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## **FORM AND SPACE ABSTRACTION IN ARCHITECTURAL REHABILITATION OF INDUSTRIAL BUILDINGS**

BY

**RADU ANDREI**

**Abstract.** In classical art, form was considered to be reproduced in the most faithful way, representing a naturalistic reality. On the other hand, contemporary art strive to achieve its value by abstraction, and by intelectual and psychological approach. Corresponding to contextual art, the architectural rehabilitation of industrial buildings opens new paths towards form and space abstracting.

**Key words:** architectural rehabilitation; form; abstracting; industrial buildings.

### **1. Introduction**

Our evolution as human beings, either of material or spiritual nature, is based on the experiences we have in relation to outside world. In this interaction, the first element setting the connection between the two aspects is our capacity to conceive, through feelings, the conditions of outside environment. Without this perception, man can not reason, can not make valuable judgments or can not interpret a certain message – either of rough – physiological or subtle nature.

### **2. The Balance between Clarity and Abstractly in Architecture**

The matter around us is the environment through which the idea is transmitted. The phenomenon is alike in art. Without having a perception

object, the aesthetical experience does not take place in abstract. The modern art developed towards an abstractization pushed in the extreme.

At the exhibition of Timothy Binkley in 1969 at the Amsterdam Art and Project Gallery, the artist informed the manager of the hired space to lock it and to post the announcement. “For the period of exhibition, the galleries will be closed”. However, we can not know if the author did it as an artist or from the perspective of a critic. We can draw the common sense conclusion that the abstraction in pure state can not aspire to the art concept, being only speculation – that do not need artistic talent.

One could be tempted to consider that, in art, the relation between matter and abstraction is of inversely proportionality through the opposition between *mundus sensibilis* and *mundus inteligibilis*, as Plato names the world of senses and the spiritual one of ideas. But is not like that. According to the Theory of Media, [1], the aesthetical elements depend in some way on the non-aesthetical elements; therefore they depend on the medium they were created in. But this medium is not a simple material, but a system of conventions delimiting the domain in which the physical elements and aesthetical qualities are related.

In other words, the value of the artwork consists in the “significant form”, [2]. If this element is not present in the work, the art becomes descriptive, says Clive Bell, and has only a historical value, not artistic. “The art conveys us from the world of human activity in a world of aesthetical exaltation. For one moment, we are disconnected from human concerns; our anticipation and memories are stopped. We are raised above the life whirl”.

Hence, the artwork means more than we perceive with our sense, it is a way by which we contact the essence of human being, beyond the reasoning and physiological aspects.

Hans Georg Gadamer consider that the artwork is not fair to be proposed to a consumer, in view of a pleasure deprived of obligations. The artist wants to provoke, to irritate and many of them start their work only as a kind of proposal, inviting the others to enter in a continuing, post-figurative activity.

We shall try to apply all these principles in theorizing the industrial architecture rehabilitation through analysing the space as a creative resource. Firstly, the space is a subtle quality of architecture that can be perceived only by physical elements which delimit it – walls, floors, volumes, etc. As the form has less significance and involves less interpretation liberty, the architecture is limiting towards the physical frame, becoming more of a machine and approaching to “the descriptive art”. It can have documentary historical value, but, in order its significance not to stop here, it should aspire to the status of authentic art. But the aesthetical experience is conditioned by perception, by the world of senses.

Cosmin C a c i u c, in an article on industrial decommissioning [3], brings Martin Heidegger into discussion who “reminded us in Being and in time that we, the humans, lost almost entirely the ability to feel. The five

fundamental senses were anaesthetized by the effect of various technological extensions. The industrial site, opposed to the industrial area, arouses by “trailing” with all the sense awakened, similar in some way to wild animals that “feel” danger. This type of thinking is named by Martin Heidegger *Besinnung* (“meditative thinking”).

The architect Cosmin Caciuc considers that “the type of computing knowledge is constituted of fragments of iceberg, taken out from a hypothetical Pangaea of the rationality, chaotically floating on an ocean of meditative knowledge. The revelation produced by the functional death of an industrial building or the decommissioning of a technological device, is equivalent to a spontaneous melting process of the iceberg and of the returning of its substance into the ocean that made it. Only the aggregation state separates the reason from irrational because, in fact, the “substance” of knowledge is the same: the phenomenological essence. The iceberg offers us the illusion of a *terra ferma* to step on and to move in knowledge. What matters is the submersed part of the ice or, better said, the potential of “reversed rationality”, of the rational totally immersed in irrational”.

Therefore, the rehabilitation of an industrial building consists in fact of shattering the illusion of progress and reintegration of space in nature. The building becomes by itself after the extinct of its utilitarian function and of its initial logic, as a natural form, a relief form delimiting the building space.

The industry and techniques, as Martin Heidegger estimates [4], are in an opposite position with Nature, being a relation of domination. The industry is the means by which the man requests resources from the natural environment, without giving back anything. The circuit of the elements in nature, by which it regenerates itself, is interrupted and an imbalance is created. In this way, a vicious circle is created through which the man is losing the link with nature, the force that created him, but because he is a component part of this system, he loses the link with himself.

This discontinuity, as a consequence of the dominating relation, can be read also at the spatial and compositional level of the industrial architecture. The spaces are closed towards inside. The building should respond to the needs of technological flow, its utility being the dominating quality and that determining the space organization.

But when it is desirable to carry out a readapting of these spaces for social functions, the first thing to be considered is surpassing this pure physical stage. The space should be redefined in order to offer an attestation of the remaking of continuity between man and nature, between man and himself. The space should become a work of art. And “the accomplished work of art is always a successful attempt to reunite of what is disjointed presented” – in our case man/nature and industrial space.

Although the matter and the abstract are not in a relation of inversed proportionality, the excess matter leads to exaggeration of the descriptive side of an object, therefore in order to get a detachment effect from physical side,

from spiritualization (characteristic and necessary to man by its nature), the form should gain on the “significance” side.

An “opening” should be made inviting to a “continuing, post-figurative activity” as Hans Georg Gadamer suggested.

In the many cases of industrial space rehabilitation, the architects, in order to get this approach to human side needing aesthetical experiences, look for dematerializing the architecture, to recreate or reestablish the connection between man–nature/his nature.

a) A project that reveals a kind of paradigm of mentality changes recorded in the 20th century art presentation, is that of the architects Herzog & de Meuron of Tate Gallery of Modern Art, Bankside, London (Fig. 1).

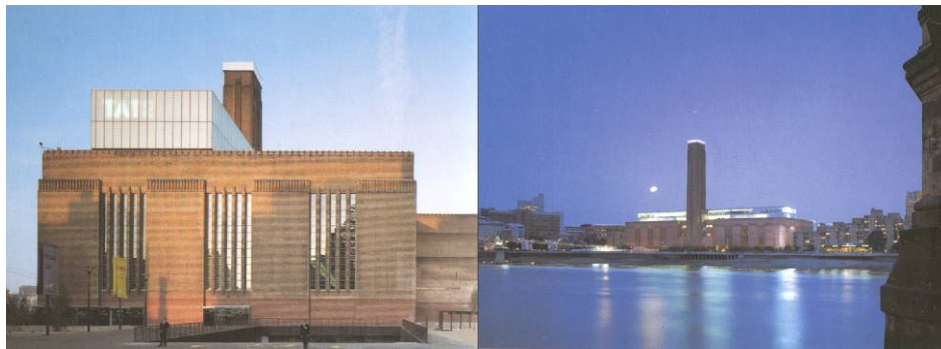


Fig. 1 – Tate Gallery of Modern Art, Bankside, London.

A former electric power station, the building is, by its features, by its position and by the specific of its activity, an enclave hard to integrate in the urban texture. With a steel and alloy structure, with numerous details, with a brick façade, the conversion should preserve the data of the original and in the same time to adapt to the requirements of a museum of such complexity: different lighting conditions, access facilitation to visitors in order to form their own route, rooms of various dimensions depending on the types of works to be exhibited, rooms for video art and mixed media, etc. The central hall (of the turbine), the most important space of the building, was transformed in a place to exhibit sculpture or for performance type actions, etc.; in the central area, three rooms were grouped, provided with many entries and exits, for free access of visitors; in the northern part, new walls and roofs were created in order to provide natural lighting.

All these started from the premise that the architecture should serve as an instrument, as a stimulus in displaying and receiving the work of art (for as much in the case of contemporary art works where any transfer of significances is equally easy and risky) and not as a restriction.

In this case, the architects choose for dematerialization of the construction not through physical fragmentation of the masonry massive crust, but with the help of an optical illusion: the extension at the roof level of a light

colour passes through the whole length of the construction and is integrally lighted by night, and by its reflection in the River Thames. The light framing thus the weight of the former power station, creates the illusion of reducing the masonry compact mass.

b) In Fig. 2 is represented the Contemporary Temporary Museum, Los Angeles, USA (Architect Frank O. Gehry).



Fig. 2 – Contemporary Temporary Museum, Los Angeles, USA.

The suggested ensemble for conversion was made of a storage room, a former garage and a car service station.

The most visible architectural intervention is the pergola carried out of metallic structure that Gehry considered vital for getting out of anonymity of the building and rediscovering an identity. This element is the one contributing to the dematerialization in the building perception. The pergola is the one that offer the illusion of an uncertain limit of construction; it is a transparent intermediary space preceding the massiveness of the industrial building. The intervention extends the indoor space towards outdoor, achieving a continuity of the route.

The indoor space offers a complete flexibility contrasting the apparent outdoor rigidity, the only partitions being suspended by the roof structure and being able to be changed depending on the needs.

The Museum was closed in 1992 because of economical reasons and reopened in 1995 – being transformed – by the architect – in destinations for education.

A new volume was added in order to shelter the reading room and the coffeehouse.

c) In Fig. 3 sugar factory conversion – Eridania Paganini Auditorium (Architect Renzo Piano) – is represented.

The conversion of the sugar factory into an auditorium was possible due to an ideal series of factors: the main body of factory, accommodating the main functions of the auditorium (lounge, hall and stage) observes the basic criteria of acoustic proportions and the surrounding park simplifies the potential problems of sound insulation.

The solution proposes the elimination of the transverse side walls of the factory and their replacement with two walls – glass curtain with a total opening of over 90 m, discovering a panoramic perspective towards the park.



Fig. 3 – Sugar factory conversion – Eridania Paganini Auditorium.

The formal, as well as the functional composition is organized along the new light axis, which unites the interior spaces with the exterior.



The transparent background of the stage offers a vivid visual sight and creates a light contrast but also between the massiveness of old building crust and the transparency and the continuous changing of the landscape depending on the day time or season.

In Fig. 4 conversion of factory from Ennetbaden – Switzerland was represented. The building that was the object of this conversion belongs to an industrial complex from the 20th century located on the river banks.

The building has 7 partitions, is 35 m long, 17 m wide and 5 m high. The apartments are simple but a special attention was paid to the details. The indoor space is one of sculptural nature in which new objects were placed as in a museum. In this way, the space materiality is diminished by the apparent mobility of elements that break it up.

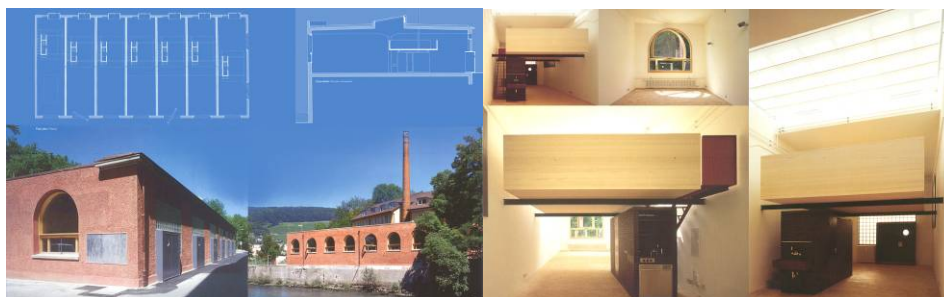


Fig. 4 – Conversion of factory from Ennetbaden – Switzerland

The first object is the split level – detached from the side walls and placed on two H metallic beams – painted in blue. The split level has a solid rampant of the same material with the floor that creates the image of a compact and massive box. The second object is the sanitary unit – a module including a small kitchen and a sanitary group. This differentiates from the rest of the setting by the colour and texture of dark bricks, creating, like in the case of the split level, an illusion of object mobility. In this way, the indoor space becomes like a free gallery where the furniture objects are placed.

The third element is the staircase – located between the sanitary unit and the wall – that by its transparency underlines the detachment of the new intervention. The staircase is not tectonically connected to existing walls, leaving the tangential light given by the roof skylight to flow along the walls.

The architect breaks the symmetry of the entrance façade in order to contrast with the opposing façade from the water, creating a solid/empty play perceptible also from inside and outside. This new language brings another rhythm and enriches the aesthetical language of the façade.

d) The gasometer is represented in Fig. 5. The building, a former furnace in Ruhr area, is not one of the most unusual places of exhibition in Europe. The huge metal room offers the experience of an echo with 7...8 periods, and the dome covering the space offers a light play revealing the space

in its entire splendor, creating a kaleidoscopic, immaterial image, contrasting with the massiveness and the rejection of the external form.

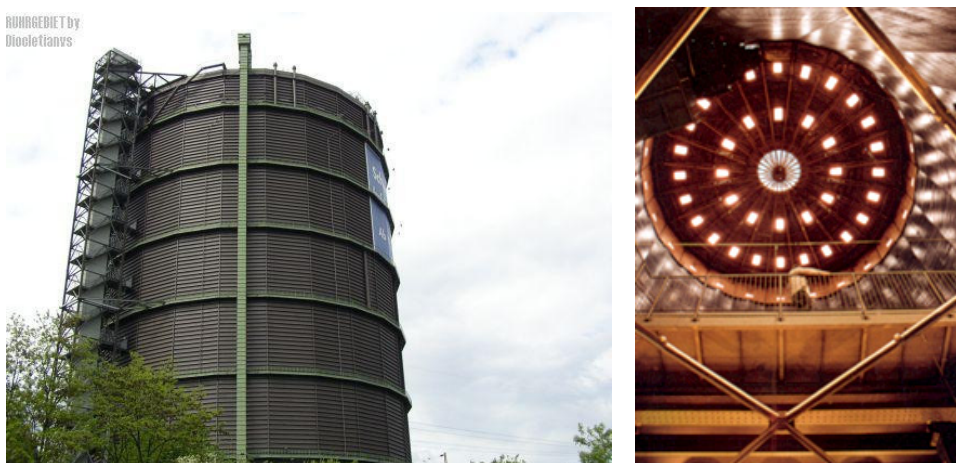


Fig. 5 – Gasometer – Ruhr area.

#### 4. Conclusions

The abstracting of form and space can play a therapeutic role in the rehabilitation of architecture and society, because only through dematerialization of matter, in the sense of “spiritualization”, one can find the fertile ground for evolution, without losing the contact with solid history. This is a challenge for the creative and artistic side of architect, who is called to “open” the rigid box and enable multiple interpretation of the object.

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„Gheorghe Asachi” Technical University of Iași,  
Department of Architecture  
e-mail: and3@yahoo.com

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ABSTRACTIZAREA FORMEI ȘI SPAȚIULUI ÎN REABILITAREA  
CLĂDIRILOR INDUSTRIALE

(Rezumat)

În arta clasică, forma trebuia reprodusă cât mai fidel, într-un mod naturalist. Artă contemporană, însă, își caută valoarea prin abstractizare, printr-o abordare intelectuală și psihologică. Împărțind din punct de vedere compozițional aceleași principii cu arta contextuală, reabilitarea arhitecturală deschide noi căi de abstractizare a formei și spațiului.