by the government, and the building of monumental brutalist images such as Dewan Tunku Canselori of University Malaya designed by Kington Loo (Figure 2c) in 1965 amazed the people. The massive appearance of the Façade resembles the Brunel University in London. The Bank Negara designed by Nik Mohamad Nik Mahmood (Figure 2b) was built in 1967 with a strong vertical element with a small window and textured with a bush-hammer surface that adds a new style of building in the neighborhood. The National Mosque, Kuala Lumpur General Hospital, and the University Kebangsaan Campus were developed according to Brutalist disposition. The National Seminar on Searching for Malaysian Identity in 1981 (Wahid et al., 2021; Wahid & Harman, 1989) woke up the architects either those serving the government or at a private practice. The call for Malaysian identity led to a new breed of architecture that surpassed the Malaysian urban landscape as well as the resort development in distinctive areas of Penang Island, Pangkor, Langkawi and Terengganu. New images of post-modernism buildings such as Maybank Tower, Tabung Haji Tower, Citibank Tower, TM Tower, and Putrajaya Convention Centre dominated the Malaysian city skyline.

Slowly, the monumental architecture of brutalists is replaced with regionalism and a hybrid of post-modernist architecture with local flavor. This healthy appearance of the new images of architecture that changed the urban landscape of Malaysia was imbued by the local graduates from University Technology Malaysia and University Technology MARA as well. After 1990 more and more new buildings started to dominate the urban landscape in major cities of Malaysia. The interpretation of post-modernism with pyramid roofs, pediments, keystones and stone brackets is also applied in some buildings such as the Sarawak Foundation building in Kuching and the Mega Hotel in Miri. The combination of Malaysian identity and post-modernist style also appears in some building designs such as Bangunan UMNO in Alor Setar and Bangunan Bank Bumiputra in Kuala

Lumpur to name a few. From this period, the brutalist style slowly disappeared and was replaced by new Malaysia style of architecture either in a high-rise or resort design.

2. Materials and Methods

Architects derived the form of architecture based on the basic shapes of geometry that are created by points, lines, segments, rays, planes and angles. These basic concepts of geometry developed into three-dimensional main shapes that formed triangles, squares and circles which later transformed into a platonic object which is enclosed by space formation. Plato – from whom the word platonic is derived said that the theory of form is a way to understand reality, it is clear and concise and thus, shows the height, length, width and volume (Blakeley, 2022). The form of the sphere, pyramid and cube later translated into a composition of architecture either transformative, subtraction or addition that is made possible with the action of light. Basically, these forms were later developed by architects in search of the deterministic design which they expressed by materials, showing texture, solid, void and of course expressive structure. The mass of the building is influenced by the materials used in the construction and the architects will judge with their understanding of design principles reflected by size, scale, proportion, rhythm, texture, color and the natural ambiance of the environment.

The brutalist movement was dominated by popular early architects such as Le Corbusier, Paul Rudolph, Marcel Breuer, Erno Goldfinger, Kenzo Tange, Ricardo Bofill, Denys Lasdun, and Vjenceslav Richter to name a few (Imani & Imani, 2021). Each of these architect came from a different academic background, and origin and has their own style of design capability. The building they are commissioned to design became a landmark and example to young architects. Paul Rudolph's work in America boldly showed the bare facade of concrete as compared to his design in Jakarta Indonesia and Singapore. The unique monumentality of the form is not reduced to bare concrete, however, the form itself exercises the continuity of brutalism style with a more transformative form expressed by the advanced materials.

Texture in architecture is the visual quality of the surface of the form that regulates the mass of the form. It helps to humanize architecture by showing the retreat of aesthetics through architects' creations. Brutalist architecture is not all portrayed through the usage of concrete, its simple, block-like, brick stone, sheet metal, wood and hulking concrete structures derived from the form exemplify the sculpture (Brockington & Cicmil, 2016; Hohenadel, 2023). Some architects break the monotony of the mass by using colors and lines to reduce the tactile elements of the building visually. From the early composition of the building typology, Michelangelo expressed the mathematical ratio by using symmetry and proportion to create harmonic expressions of the form (Germino, 2014; Meyer, 2023). The wall surface sometimes contrasts with color to bind the materials at intervals to reach the scale proportionate to the height. Lines in architecture define the appearance of form. The texture of the materials experienced from far away only depicted the surface without any indication of specific texture. Time and

space in architecture are dominated by the participant through his/her path of experience.

The feature of the cold and grey façade of the concrete on the building was chunky slowly blending with bricks and glass to subdue the heavy and massive of the poured concrete construction. Later, the combination of the egg-crate, vertical fin, flanked with a deep parapet is replaced with a redbrick façade but still, the exposed structure of the building helps an honest expression such as that of the University Kebangsaan Malaysia building (Figure 2). The red bricks and exposed beams show the modest finishes of institutional buildings that remain in a brutalist era (site visit 2023). The smooth and rough application of concrete differs in the interior and exterior. The continuous interior of brutalists may be smooth and incorporate timber and glass while the rough exterior may be hacked with a hammer to expose the true nature of concrete.



Figure 1. University Kebangsaan Malaysia Campus

(Source: Google 2024)

Brutalism architecture is an honest expression of materials and an expression of structure, the subsequent stages of the construction process were a symbol of sincerity and straightforwardness (Niebrzydowski, 2019). He added that "... at the beginning of brutalism materials were used in "as found" manner, without any treatment, just as the "found objects" used by artists in their works. It should be remembered that the use of materials in "as found" way originated, from avant-garde art, including Eduardo Paolozzi's sculptures and Nigel Henderson's photograms". The brutalist architecture was the exposure of building materials and their texture described as the massive plasticity and coarse surfaces (Banham, 1966; Thoburn, 2018).

In architecture, the term characteristic describes the composition of the design with regard to the principles that appear in the building. The elements of the building are portrayed by the presence of verticality and horizontality of the building components. Unlike the art and craft movement that employs superfluous ornamentation to mask the structure brutalist architecture exposed the bare concrete as a dramatic shape with rough texture as a true geometrical form that is repetitive and simple giving a character to brutalist architecture. Brutalism is a testament to a "strong look; it's imposing, intimidating, and shows off the power of raw concrete" that was idealized by the early generation of architects (Hohenadel, 2023). The use of concrete as a primary building

material, and the proportions for Brutalist designs often resulted in buildings and interiors that were chunky.

The research applies the exploratory technique together with qualitative information available in the literature that is related to the topic. In order to exhume the writings of the earlier scholars on the topics of Brutalism. A pictorial representation of the building is shown in the analysis of the architecture. The research methodology designed for investigating Brutalism, a distinctive style in architecture, integrates exploratory methods with in-depth qualitative analysis. This approach is grounded in a thorough review and interpretation of the extensive body of literature dedicated to Brutalism. It involves a detailed exploration of the contributions of early scholars and theorists who have significantly shaped the current understanding of this architectural style. Brutalism is recognized for its bold experimentation with forms and materials, creating monumental and impactful designs primarily characterized by their stark simplicity and robust materials.

A critical aspect of this methodology is the emphasis on Brutalism's defining feature: the raw, unadorned reinforced concrete frame. This element symbolizes the essence of Brutalism - a commitment to simplicity, structural honesty, and a departure from ornamental aesthetics. To gain a more nuanced understanding of Brutalism, the research delves into a wide range of scholarly articles, historical critiques, and architectural analyses. These sources offer a rich perspective on how Brutalism has evolved, how it has been perceived across different times, and its theoretical underpinnings. Special attention is given to the stylistic nuances of Brutalism, such as the minimal use of oriels, the typical 'fair finish' of concrete, and the style's prominence in governmental and institutional edifices.

An essential element of this methodology is the incorporation of pictorial representations of Brutalist architecture. These images are much more than mere illustrations; they are pivotal for a thorough and critical analysis. They allow for an in-depth exploration of the physical attributes and design philosophies that are central to Brutalism. Through these visual representations, the research vividly brings to life the imposing and formidable nature of Brutalist structures, making the abstract concepts more concrete and accessible.

In essence, this research methodology combines theoretical scrutiny with visual examination, offering a comprehensive approach to understanding Brutalism. This fusion not only sheds light on the architectural and aesthetic dimensions of Brutalism but also provides a lens to view its historical evolution, cultural significance, and the broader socio-cultural contexts in which this powerful architectural style exists.

3. Result and Discussion

Concrete was widely used since the earliest known dating from Syria and Jordan in 6,000 BC and Roman era but throughout the Middle Ages and Renaissance, they dropped its usage. Until the second half of the nineteenth century, the trabeated system

for reinforced concrete was established and refined. The composition of the mix and quality of concrete is advancing according to the present technology. Due to its plasticity, cheap and manageable in general works, it became a popular material at the beginning of the twentieth-century architectural era, especially in the fifties and sixties. The shape of the form follows the mold of the formwork.



Figure 2. (a) Brutalist Architecture for Institutional Building Worldwide Boston City Hall, Massachusetts; (b) Bank Negara, Kuching; (c) University Malaya Hall
(Source: Google 2024)

Adolf Loos pointed out that “materials had its language of the form’, it is the way to “simulate the material with one another where each material has its intrinsic value”. As agreed by Sullivan that “function and structure could not on their own “generate” an adequate form”. The quality that abstracted the form does not necessarily rely on the materials, however, the tradition of construction suggested its configuration. Sullivan had a dialectic situation in defining the genuine form in high-rise buildings. However, the twentieth-century attempt to project the new era of architectural expression through the lightness of the structure as shown by Violet Le Duc and Auguste Choisy as well as Paxton’s Crystal Palace (Curtis, 1986).

The architect of that era upholds the philosophy of brutalist design by looking at the shape, and, the cast of shadow and the penetration of light from the slit window and egg-crate shading devices. It gives a strong experience of internal smooth space and the drama of light, shadow and texture play a sequence as we enter the interior of the building. Unlike the art deco, art nouveau or art and craft style, in the brutalist space - the white leather furniture enhances the grey ambiance of the living room.



Hong Kong

Singapore

Indonesia

Figure 3. Paul Rudolph’s Work in South East Asia
(Source: Google 2024)

The era of inverted pyramids in buildings appeared in the 1970s and the brutalists suit the style with the sculptured structure monument of the new form. The inverted pyramid design allowed the building to gain an unusual distribution of space, especially the lower ground. The inverted pyramid shape was claimed to keep the building cool in summer and warm in winter (Hohenadel, 2023). The Tempe, Arizona Municipal building seems similar to Boston City Hall (Figure 2a). The brutalist inverted pyramid also spread to other parts of the world, for example, Bangunan Mahkamah in Kuching. The Energy Commission Building, Malaysia revived the shape of an inverted pyramid with a glass envelope. The Western architect who contributed the most to brutalist architecture in the Far East is Paul Rudolph. He sets out a new example of sculptural regionalism of tropical architecture that local architects overlooked. Although his works at Richard Medical Centre and the Yale Art and Architecture Building were the earliest examples of brutalist architecture in America (*Paul Rudolph: The Latest Architecture and News*, 2023).

The style of architecture changed along with the progression of the wave of change brought by the economy, technology, fashion and culture. Urbanization and globalization have evidently influenced the pace of architectural trends. It is obvious to see a similar style of design in the West that appears in the far-flung eastern part of the world. Brutalism style reached the set-off point in the 1960s and faded away in the late 1970s (Niebrzydowski, 2019). It created a gap in architecture trends in the Eastern world, however, it developed into a more creative and transformative in the development of the design. It can be seen in the institutional building after the brutalism era. The form and the façade of the building, although did not repeat the brutalism style, however, it introduced another continuity of similar mass of architectural form. Paul Rudolph's work of Wisma Dharma Sakti Office Headquarters in Jakarta, the Concourse in Singapore and Hong Kong Bond Centre gave another version of the brutalist and tropical setting for skyscrapers in the Far East. The Wisma Dharma Sakti and Concourse Building (figure 3) clearly explained Rudolph's style in maintaining monumental architecture and respect for the tropical climate by introducing shading devices while the Bond Centre dragged to the period of post-modernist architecture.

The world is divided into those who go with concrete for building the urban landscape and those who consider the cold nature and indestructibility of concrete an eyesore that should be demolished. The heavily poured concrete is hard to renovate and left deteriorated from the inside and prone to crumbling with water damage from the inside as it ages. The high-rise building of Pruitt Igoe in St Louis, Missouri was neglected covered with graffiti and left to decay until it was blasted to the ground while the Grenfell Tower which was designed in 1967 and built in 1970 was gutted by fire. The two publicized examples of brutalist architecture became a symbol of the failure of modernism in architecture (Jencks, 2001). The inception of brutalist architecture in public housing designed by Corbusier at Unite de Habitation became the epitome of modern design of street in the air, playground and roof garden without going to the ground. It has been criticized by several scholars and many others (Jencks, 2001; Wolf,

1981). The utopian model during the 1960s at a huge scale of Brasilia by Oscar Niemeyer and Coleman (1995) addressed the public housing that was designed by a utopian concept that failed to meet the social or utilitarian needs of the residents. The Byker Wall at Newcastle Upon Tyne - was torn down in 1966 because of vandalism and crime and claimed as unfit for human habitation. The cold grey face of bare concrete is also expensive to maintain such as the 44-year-old brutalist Orange County Building by Paul Rudolph legislators are in dilemma whether to demolish or maintain the building. Not all of the brutalists end in demolition, the development of the form is extended to a more transformative design. After the brutalist period, the transition in the style became less conspicuous until it was declared by someone through writing or other media of communications.

4. Conclusion

Brutalism in architecture, recognized for its raw, unrefined aesthetic, is a movement that emerged in the mid-20th century, characterized by its experimental approach to form and materials. This style is marked by its massive, monumental designs, often evoking a sense of awe and impact. The quintessential use of unadorned reinforced concrete frames is a hallmark of Brutalism, highlighting the material in its most elemental state. This focus on simplicity and the lack of ornamentation, paired with minimal oriels and a 'fair finish' in concrete, underscores the movement's commitment to functional and honest design. Primarily seen in governmental and institutional buildings, Brutalism's formidable presence serves as a physical manifestation of authority and durability. However, its stark and imposing forms have often been a subject of debate, polarizing public and critical opinion.

For further research, it would be beneficial to explore the socio-cultural implications of Brutalist architecture, particularly how these structures have been received and repurposed over time. Investigating the sustainability and environmental impact of Brutalist buildings, given their extensive use of concrete, is another critical area. Additionally, examining the psychological and emotional effects of living or working in Brutalist spaces could provide valuable insights into human-environment interactions. Lastly, the potential for integrating Brutalist principles with contemporary architectural innovations offers a rich avenue for exploring how this distinct style can evolve and remain relevant in the 21st century.

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