

BRUTALIST CONCRETE

BRUTALISTYCZNY BETON

Abstract

Standing in opposition to the stripped of originality art of modernism, the brutalist architecture rejected the metaphor to give it an individual character by combining scaled, sculpted forms with the use of raw concrete. The text shows the transformation of concrete in the aesthetic dimension, presenting the image of “brutal” architecture as a negation of perception of concrete as a building block and giving it beyond practical functionalism, namely expression. The author, based on examples of brutalistic architecture, shows the process of concrete evolution from being raw material to masterpiece, from component to entirety.

Keywords: transformation, raw, concrete

Streszczenie

Stojąc w opozycji do pozbawionej indywidualności sztuki modernizmu, architektura brutalistyczna odrzuciła metaforę, by dzięki zestawieniu przeskalowanych, rozrzeźbionych form, pogłębionych zastosowaniem surowego betonu, nadać jej indywidualny charakter. Tekst ukazuje transformację betonu w wymiarze estetycznym, przedstawiając obraz architektury „brutalnej” będącej negacją postrzegania betonu jako budulca i nadającej mu poza praktycznym funkcjonalizmem – ekspresję. Autor na podstawie przykładów architektury brutalistycznej ukazuje proces ewolucji betonu z surowca do dzieła, z części składowej do całości.

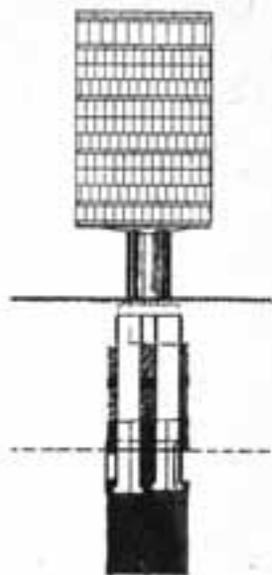
Słowa kluczowe: transformacja, surowy, beton

Concrete: a mixture of aggregate, sand and cement which binds and hardens in the hydration process, converting into a material with similar properties to natural rocks. Concrete has been transformed from its very beginning, from a variety of mixtures to a coherent, undifferentiated monolith; from the original building block to the main narrative.

One uses stone, wood, cement and converts them into houses or palaces; this is a design. It calls for talent. But suddenly, you touch my heart, you make me feel good. I'm happy. I say: it's beautiful. This is the architecture. This is the art¹ – Le Corbusier

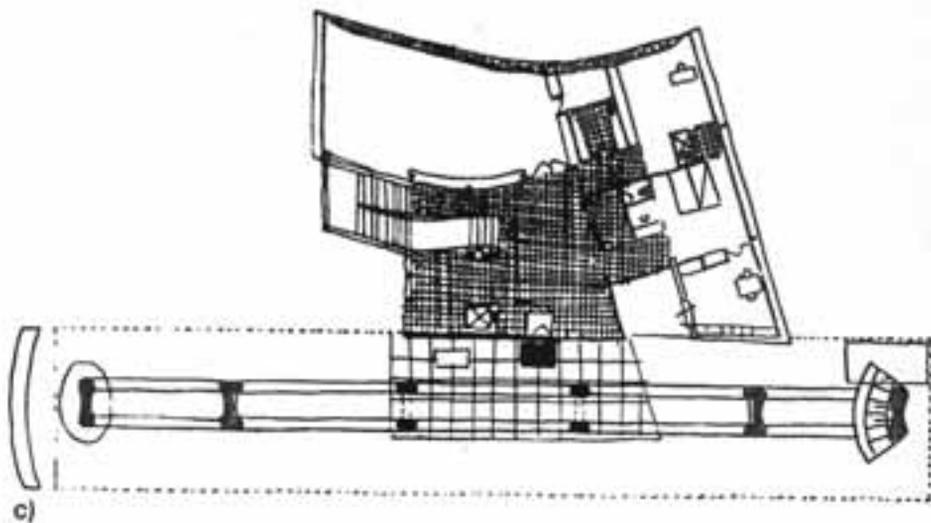
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¹ *Beton – współczesny materiał o starym rodowodzie*, Budownictwo, Technologie, Architektura, 4–6 2004, p. 15.



Le Corbusier

b)



c)

III. 1. The Swiss Pavilion – Le Corbusier , Paris, 1930–32 [source: S. Latour, A. Szymiski, *Rozwój współczesnej myśli architektonicznej*, Warszawa 1985, p. 74]

By overcoming its original physical destiny, concrete has undergone transformation into a metaphorical thing, becoming an intrinsic attribute of modern architecture. Due to its plastic properties, it exceeded its common use to articulate form and express itself. A turn, redefining the meaning of concrete as a building block or texture, has become a current in modern architecture called brutalism. Trying to understand the meaning and principles of brutalism, one should look at architectural phenomena, social and cultural transformations and individual views over the course of the nineteenth century. "Brutalist" architecture emerged as the direction of the decline of modernism, but in consequence it rejected the typical aesthetics of modernism and stood in opposition to the simple, light, indistinguishable structures. From the beginning of its existence, this trend was controversial in terms of the purpose of erecting a raw, overwhelming and rejecting context brutalist architecture. Although many critics have recognized it as a period that has "cluttered" the history of architecture, it is impossible not to see its breakthrough, radically cutting-edge architecture.

Definitions: *architecture is nothing more than an ornament added to a building*, John Ruskin, *architecture as opposed to ordinary building is a decoration*, Gilbert Scott, or "architecture begins where the function ends", Edwin Lutyens. The contemporary role of architecture and its program – have ceased to be adequate.² to the coming brutalist movement, which freed structural elements as pillars, staircases, corridors and "pushed" them out, articulating their character by using raw, uncovered concrete plaster.

Brutalism developed in the early 1950s and spread until the mid-1970s. Charles Jencks announced in 1977: Modern architecture descended from this world in St. Louis, Missouri, on July 15, 1972, at (roughly) 15:32, when the infamous Pruitt-Igoe housing estate, or rather the housing blocks in this housing estate, were given the final coup de grace by being blown up³. The housing estate was built according to the ideals and assumptions of the Miyak Yamasaki modern architecture from 1952 to 1955. It contained "three basic joys of urbanism": the sun, the space and the green.

Wojciech Niebrzydowski in his publication "Brutalism in architecture – the origin of the trend", reflecting on the causes of the rise of brutalism and the events that influenced the harsh nature of this period, created a list of elements that were most important in the formation of brutality:

1. *Buildings of the early twentieth century, characterized by rigidity and formed on the basis of contrasting structural blocks (e.g. Glasgow School of Art buildings of the Mackintosh project).*

2. *Exposing concrete texture in the work of such architects as Perret and Moser.*

3. *Industrial buildings of the interwar years using reinforced concrete structures and plastic potential of concrete (e.g. Beeston's Sir Owen Williams project).*

4. *The use of natural, raw local materials, "as found", in the Aalto structures of the 30s of the last century.*

5. *Changes in Le Corbusier's work, which took place in the early 1930s, referred mainly to the design of more articulated forms, use of raw materials, and inspiration of the primitive construction.*

² S. Latour, A. Szyski, *Rozwój współczesnej myśli architektonicznej*, Warszawa 1985, p. 25.

³ Ch. Jencks, *The language of Post-Modern Architecture*, Londyn 1977.



III. 2. Glasgow School of Art – Ch. R. Mackintosh, Glasgow, 1898–1909 [source: S. Latour, A. Szymski, *Rozwój współczesnej myśli architektonicznej*, Warszawa 1985, p. 321]

6. *Permanent introduction of the brutalistic language terms to the architecture, such as beton brut, brutal British, brise soleil, rhythmically repetitive structural elements.*

7. *The emergence of the idea of a “vertical city”: a building expressing its complex internal functions through a specific composition of the elevation.*

8. *The tendency to create sculptural and monumental architecture inspired by Nine Points of Monumentality.*

9. *Social moods in the post-war world favouring the search for new ways of architecture based on the greater pluralism of attitudes and the individualism of the creators.*

10. *Searching for fast and cheap methods of restoring damaged cities, especially in terms of housing construction.*

11. *Le Corbusier’s first post-war building presenting the full features of brutalist architecture – Unité d’Habitation in Marseille.*

12. *Smithson’s work in the first years after World War II, and in particular the socio-architectural theory of the new brutality, which shows the relationship between art, architecture, everyday life and the school’s implementation in Hunstanton, which exploits the use of common materials and the visibility of the installation⁴.*

The term brutalism itself comes from the French word brut, meaning raw⁵. Raw, natural textures have long been of interest to many architects. Frank L. Wright was known not only for his architectural ideas, but also for the use of stone walls, which to his belief were integrated with nature. Brutalists continued Wright’s theory, but instead of stone and wood they used unplastered brick or reinforced concrete both inside and outside the building. The

⁴ W. Niebrzydowski, *Brutalizm w architekturze – geneza kierunku*, p. 53.

⁵ <http://wiedzanieboli.blogspot.com/2010/02/brutalizm-niedoceniony-nurt.html>.

buildings representing this flow are characterized by a massive form made mostly of raw concrete, operating with heavy solids and thickly shaped details.

The University of Pennsylvania Medical Research Laboratory (1957–61) characterizes this period. Louis Kahn, the author of the facility, combined his monumentalism, purist simplicity of detail and geometric content into his architecture. This type of Kahn art was initiated by the Yale University Art Gallery in New Haven (1952–54). Thanks to the contrast of the mass of walls, supports and sinks, it increased the aggressiveness of their works ⁶.

The Hunstanton High School in England designed by A. I. P. Smithson, was named the first brutalist building by the authors themselves. This building was distinguished from others from this period not only by the total severity of the material, but also by the presence of sanitary installations. He was referring to the construction of old machines and their wires. However, the building, in spite of its severity and the impression of an industrial facility, does not blur the aggressiveness of form. On the contrary, it is very orderly and symmetrical and eye-friendly.

Brutalism is trying to face the mass production society, trying to create raw poetry with complex and powerful forces⁷ Alison and Peter Smithson.

*However, Le Corbusier, or rather his Unite d'Habitation in Marseille, was the inspiration for the architecture of the period of brutalism. According to many architects, Le Corbusier in designing this facility has exhausted almost all architectural possibilities, for example by using industrial products as found⁸. There were different views about Le Corbusier's art, but Alison Smithson thought that nothing more than Le Corbusier could be done, because his objects contained all the solutions and ideas that would come to his head already in his architecture. This could have been a bit depressing, but on the other hand it made people realize how great and "prophetic" an architect Le Corbusier was. He was fascinated by the texture of raw concrete, the possibilities it gives. *His favourite texture has been the rough, coarse and irregular concrete surface, leaving the jars of boards and knots, and the crack and scratches remaining after the removal of the planking⁹. In the Marseille Unit, Le Corbusier created the impression of movement, making the person speak to the architecture of that construction. Glass and wall were not aligned. The intersections that he applied are placed either backward or forward. In addition, the rhythm on the walls of the building create interlacing dark and bright rectangles. The loggias were highlighted with dark rectangles and their side walls painted in different colours. *The building observed at a right angle transforms from a massive, reinforced concrete giant into a glittering mosaic¹⁰. It was Le Corbusier who combined the idea of combining an elemental solid block with the characteristics of brutalist architecture and thus became a model for the entire generation of creators.***

Malfunctions are thrown in all parts of this building! Uncovered concrete reveals the smallest inaccuracies in the combination of planks, fibres and beads, knots, etc. And do men

⁶ S. Latour, A. Szymski, *Rozwój współczesnej myśli architektonicznej*, Warszawa 1985, p. 73, 502–513.

⁷ http://www.sztuka-architektury.pl/index.php?ID_PAGE=3699.

⁸ Ch. Jencks, *Ruch nowoczesny w architekturze*, Warszawa 1987, p. 293.

⁹ J. Sławińska, *Ruchy protestu w architekturze współczesnej*, Wrocław 1995, p. 28.

¹⁰ W. Niebrzydowski, *Brutalizm w architekturze – geneza kierunku*, p. 51.



Ill. 3. The Yale University Department of Art and Architecture – P.Rudolph, New Haven, 1961–64
[source: *Le Corbusier – Tragizm współczesnej architektury*, Warszawa 1982, p. 217]

*and women not exhibit wrinkles, moles, hooked noses and innumerable unique features?*¹¹
– Le Corbusier

But it is not the only building by Le Corbusier that emanates brutalist energy. The Swiss Pavilion in the Parisian university town, like the Marseille Unit, was created before brutalism was officially named (ill. 1). This building was built between 1930–32 (earlier than the Unite d’Habitation). The building is made of raw concrete, where you can see the imprints of the wooden formwork. The whole structure is raised above the ground on massive pillars, giving the impression that the building is cut off from the ground. The Swiss student house was one of Le Corbusier’s experimental buildings of

¹¹ Ch. Jencks, *Ruch nowoczesny w architekturze*, Warszawa 1987, p. 33–34.

a larger scale than ever before. About his accomplishments (including the *Maison de Week-End in Bolougne-sur-Seine*), Le Corbusier said: *It was about extracting the simple poetry of these materials; These were the objects that triggered a 'poetic reaction', and the purpose of architecture, as the 1923 definition says, is 'creating emotional bonds with the use of raw materials'*¹².

Also Charles Rennie Mackintosh “announced” the arrival of brutalism. Although he was a representative of the “Secession” in his projects, he applied solutions which were later the basic features of brutalism. “(...) *the reshuffling of the workpiece and the sharp contrast of the cubic forms, while at the same time the purist expression of the solid blocks, lead to the extraction of the structural and artistic values of the building, overturning the form of expressive brutalism*”¹³. *This is what Latour and Szymiski write about the main building and the library at the Glasgow School of Art, which was completed between 1898 and 1909* (ill. 2).

James Stirling and James Gowan designed the Ham Cammon housing complex in London, which played a very important role in shaping the brutalist architecture. They customised the size and shape of the windows as well as using loggias illuminating living rooms. As Le Corbusier did, their inner and exterior walls were left unplastered, reinforced concrete floor slabs showing a perfect texture due to marks left from the planks. However, the locals, having considered the interior unfinished, plastered the walls of the rooms themselves. That made Sterling feel unease and forced him to rethink the idea.

On the basis of that structure, it can be noted that the brutalist style has undergone fundamental change. Elements that were left, had different roles:

- exterior elements of installations left untouched,
- windows of various shapes and sizes,
- raw concrete,
- unplastered brick walls,
- reinforced concrete skeletons filled with brick.

Brutalist buildings with extravagant appearances transformed into human-friendly homes, decent dwellings, and the Ham Cammon estate has become an example of a modern, mixed-use housing complex in which you can feel at home¹⁴.

New Haven was created in 1962–64 by the Yale University Department of Art and Architecture, designed by Paul Rudolph (ill. 3). The architect argued that “*architecture is simply an art, and art has little to do with functionalism, etc., but always involves bringing things to their essence*”¹⁵. He also believed in the veracity of the fundamental premise of Mies van de Rohe: “less means more”. Is that why the university building appeals by the use of concrete? The layout creates a sculptural composition that can be admired from any angle. In order to obtain an unusual texture, special inserts are placed in the formwork, so that after unmounting the formwork there are unique strips. In addition, the surface of the walls was subjected to pneumatic hammering. In this case, the designer has diverged from the original premise of a raw, natural and economical texture. For many people it was “nasty”, while others thought it expressed Rudolph’s feelings.

¹² Ch. Jencks, *Le Corbusier – Tragizm współczesnej architektury*, Warszawa 1982, p. 119.

¹³ S. Latour, A. Szymiski, *op.cit.*, p. 566.

¹⁴ J. Sławińska, *Ruchy protestu w architekturze współczesnej*, Wrocław 1995, p. 29–31.

¹⁵ Ch. Jencks, *op.cit.*, p. 215.



III. 4. Royal National Theatre – D. Lasdun, London, 1971 [source: <https://www.britannica.com/media/full/511486/149657>]

The brutalist architecture and styling became so attractive and widespread, that buildings of various functions took over its basic assumptions. The official, representative as well as sacred architecture were typical images of the trend. London's Denys Lasduna Theatre (London 11) is a great example of such a building.¹⁶ At first glance, we pay attention to the composition of solid blocks which make up the whole. But this is not the only eye-catching element. The elevation made of concrete blocks shows all the possible advantages and disadvantages of such construction. It is safe to say that the author intended to move from aesthetics to ethics. The building delights with its size and provokes the question: "Am I so small or is this building so big?"

Poland, too, did not remain indifferent to the prevailing brutalism. The building whose form is most related to this period and is most recognizable is the railway station in Katowice, which was completed in 1966–1972. However, its design was created earlier in 1959, when a contest for the best project was announced. Three architects: Waław Kłyszewski, Jerzy Mokrzycki and Eugeniusz Wierzbicki put on the aesthetics of brutalism and the flared design. This idea was the most innovative and so far in Polish buildings of this nature are exclusively seen. Flares made of reinforced concrete have a typical texture of raw concrete with visible marks of planks, but even time has not managed to destroy the texture that is still visible beneath the layer of dirt. The concrete structure, which had hitherto been covered under a thick layer of plasterwork, finally came to light¹⁷.

We also find the visibly clear form of brutalism in the Bunkier Sztuki, designed by Krystyna Różyńska-Tołoczko. *The exterior wall texture is one of the most interesting*

¹⁶ J. Sławińska, *op.cit.*, p. 42.

¹⁷ http://www.sztuka-architektury.pl/index.php?ID_PAGE=3699.

construction elements. It was created as a result of the casting of walls from the formwork made of planks, cut at different angles. Hence, here are the patterns of the wood structure. Antoni Hajdecki (1927–1991) is the author of the sculptural elaboration of the façade. The main entrance, covered with rolled concrete ribbon, was originally intended as a bridge to the Planty Walk¹⁸.

Concrete architects of a brutalist character also have sacred objects on their account. Many of them are given as examples of concrete sacrum as well as for the great work of architects. In 1959, Le Corbusier designed the Monastery of La Tourette. Its construction took place between 1966–72. *The walls of the building have a raw, predatory texture of concrete and the predilection of raw concrete surfaces, which contrasts with the sophisticated way of arranging interior spaces and lighting solutions. The design of the exterior façade of the building was co-authored by Le Corbusier with Iannis Xenakis, architect and composer who co-authored the “Corulla” modular mathematical formula Modulora, and wrote “Metastasis” for the monastery project in La Tourette.* PhD Stefan Kuryłowicz¹⁹. From the years 1967–68 comes the implementation of the Hurva Synagogue in Jerusalem designed by Louis Kahn. *“Concrete is beautiful. If it is beautifully made, it is one of the finest materials”*²⁰. Reading the author’s quotation of the structure, you can see how the building will be seen. PhD Dariusz Kozłowski describes the synagogue as follows: *The concrete of the synagogue is extraordinary. First, it creates the structure, it shows the power, maybe the power of its own, and architectural features at the same time. It remains true to reveal the reason for its existence: technological reflections of formwork – boards and ties. It shows its nature: it is raw, it does not care to be more elegant than is required by building custom; Its cast surfaces in the form represent shades of grey and texture created not without a subtle contribution from coincidence. It does not bother itself with its tectonics, nor the power hidden inside steel bars. The stone here, with a distinct texture that has penetrated the outside of the building, does not oppose the dominance of concrete, but rather emphasises the distinctness of its nature.* In Paris, 1994–95, the Temple of Meditation was designed by Tadao Ando. Although the period of brutalism ended years ago, the construction definitely refers to the principles of the trend. It has a cylindrical shape of 6.5 m high, no windows, only a gap in the ceiling of smaller diameter than the interior of the cylinder located on crossed beams. The walls are massive. *The rigour of simple, geometric compositions is built on the sensual quality of reinforced concrete structures. As always, Tadao Ando’s cast in smooth-moulded forms does not hide its technological origin. Formwork leaves on the material the size, shape and arrangement of the tie holes connecting the wooden formwork*²¹. Tadao Ando’s architecture (not only sacred) is stripped of colour, it is grey, which makes the light inside an important role in the interior.

¹⁸ <http://www.artstore.pl/to-prawdziwy-brutalizm-w-architekturze>.

¹⁹ Budownictwo, Technologie, Architektura, *Beton – współczesny materiał o starym rodowdzie*, kwiecień-czerwiec 2004, p. 14–15.

²⁰ Budownictwo, Technologie, Architektura, *Beton Najtrwalszy, albo odnaleziona budowla Louisa Kahna*, lipiec-wrzesień 2002, p. 12.

²¹ Budownictwo, Technologie, Architektura, *Minimal Art. Tadao Ando*, kwiecień 2000, p. 7.

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