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## THE ROLE OF TRADITION IN THE BRUTALIST ARCHITECTURE

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### ROLA TRADYCJI W ARCHITEKTURZE BRUTALISTYCZNEJ

#### Abstract

Brutalist architecture was an avant-garde architectural trend that began in the mid-twentieth century. One of its basic assumptions was to create solutions corresponding to post-war reality and to reject the existing stylistic models. On the other hand, an important inspiration for protagonists of the trend was vernacular architecture, in which they searched for “basicity”, that is uncontaminated, timeless values of architecture. Along with the development of the brutalist trend, references to the tradition became clearer, contributing to its regional differentiation. The aim of the research is to present the role and significance of the tradition in the brutalist architecture. The method of historical and interpretative studies was applied, using analyses of ideas, projects and buildings of architects connected with the brutalist trend.

*Keywords: theory of 20th-century architecture, brutalist architecture, vernacular architecture*

#### Streszczenie

Architektura brutalistyczna był awangardowym nurtem architektonicznym, który miał swój początek w połowie XX wieku. Jednym z jego podstawowych założeń było tworzenie rozwiązań odpowiadających powojennej rzeczywistości i odrzucenie dotychczasowych wzorców stylistycznych. Z drugiej strony ważną inspirację dla protagonistów nurtu stanowiła architektura wernakularna, w której poszukiwali podstawowości, czyli nieskażonych, ponadczasowych wartości architektury. Wraz z rozwojem nurtu brutalistycznego odniesienia do tradycji stawały się coraz wyraźniejsze przyczyniając się do jego regionalnego zróżnicowania. Celem badań jest przedstawienie roli jaką pełniła tradycja w architekturze brutalistycznej. Zastosowano metodę badań historyczno-interpretacyjnych, wykorzystując w niej analizy idei, projektów i realizacji architektów związanych z nurtem brutalistycznym.

*Słowa kluczowe: teoria architektury XX wieku, architektura brutalistyczna, architektura wernakularna*

## 1. INTRODUCTION

The subject of the research presented in the article is brutalist architecture understood as a global architectural trend. It began after the World War II, reached the apogee in the sixties, and its decline was in the seventies. The aim of the research was to present the important role that the tradition played in the brutalist architecture, which is often perceived as an extremely progressive trend, completely rejecting past rules and patterns. Due to the nature of the research problem and its complexity, the method of historical and interpretative research

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was implemented, using analyses of ideas, projects and buildings of architects related to the brutalist trend.

The genesis of brutalist architecture dates back to some trends and tendencies from the first half of the twentieth century, including expressionism, futurism, ideas of Hugo Häring. However, its primary factors were the shift in the work of Le Corbusier and the New Brutalism. It should be emphasized that the New Brutalism can't be equated with the brutalist architecture. The creators of the New Brutalism were young English architects of the post-war generation, especially Alison and Peter Smithson, as well as artists cooperating with them. An important role as a propagator of concepts of the Smithsons was played by Reyner Banham, a historian and critic of architecture. The New Brutalism was, to a large extent, the theoretical foundation of brutalist architecture, although with time its ideas underwent transformations.

The brutalist architecture was to correspond with the post-war reality – austere and marked by the tragedy of war. It was to be based on emotions, but at the same time to take into account current design conditions in an objective manner. Although its creators wanted to design modern buildings avoiding direct imitation of past styles, they decided that there are eternal, deep-rooted and everlasting architectural values to be reached. They sought them primarily in the vernacular architecture. This aspect and other factors that will be presented in the article, decided that the brutalist architecture had a regional character.

The impact of the tradition on the brutalist architecture can be noticed already during the development of the trend. Chapters 2 and 3 are devoted to this topic. Chapters 4 and 5 deal with the mature phase of the trend.

## 2. LE CORBUSIER – VERNACULARISM AND BASICITY

Le Corbusier is considered one of the pioneers of modernism. He was a propagator of abstract, geometric forms of buildings. However, he was the first to leave them. Already in the 1930s he rejected a smooth, machine aesthetics in favor of more articulated forms and rough textures. Le Corbusier noted that sophisticated, unreal modernist buildings don't appeal to ordinary people. They don't evoke emotions expected by authors. Already in 1927 he wrote:

“My house is practical. I thank you, as I might thank Railway engineers, or the Telephone service. You have not touched my heart.

But suppose that walls rise towards heaven in such a way that I am moved. I perceive your intentions. Your mood has been gentle, brutal, charming or noble. The stones you have erected tell me so. (...) By the use of raw materials and starting from conditions more or less utilitarian, you have established certain relationships which have aroused my emotions. This is Architecture”<sup>2</sup>.

Le Corbusier realized that people identify with buildings with less artificial aesthetics, more traditional forms and made of local materials. He noticed how great emotional potential lies in the vernacular architecture and decided to use it in his new style.

The departure from modernism to brutalist architecture should be attributed largely to Le Corbusier's fascination with French rural buildings. This enchantment can be seen in his drawings of wooden huts and their details made in the rural area where he spent his holidays. As a result of the analyses of the vernacular architecture, he began to design heavy forms,

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<sup>2</sup> Le Corbusier, *Towards a New Architecture*, BN Publishing, Lexington 2009, p. 153.

massive walls, steep roofs and introduced natural materials. In his protobrutalist projects from the 1930s, he showed that technical perfection and purist aesthetics can be replaced with buildings with primitive forms, carelessly made, exhibiting primitive construction solutions.

It should be emphasized that Le Corbusier didn't look for direct formal inspirations in the vernacular architecture. He believed that he could find in it pure, uncontaminated ideas and principles that have a timeless value. The concept of a modern work can be influenced by the experience of ancient cultures, especially that from their beginnings. Le Corbusier didn't reject the tradition and belonged to the representatives of the trend, "which never broke with the past. However, the representatives of this sub-trend concentrated their relationships with the past at specific moments that had been repeated in past centuries and even millennia. They clearly and constantly returned to the beginnings of past eras, when new forms were just beginning to crystallize"<sup>3</sup>. These beginnings represented a certain value that Jerzy Sołtan called "basicity"<sup>4</sup>. Le Corbusier came to the conclusion that this basicity is also included in the contemporary vernacular architecture and it may be even easier to find it today than in distant historical epochs. The important thing is that direct contact with vernacular buildings and their authors is still possible. Le Corbusier was one of the first to appreciate the work of simple craftsmen, seeing in their buildings a sense of design and respect for materials.

The aim of the analyses of the vernacular architecture was therefore to find the basicity that is the foundation and the starting point for a new era in architecture. Le Corbusier's ambition was to start this era and give it a spirit characterized by austerity and sensuality, discovered in traditional buildings. Several small houses have become the first reflection of these aspirations. One of them was Le Sextant for Albin Peyron built in Les Mathes in 1935. It was supposed to be a cheap and technically simple holiday home, which prompted Le Corbusier to apply such primitive solutions as in huts and sheds of fishermen rented to tourists. Massive stone walls, exposed wooden elements and a butterfly roof were clear references to the local tradition. Le Corbusier began to design in a similar style also large buildings. A prominent example of the shift to massive plasticity on a much larger scale was the Swiss Pavilion in International City University in Paris built in 1930–1932. The curved wall of the lower part of the building made of irregular stones is a confirmation of this (Ill. 1).

### 3. NEW BRUTALISM – REINTERPRETATION

The authors of the New Brutalism, in many aspects, shared Le Corbusier's views. They referred to the inspirations from rural English houses and also appreciated the tradition of Japanese architecture. They were interested in getting to the basicity, rather than shallow reaching for formal patterns. Alison and Peter Smithson ended their program manifesto, published in January 1955, with a significant reference to the vernacular architecture: "What is new about the New Brutalism among Movements is that it finds its closest affinities, not in a past architectural style, but in peasant dwelling forms. It has nothing to do with craft. We see architecture as the direct result of a way of life"<sup>5</sup>.

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<sup>3</sup> J. Gola (ed.), *Jerzy Sołtan*, Wydawnictwo Akademii Sztuk Pięknych, Warszawa 1995, pp. 345–346.

<sup>4</sup> *Ibidem*, p. 346.

<sup>5</sup> T. Crosby, *The New Brutalism*, Architectural Design, January 1955, p. 1.

Young English architects discovered for themselves important values in traditional houses built for centuries in the British Isles. Vernacular buildings were, in their opinion, a perfect answer to the living conditions and needs of people who used them. They considered it extremely important. The New Brutalists stated that the future of the architecture belongs to simple, raw buildings that meet the users' requirements. This direction was confirmed during the exhibition "This is Tomorrow" organized in London in 1956. The exhibition served as the presentation how architects and artists see the immediate future. The Smithsons together with Eduardo Paolozzi and Nigel Henderson were the authors of an installation called "Patio and Pavilion". They reached to the roots of architecture – a primitive house and a yard around it – the two most basic elements of the space of human life. They concluded that these architectural rudiments will be still valid in the future, what was emphasized by both traditional (wood) and modern (plastic, aluminum) materials used in their installation. In both cases, these were unsophisticated, ordinary materials. Claude Lichtenstein wrote that the installation "showed the power of something immediate and ordinary"<sup>6</sup>.

Smithsons' first projects and buildings corresponded to this standpoint. As the main material, they used bricks, traditional English material. The influence of local architecture is particularly evident in Sugden House built in Watford in 1956 (Ill. 2). The building had a simple, almost archetypal form of a country house with a pitched roof. However, the composition of its facades was far from traditional rules. They were made of bricks of inferior grade – cracked and badly burned, and the arrangement of windows of various sizes and shapes was irregular.

In buildings of this type, one of the most important ideas of the New Brutalism appeared – As Found, as well as the principle of reinterpretation resulting from it. According to As Found, the value of the thing was hidden in itself. Therefore, you should not transform the thing in any way, or give it a meaning other than that which is inherent in its nature. In this connection, the New Brutalists did not modify the thing itself, but tried to change its relations with other things, with the man, with the reality. First, they rejected the accretions, then reached the core – basicity, and finally created new interactions. Anette Busse considered: "As Found meant taking something existing and reinterpreting in relation to reality"<sup>7</sup>. The Smithsons divided their design process into three stages, which they described as „picking up, turning over and putting with"<sup>8</sup>. This can be illustrated by their way of working on the Upper Lawn Pavilion in Fonthill Abbey (1961). First, they assessed the existing situation, analyzing the remains (foundations and fragments of walls) of the historic building. Then they reinterpreted it in relation to new needs, deciding to use the old structure. And as a result, they received a new object with significant preservation of the original artifacts.

The principle of reinterpreting traditional solutions and adapting them to the new situation is also visible in more complex projects of architects connected with the New Brutalism. The Smithsons presented their idea for a modern housing estate in 1952. One of the basic elements shaping the multi-family development of Golden Lane in London were galleries called "street decks". They appeared every third floor and connected all buildings. Street decks weren't just elements of pedestrian communication, but were also supposed to be the main space of social contacts. Banham wrote: „Street deck was intended to function socially and psychologically

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<sup>6</sup> C. Lichtenstein, T. Schregenberger (ed.), *As Found – The Discovery of the Ordinary*, Lars Müller Publishers, Zürich 2001, p. 13.

<sup>7</sup> A. Busse, *III – Was ist Brutalismus?*, Baumeister, April 2014, p. 93.

<sup>8</sup> A. Smithson, P. Smithson, *The „As Found” and the „Found”* [in:] D. Robbins (ed.), *The Independent Group: Postwar Britain and the Aesthetics of Plenty*, MIT Press, Cambridge 1990, p. 201.

in the manner of the street which – in working class areas in Britain – is the main public forum of communication, the traditional playground for children, and the only public space available for mass meetings and large-scale sociability”<sup>9</sup>. Street decks, together with flats available from them and staircases, were to create a system that would correspond to a traditional city (or housing estate), that is, main streets enclosed by houses and connected by cross streets. The standard, horizontal structure has been reinterpreted and replaced with a vertical one.

The implementation of the Smithsons’ assumptions from Golden Lane was Park Hill Estate in Sheffield designed by Jacek Lynn and Ivor Smith and built in 1957–1961 (Ill. 3). Street decks are always on the shady side of the building meandering at different angles, so they have to turn and penetrate through the building. In these places, the architects designed spaces analogous to traditional street corners with intimate squares. They were supposed to be zones of frequent meetings of residents, because from there they enter the staircases and elevators, and also throw garbage into the refuse chutes. Lynn and Smith claimed that in the aspect of neighbourly contacts, the opening of the chute is „the modern equivalent of the village pump”<sup>10</sup>.

#### 4. DUALISM OF BRUTALIST ARCHITECTURE

This dualism, based on references to the tradition in projects of modern buildings, noticeable already in the assumptions of the New Brutalism, became even more evident in the mature phase of the brutalist architecture. It should be noted that references to traditional architecture became more direct. They occurred not only at the level of reinterpretation of basic principles, but also at the level of transforming forms and elements.

In the brutalist architecture, the problem of architectural form was associated with the concept of “image”. It was considered that every building should evoke in people a suggestive, memorable image. It should be emphasized that the character of the process of creating this mental image was active, based on the interaction between man and object. The images were supposed to be connected with real things, so the buildings were supposed to evoke associations with objects known to the observer, expressive cultural symbols rooted in his mind. John MacArthur writes that in the brutalist architecture the image was “the re-cognition, the identification of what we already know, distinguished among other visual percepts”<sup>11</sup>. Thus, brutalist architects used images such as: a housing estate, a village, a castle, although they didn’t imitate historical forms.

Paul Rudolph emphasized that the original image of the housing estate for married students at Yale University in New Haven (1960–1961) was the structure of a traditional village<sup>12</sup> (Ill. 4). Jadwiga Sławińska, while writing about the housing estate in Preston, completed in 1962 according to the project of James Stirling and James Gowan, pointed to associations

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<sup>9</sup> R. Banham, *The New Brutalism: Ethic or Aesthetic?*, Reinhold Publishing Corporation, New York 1966, p. 42.

<sup>10</sup> *Ibidem*, p. 132.

<sup>11</sup> J. MacArthur, *Brutalism, Ugliness and the Picturesque Object* [in:] A. Leach, E. Petrovic (ed.), *Formulation Fabrication – The Architecture of History: Proceedings of the Seventeenth Annual Conference of the Society of Architectural Historians, Australia and New Zealand*, Society of Architectural Historians, Wellington 2000, p. 261.

<sup>12</sup> *Vide*: P. Rudolph, *Four current projects by Rudolph*, *Architectural Record*, March 1961, p. 141.

with the “poor working-class suburb”<sup>13</sup>. Many brutalist buildings presented the image related to fortified buildings, which was supported by the use of service towers, reminiscent of medieval keeps. These associations, established by tradition, resulted in humanization of brutalist architecture. They were supposed to make people perceive it as something familiar and identify with it.

Another important aspect of the brutalist architecture was the problem of the material and the way it was exposed. A fairly wide range of materials, including natural ones, was used, but the concrete was definitely the dominant material. It was commonly thought as a symbol of modernity. However, by brutalists it was used in the specific way – akin to traditional architecture. In the early buildings, it was primarily *béton brut* with an imprint of wooden formwork, not subjected to any treatment. Then, the concrete surfaces were aestheticized and even treated with a meticulous finish. It is, among others, hammering, a technique derived from traditional masonry. Regardless of the type of texture, for brutalist architects it was important that the result made us feel that the building is not the product of an anonymous machine, but the work of human hands. An important role, as in the vernacular architecture, was played by craftsmanship. It should be noted that it did not have to be perfect. Some clumsiness of workmanship, and even surface defects were often treated as appropriate feature.

The next most popular material was traditional brick. At the beginning, it was used as a filling between reinforced concrete structural elements. In the sixties, homogeneous brick facades that gave the effect of massiveness and defensiveness were introduced. A good example is the Larsen Hall Building at Harvard University in Cambridge near Boston, designed by Caudill, Rowlett, Scott and completed in 1965 (Ill. 5). Brutalist architects also used stone and wood. The use of these materials resulted from the interest in the vernacular architecture as well as from local conditions. Architects placed them most often as additions to exposed concrete, trying to keep their natural texture. Such wooden or stone applications were intended by the designers to soften the reception of avant-garde forms of buildings. An example of the use of wood is the complex of the Jonas Salk Research Institute in La Jolla, built in 1959–1965 according to the project of Louis I. Kahn. Concrete has been contrasted here with small oak planks placed around the windows. Joao Batista Vilanova Artigas, on the other hand, juxtaposed stone walls with *béton brut* texture at Casa Martirani built in Sao Paulo in 1969–1974 (Ill. 6).

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<sup>13</sup> J. Sławińska, *Ruchy protestu w architekturze współczesnej*, Oficyna Wydawnicza Politechniki Wrocławskiej, Wrocław 1995, p. 34.

- Ill. 1. Le Corbusier, Swiss Pavilion in International City University in Paris, 1930–1932; photo author
- Ill. 2. Alison and Peter Smithson, Sugden House in Watford, 1956; photo Joshua Abbott
- Ill. 3. Jack Lynn and Ivor Smith, Park Hill Estate in Sheffield, 1957–1961; photo Sarah Briggs Ramsey
- Ill. 4. Paul Rudolph, housing estate for married students at Yale University in New Haven, 1960–1961; photo author
- Ill. 5. Caudill, Rowlett, Scott, Larsen Hall at Harvard University in Cambridge near Boston, 1965; photo author
- Ill. 6. Joao Batista Vilanova Artigas, Casa Martirani in Sao Paulo, 1969–1974; photo Nelson Kon
- Ill. 7. Sachio Otani, Kyoto Kokusai Kaikan, 1963–1966; photo Steven Smith
- Ill. 8. Balkrishna Doshi, Centre for Environment and Planning Technology in Ahmedabad, 1968–1972; photo Aurobindo Ogra



## 5. REGIONAL CHARACTER OF THE BRUTALIST ARCHITECTURE

In contrast to the international, universal nature of functionalist architecture in the case of brutalist architecture, we can talk about its regional differentiation. At the core of this phenomenon was the fascination with traditional architecture and the idea of *As Found* based on taking into account the specificity and uniqueness of each place. Many architects attached great importance to the social, historical and geographical context as well as local materials and construction methods. As a result of such attitudes, differences between individual regions of the world or countries emerged clearly. Brutalism, despite the general aesthetic coherence, didn't become a unified style, but took on regional characteristics. Some designers combined motifs of native architecture with the language of brutalist forms and elements, creating an almost national style. In the case of other countries, the influence of the tradition was smaller, but local trends also developed there.

Examples of countries in which the brutalist architecture took on local flavour and developed specific forms and solutions that stand out against the background of the entire trend are Japan and India.

### 5.1. JAPAN

The country in which brutalism became a kind of national architecture was Japan. The reasons for this state of affairs lie primarily in the postwar pursuit of the Japanese to preserve their national identity while taking over the patterns from the Western world as well as in increasing significance of concrete in the architecture of this country. Concrete quickly became the most important material that allowed to connect the past with the present.

In Japanese brutalism, forms and solutions specific to traditional architecture were often used quite directly. Particularly characteristic was the fact that in many buildings made of reinforced concrete, the supporting structure imitated the layout, proportions and even shapes of wooden construction elements. An example is the Tsuyama Culture Center built in 1965 according to the project of Kohji Kawashima. The facades of the building are composed of overhanging floors with an exposed reinforced concrete structure. All its elements replicate the wooden poles, beams and corbels used in traditional Japanese temples. A very expressive form based on the transposition of a traditional wooden structure into the language of concrete brutalism was designed by Sachio Otani in the Kyoto Kokusai Kaikan Building built in 1963–1966 (Ill. 7).

Brutalist aesthetics were often used in buildings for local authorities. Several town halls were designed by the most famous Japanese architect connected with brutalism – Kenzo Tange. At the headquarters of the Kagawa Prefecture (1955–1958) references to historical architecture are clearly visible. Kenneth Frampton writes about the building that it is “a *béton brut* version of Daibutsu wooden style of the 12th century as we find this in the Todaiji precinct at Nara, which for Tange embodied the essence of Japanese national culture”<sup>14</sup>. In the works of Tange and other Japanese brutalists, the motif of the arch, characteristic of the traditional architecture of this country, also appears. Curvatures were used first in details and

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<sup>14</sup> K. Frampton, *The Evolution of 20th Century Architecture*, Springer Verlag, Wien – New York 2007, p. 98.

later in larger elements such as roofs. Tange's sports hall in Takamatsu from 1964 is actually a completely arched form.

## 5.2. INDIA

In the forms of brutalist buildings constructed in India, the impact of climatic conditions is visible. To the introduction of brutalism in this country Le Corbusier's buildings contributed. He used his own original set of elements, but also applied solutions corresponding to the hot climate of India. An example of this was the method of shaping the building structure in a way that supports its natural ventilation. In addition, Le Corbusier drew inspiration from the ancient architecture of the region. Frampton claimed that the umbrella roofs at Chandigarh are a reinterpreted solution from Fatehpur Sikri – the former capital of the Great Mughal<sup>15</sup>. William J.R. Curtis saw in the form of the Mill Owners' Association Building echo of a traditional, wooden and stone, architecture of the Gujarat Region<sup>16</sup>. Indian brutalism was also influenced by Kahn's buildings. His ideas and monumental forms constructed in Ahmedabad and Dacca (the capital of neighbouring Bangladesh) were reflected in the works of local architects who enriched them with native motifs.

The most important brutalist buildings are the works of such Indian architects as Charles Correa, Balkrishna Doshi and Achyut Kanvinde. Correa is the author of the Museum of Mahatma Gandhi (Gandhi Smarak Sangrahalaya) in Ahmedabad (1963), which modular structure refers to the scale and proportions of traditional buildings, and the massive reinforced concrete structure combined with ceramic roofs make "local imagery forestalls global abstraction"<sup>17</sup>. Doshi designed the Center for Environment and Planning Technology in Ahmedabad (1968–1972) combining brutalism with motifs taken from the Great Mughal tradition (Ill. 8). Kanvinde in his monumental buildings with expressive tower elements, such as the factory in Mehsana (1970–1973), evoked reminiscences of historical temples.

## 6. CONCLUSION

The considerations presented above confirm the significant role of tradition in shaping and developing the brutalist trend. Despite its avant-garde character and orientation towards innovative solutions, this trend didn't reject architectural heritage. It should be emphasized that in this respect the greatest impact on the ideas and buildings of the architects had vernacular architecture. This influence is visible in such aspects of the brutalist architecture as:

- searching for basicity – the timeless values and rules of architecture,
- regional diversity,
- principle of reinterpretation,
- rejection of universal solutions for unique ones,
- glorification of ordinariness,
- applying of images rooted in tradition,

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<sup>15</sup> Vide: K. Frampton, *Modern Architecture: A Critical History*, Thames and Hudson, London 1980, p. 228.

<sup>16</sup> Vide.: W.J.R. Curtis, *Modern Architecture Since 1900*, Phaidon Press Limited, London 1996, p. 426.

<sup>17</sup> A. Godel, *If Ducks Could Talk: Both-and Brutalism*, CLOG, February 2013 (vol. *Brutalism*), p. 85.

- inspirations from traditional forms – more or less direct,
- application of natural, raw materials,
- appreciation of craftsmanship and imperfectionism,
- responding to the way of life and the needs of users,
- creating spaces of neighbourly contacts.

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## References

- [1] Banham R., *The New Brutalism: Ethic or Aesthetic?*, Reinhold Publishing Corporation, New York 1966.
- [2] Busse A., *III – Was ist Brutalismus?*, Baumeister, April 2014, pp. 90–93.
- [3] Crosby T., *The New Brutalism*, Architectural Design, January 1955, p. 1.
- [4] Curtis W.J.R., *Modern Architecture Since 1900*, Phaidon Press Limited, London 1996.
- [5] Frampton K., *Modern Architecture: A Critical History*, Thames and Hudson, London 1980.
- [6] Frampton K., *The Evolution of 20th Century Architecture*, Springer Verlag, Wien – New York 2007.
- [7] Godel A., *If Ducks Could Talk: Both-and Brutalism*, CLOG, February 2013 (vol. *Brutalism*), pp. 84–85.
- [8] Gola J. (ed.), *Jerzy Soltan*, Wydawnictwo Akademii Sztuk Pięknych, Warszawa 1995.
- [9] Le Corbusier, *Towards a New Architecture*, BN Publishing, Lexington 2009.
- [10] Lichtenstein C., Schregenberger T. (ed.), *As Found – The Discovery of the Ordinary*, Lars Müller Publishers, Zürich 2001.
- [11] MacArthur J., *Brutalism, Ugliness and the Picturesque Object* [in:] A. Leach, E. Petrovic (ed.), *Formulation Fabrication – The Architecture of History: Proceedings of the Seventeenth Annual Conference of the Society of Architectural Historians, Australia and New Zealand*, Society of Architectural Historians, Wellington 2000, pp. 259–266.
- [12] Rudolph P., *Four current projects by Rudolph*, Architectural Record, March 1961, pp. 139–154.
- [13] Sławińska J., *Ruchy protestu w architekturze współczesnej*, Oficyna Wydawnicza Politechniki Wrocławskiej, Wrocław 1995.
- [14] Smithson A., Smithson P., *The „As Found” and the „Found”* [in:] D. Robbins (red.), *The Independent Group: Postwar Britain and the Aesthetics of Plenty*, MIT Press, Cambridge 1990, pp. 201–202.

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