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The work of Paul Rudolph in the context of the brutalist idea of As Found

Introduction

The idea of As Found played a significant role in forming the brutalist trend and in the first phase of its development. It was also one of the foundations of the New Brutalism doctrine. In subsequent phases of brutalism, the principles resulting from the idea of As Found were modified or even rejected. Paul Rudolph was the most important representative of brutalist architecture in the United States. His views, and especially his buildings, had such a strong impact that they influenced the development of this trend not only in this country, but all over the world.

The article presents research on the relationship between the work of Paul Rudolph and the architectural rules resulting from the idea of As Found. The aim of the study was to determine in which aspects these relations are consistent, and in which they are divergent or contradictory. The author analyzed what these discrepancies were and what factors influenced them. It was also important to determine how the impact of the idea of As Found changed in different phases of Rudolph’s work.

The state of research

The most important researcher of brutalist architecture was Reyner Banham. He was also a propagator of the New Brutalism doctrine. In particular, two of Banham’s publications are of fundamental importance – the article *The New Brutalism*, which appeared in “The Architectural Review” in December 1955 [1] and the book *The New Brutalism: Ethic or Aesthetic?* [2]. The considerations contained in the article concerned the beginnings of brutalist architecture and included, inter alia, its definition. The book was to a large extent their continuation and amplification. The precursors of the New Brutalism doctrine, Alison and Peter Smithson, were engaged in intense journalistic work. In the 1953 article *House in Soho, London* they used the term “New Brutalism” for the first time [3]. Another important book is *As Found: The Discovery of the Ordinary* published by Claude Lichtenstein and Thomas Schregenberger in 2001 [4]. The authors presented the idea of As Found as crucial for both brutalist architecture and avant-garde art.

When it comes to the buildings and ideas of Paul Rudolph, two books are the most important. The first is *The Architecture of Paul Rudolph* [5]. It was the first monographic collection of Rudolph’s works compiled by Sibyl Moholy-Nagy and annotated by Rudolph. The second book has the same title [6] and its author Timothy M. Rohan has devoted to Rudolph most of his career as an architecture researcher. Paul Rudolph published little. Instead, he gave lectures and interviews to architectural

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Rudolph and As Found

The idea of As Found was one of the foundations of brutalist architecture. To a large extent, it was derived from avant-garde art trends that developed after World War II. *Art autre*, *art brut* and *musique concrete* should be mentioned here, as well as the works of artists such as Jackson Pollock, Jean Dubuffet, Pierre Schaeffer, Eduardo Paolozzi and Nigel Henderson. All these artists stood from avant-garde art trends that developed after World War II. The idea of As Found was associated with the glorification of ordinariness. Prosaic, readily available materials were used. In post-war England, it was primarily

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1 The last two of those mentioned worked closely with the Smithsons.

2 They rejected the classic concept of beauty as an overriding aesthetic value in favor of the visual suggestibility of a work of art or a building.

3 For example, the Smithsons in the Upper Lawn Pavilion in Fonthill Abbey, Gottfried Böhm in the Godesberg Hotel in Bad Godesberg.
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brick. Therefore, the first buildings of the Smithsons and other proponents of New Brutalism were made of this material. They believed that regardless of the material used, it should only show what it really is. They rejected any imitations. We were concerned with the seeing of materials for what they were: the woodness of wood, the sandiness of sand [14, p. 201]. Building materials were directly exposed both in the façades and inside the buildings. No plasters or facings were used. The structure of the building was also exposed, and its components had sometimes even primitive shapes. The principle of sincerity also contributed to the exposition of technical elements and installations. The architectural forms were uncomplicated and devoid of sophisticated detail. The architects used a small number of solutions and elements, emphasizing simplicity and clarity.

Paul Rudolph obtained his architect diploma in 1947, so in the same period as the Smithsons. However, he started his design practice in a different reality than English architects of the younger generation. Great Britain, despite being one of the countries that won the war, struggled with many problems. War damage, the economic crisis, rationing goods and food contributed to the difficult living conditions of the society. This period is known as “British austerity” [15, p. 106]. The Smithsons were by necessity, although according to the idea of As Found, doomed to brick [16, p. 73]. Rudolph could choose from a wider range of building materials. And he did it, although it must be admitted that he opted for the ordinary ones. Wood, plywood and steel were the ones that dominated his first Florida vacation homes in the early 1950s. However, in the brutalist phase of his work, he definitely chose concrete.

Indeed, concrete was considered not a very sophisticated material in the United States at that time. Although, of course, it had already been used in the works of such masters of American architecture as Frank Lloyd Wright. Rudolph consistently exhibited concrete, both on the façades and in the interiors of his buildings. However, he quickly abandoned the ordinariness of concrete and began to treat it as an artistic material and use it in a way that differed from the idea of As Found. This was confirmed by the way of shaping the reinforced concrete structural elements. An example is the William B. Greeley Memorial Forestry Laboratory in New Haven, built between 1957 and 1959 (Fig. 1). The building has a rather modest form and small dimensions. Therefore, the pillars supporting the flat roof stand out even more. Their row is exposed in the entrance façade, but they are also visible in the single-space interior of the laboratory. The poles have the form of the letter “Y” and their shapes are rounded and flowing. They even evoke plant associations, which was emphasized by the American press, comparing them to a “concrete orchard” [17]. The pillars are prefabricated, thanks to which they have very precisely made details, surfaces and edges, as well as surprisingly small cross-sections. Also, the beams, which rest on the pillars, present sublime, curvilinear shapes. Rudolph treated the structure of the building as an ornament. Jerzy Sołtan, a supporter of the As Found idea, wrote: It is hard to imagine that reinforced concrete could be made to adopt more artificial, fancy, strange forms [18, p. 114].

It can be admitted, however, that the structure of the Greeley Laboratory is clearly exposed and is an inherent component of the building’s form. This is no longer the case in the subsequent Rudolph buildings. Structural elements are unnaturally enlarged, as in the Southeastern Massachusetts Technical Institute in Dartmouth (1963–1972) or subordinated to the plastic effect of the form. In some cases, Rudolph even distorted the actual structure of the building. An example is the Yale Art & Architecture
Building in New Haven, erected in 1958–1963 (Fig. 2). The supporting structure is made of massive reinforced concrete walls poured together with the floor slabs at the construction site. Although the structure is the monolithic whole, the architect decided to distinguish smooth horizontal stripes in the rough surfaces of the façades, imitating the position of beams and lintels. It was not a procedure consistent with the idea of As Found, but only the introduction of a compositional contrast to the vertical blocks dominating the façades. An even more striking example of imitation is the Yale Married Student Housing Estate built in New Haven in 1960–1961 (Fig. 3). Rudolph designed here not only imitations of reinforced concrete structural beams, but also false load-bearing walls [6, pp. 76–79]. The brick walls forming the façades are only a cover for a real wooden construction system (traditional wood stud wall). Even Banham was deceived by this solution. After all, in his book *The New Brutalism: Ethic or Aesthetic?* he placed this building as an example of the practical use of this doctrine [2, pp. 164, 165]. And it was the only work of Rudolph presented in the book.

When it comes to exposing technical elements and installations, Rudolph argued in the 1950s, in line with the As Found idea, that they could become important elements of architectural forms. He put it into practice in the Blue Cross – Blue Shield Building in Boston, erected in the years 1957–1960. The prefabricated concrete elements forming the façades of the building are in fact the ducts for heating and air conditioning (Fig. 4). Later in his work, Rudolph definitely abandoned the exposition of technical elements, and he consistently hid cables and pipes both on the façades and in the interiors. Examples are the thick internal columns in the Art & Architecture Building, which, in addition to being load-bearing, also house installations inside.

**Sincerity**

According to the idea of As Found, materials were exposed in an sincere and direct manner. This meant that surfaces of a building and its elements remained raw. The textures were not finished in any way. Poorly made brick walls had crooked joints, and *béton brut* textures showed
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completed in 1971 (Fig. 6), of deeply textured, prefabricated concrete blocks.

As a result of mechanical surface treatment, the internal structure of concrete was exposed – the color of cement, aggregate granulation. Just as Paolozzi’s sculptures appeared to be a study of the properties of a material [22, p. 63], some of Rudolph’s buildings can be seen as studies of the properties of concrete. Rudolph appreciated hammered concrete also for the fact that it concealed discoloration and dirt resulting from the passage of time [23, p. 300]. It should be emphasized, however, that concrete hammering effectively hid marks of formwork and traces of the way the building was poured. It was therefore a contradiction to the idea of As Found. However, Rudolph wanted the textures of his buildings to be expressive and sensual. And it must be admitted that he achieved exceptional results in this respect. Some surfaces are so intriguing, but also rough and sharp that, according to Rohan, they seem to both encourage and warn: Come close to me, but not too close [24, p. 100].

Objectivity

The idea of As Found imposed the imperative of being objective in relation to reality. The architects were also to perceive each design task in a holistic way, analyzing all aspects of the context (not only spatial). The idea of As Found contributed to the search for specific features of the place and taking into account the existing conditions in the project. Thanks to it, regional themes appeared in brutalism – references to the climate, culture, way of life and local architectural tradition. Some architects even decided to transform historical forms and elements.

Rudolph did not agree to the role of a passive resonator of reality. He took definitely a subjective attitude.
He described himself as an architect-artist who creates very personal works, but at the same time fulfills his duty to society. This type of heroic attitude resulted largely from the tradition of American architecture. Rudolph rejected external factors that might hinder his creativity. He emphasized that [...] architecture is an infinite possibility, a free and indestructible art (after: [10, p. 521]). In fact, Rudolph’s design process can hardly be described as discursive, which was characteristic of architects following the idea of As Found. It was definitely emotional, largely based on intuition.

After the first years of working in the profession of an architect (cooperation with Ralph Twitchell), he decided that an architect should work independently [5, p. 11]. Although Walter Gropius instilled in him a teamwork ethos during his studies at Harvard, Rudolph stated that: Architects were not meant to design together; it’s either all his work, or mine (after: [25, p. 175]). This extreme individualism will accompany him until the last years of his activity.

Rudolph also rejected a holistic approach to the design task. He assumed that it was impossible to objectively assess and solve all problems resulting from the existing conditions. While designing, Rudolph focused solely on solving the issues he had chosen. Usually, he prioritized those that made the form more attractive. It should be mentioned that such an attitude was not only inconsistent with the idea of As Found, but also contributed to some shortcomings of his buildings, mainly of a functional nature. Sołtan criticized the Jewett Arts Center at Wellesley College (1955–1958): Even Corbusian sun breakers are on the north side of the building. What for? To ensure the light vibrates on the façade. What was lost? All the logic and poetry of the solution. If Le Corbusier’s contribution to the development of detail in the architecture of the twentieth century was, inter alia, inventing the sun breaker, the contribution of P. Rudolph will be the use of this element on the northern elevation – where the sun never reaches [18, p. 114].

On the other hand, from the idea of As Found came Rudolph’s search for the foundations of architecture – its everlasting, eternal principles. The New Brutalists and Le Corbusier tried to find them in vernacular architecture and use them in their works. Also, according to Rudolph, modern architecture should grow [...] not like a branch from a tree trunk, but like a new plant, straight from the roots (after: [10, p. 515]). That is why, in search of inspiration, he turned to historical architecture [20, p. 7]. He was also disappointed that modernism rejected the notion of regionalism and tried to restore it in his works [5, p. 10].

It should be emphasized that Rudolph, as the Dean of the School of Architecture at Yale University, initiated a discussion on the issues of context among American architects. His buildings confirm that he also thoroughly analyzed this problem himself. The forms from the 2nd half of the 1950s show direct references to the neighbouring buildings. In the Jewett Arts Center, he used elements and solutions inspired by the nearby Gothic collegiate church. At Blue Cross – Blue Shield Building, he rejected the idea of a glass curtain wall, characteristic of office buildings, in favor of massive façades composed of concrete columns and pilasters. In this way, it achieved an effect similar to the aesthetics of the stone façades of the neighbouring historical buildings. Rudolph used more processed, or reinterpreted (according to the terminology of New Brutalism) solutions taken from historical architecture at the height of his brutalist style. Nevertheless, in the form of the Boston Government Service Center (1966–1971) a reminiscence of columns carrying a monstrous cornice can be seen (Fig. 7). The complex is also important because its wings form frontages that show the layout of historic Boston streets in a place where the old buildings have been completely demolished. However, it cannot be ignored that when Rudolph found the neighbour-
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Hood unattractive or chaotic, he did not hesitate to introduce the dominant building. In such a situation, he chose the principle of [...] a contrasting element in the anonymous townscape [5, p. 123]. An example is the dramatic corner form of the Art & Architecture Building (Fig. 8).

**Uniqueness**

The idea of As Found involved an objective assessment of the conditions of each project task in all its complexity. As these conditions were always unique, each building had to be an individual, original design response. Banham wrote in this context about [...] the unique solution in an unique situation [2, p. 72]. The uniqueness of the design solutions resulted from the fact that architects treated the existing situation as found, simply as a found object. In this way, the architects guided by the idea of As Found opposed the uniformity that characterizes the International Style.

Rudolph also criticized the International Style, but he did so for slightly different reasons. Above all, he condemned the monotony and uniformity of forms. In one of his articles published in 1954, he wrote that [...] modern
architecture’s range of expression is today from A to B [7, p. 120]. He was looking for a remedy for this not in objectivism, but in subjectivism, the individualism of an architect-artist who creates a form in an almost intuitive way. Gerhard Kallmann (author of the brutalist city hall in Boston) compared this way of designing to Jackson Pollock’s spontaneous painting called “action painting”. Kallmann called this architectural method “action architecture” [26, p. 134].

Rudolph began to design increasingly expressive and dramatized forms. Their uniqueness resulted from a subjective creative assumption, and not from the objectivity of the idea of As Found. Simple compositions were replaced with more complex ones. In the 1960s, they became almost bombastic. At the end of that decade, Rudolph introduced additional solutions to his projects to increase their dynamics. An example is the Brydges Library Building in Niagara Falls, erected in 1969–1970 (Fig. 9). Vertical and oblique planes, sharp edges of solids and abrupt juxtaposition of elements evoke associations with the expression of deconstructive forms of buildings. The principle of clarity and consistency of forms found its contradiction here. The only thing that binds the form of this building together is the ubiquitous concrete. Instead of clarity, we find mysteries and surprises in many of Rudolph’s brutalist buildings. In complex façades, it is difficult to find entrances to buildings, and vertical service towers do not contain staircases at all. In the interiors, users can get lost, and hanging galleries and rough surfaces make them feel threatened [20, p. 8].

Rudolph was guided by emotions – his own and those he wanted to arouse in the users of architecture. These were supposed to be positive emotions and he treated their evoking as an architect’s obligation towards society. Rudolph tried to stimulate Americans to action, to increase their creativity through the forms of buildings, which were works of art most related to everyday life. The dramatic and monumental buildings were also meant to evoke their sense of community. Thus, Rudolph’s architecture met the political demands of the Cold War. Therefore, since his buildings were a direct response to the conditions and situation of the time, they can be considered compatible in this respect with the idea of As Found. It should be noted that the monumentalization of forms concerned not only prestigious buildings but also more prosaic objects, e.g., residential buildings.

Summary and conclusions

The conducted research contributed to broadening the knowledge about both the work of Paul Rudolph and the brutalist architecture of which he was a leading representative.

The research confirmed the thesis that the impact of the As Found idea on the work of Paul Rudolph was evident. Especially in the 1950s, the American architect relied on the principles of As Found in many respects. At the turn of the 1950s and 1960s, however, he began to depart from them. The reasons for this were, above all, the individualism of Rudolph, the rejection of rational design methods and the unbridled striving to dramatize forms. Many architectural solutions and aesthetic effects, which he used at the height of the brutalist phase of his work, contradict the idea of As Found.

An important result of the research is the identification of the detailed relations between the work of Paul Rudolph and the principles resulting from the idea of As Found. The characteristic features of Rudolph’s work are
presented below, grouped into three categories: full or very high compliance with the As Found (1), low compliance (2), clear inconsistency with this idea (3).

1) Compliance with the As Found idea:
– the use of ordinary materials,
– exposing materials without cladding and plaster,
– striving for rough and sensual textures,
– the use of béton brut texture,
– searching for the basics of architecture,
– reinterpretation of solutions and historical elements,
– treating architecture as art,
– stimulating the user’s emotions,
– emphasizing the social role of architecture.

2) Low compliance or discrepancy with the As Found idea:
– both exposing and hiding the structure,
– both exposing or hiding technical elements,
– the use of corrugated concrete texture,
– striving for unique forms.

3) Denial of the As Found Idea:
– the use of imitations,
– sophisticated shapes of construction elements,
– the use of bush hammerd concrete texture,
– hiding the method of erecting the building by hammering concrete,
– subjectivity,
– selective approach to design problems,
– the intuitive way of designing,
– individualism,
– complexity of forms,
– extreme expression of forms,
– confusing and surprising solutions.

My research into the work of Paul Rudolph can help to understand why brutalist architecture took a different course than assumed by the creators of the idea of As Found and the doctrine of New Brutalism. However, to fully explain this problem, further research on the works of other architects important for this trend should be conducted.

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References

Abstract

The work of Paul Rudolph in the context of the brutalist idea of As Found

Paul Rudolph was one of the most important representatives of brutalist architecture and played a significant role in introducing this trend to the United States in the 1950s. One of the foundations of brutalist architecture was the New Brutalism doctrine developed by Alison and Peter Smithson. The idea of As Found was closely related to this doctrine. Knowledge of the impact of the As Found idea on Rudolph’s views and projects is insufficient and requires deepening. Therefore, the main aim of the research presented in this article was to define the relationship between the work of the American architect and the principles resulting from the idea of As Found. The nature of the research problems determined the use of the method of historical and interpretative studies, which employed, inter alia, an analysis of the literature and a comparative analysis of buildings. On-site studies of Rudolph’s work in New Haven, Boston and Niagara Falls were of great importance. It was determined that the relationship between Rudolph’s work and the idea of As Found was consistent in such aspects as the use of ordinary materials, exposing materials without cladding and plaster, striving for rough textures, reinterpreting historical solutions and elements, and stimulating emotions of users. On the other hand, discrepancies appeared regarding the role of structural and technical elements in shaping buildings and striving for the uniqueness of forms. Completely inconsistent with the idea of As Found were: the intuitive design method, the use of confusing and surprising solutions, extreme expression of forms, and imitations. The conducted research may be helpful in understanding why brutalist architecture took a different course than assumed by the creators of the idea of As Found and the doctrine of New Brutalism.

Key words: Paul Rudolph, brutalist architecture, idea of As Found

Streszczenie

Twórczość Paula Rudolpha w kontekście brutalistycznej idei As Found

Paul Rudolph był jednym z najważniejszych przedstawicieli architektury brutalistycznej i odegrał znaczącą rolę we wprowadzaniu tego nurtu do Stanów Zjednoczonych w latach 50. minionego stulecia. U podstaw architektury brutalistycznej leżała doktryna Nowego Brutalizmu opracowana przez Alison i Petera Smithsonów i powiązana z nią idea As Found. Wiedza dotycząca wpływu idei As Found na poglądy i projekty Rudolpha jest niewystarczająca i wymaga pogłębiania. Dlatego też głównym celem badań przedstawionych w tym artykule było określenie relacji pomiędzy twórczością amerykańskiego architekta a zasadami wynikającymi z idei As Found. Charakter problemu badawczego zdecydował o zastosowaniu metody badań historyczno-interpretacyjnych, w której wykorzystano m.in. analizę i krytykę piśmiennictwa oraz analizy porównawcze budynków. Duże znaczenie miały badania dzieł Rudolpha przeprowadzone in situ w New Haven, Bostone i Niagara Falls. Ustalono, że relacje między twórczością Rudolpha a ideą As Found były spójne w takich aspektach, jak stosowanie zwyczajnych tworzyw, eksponowanie materiałów bez okładzin i tynku, dążenie do chropowatych faktur, przetwarzanie rozwiązań i elementów historycznych, pobudzanie emocji użytkownika. Rozbieżności pojawiły się natomiast w kwestiach dotyczących roli elementów konstrukcyjnych i technicznych w kształtowaniu budynków, a także dążenia do unikalności form. Całkowicie niezgodne z ideą As Found były działania imitacyjne, intuicyjny sposób projektowania, stosowanie zagadkowych i zaskakujących rozwiązań oraz skrajna ekspresja form. Zaprezentowane badania mogą okazać się pomocne w zrozumieniu, dlaczego architektura brutalistyczna podążyła w innym kierunku, niż zakładali twórcy idei As Found i doktryny Nowego Brutalizmu.

Słowa kluczowe: Paul Rudolph, architektura brutalistyczna, idea As Found