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AUTHENTICITY AND FALSEHOOD OF MATTER – TWO FACES OF THE AESTHETICS OF CONCRETE IN CONTEMPORARY ARCHITECTURE

AUTENTYZM I FAŁSZ MATERII – DWA OBLICZA ESTETYKI BETONU WE WSPÓŁCZESNEJ ARCHITEKTURZE

Abstract

Modern technology favours the falsification of the truth about the material that forms the physical form of a work of architecture. The common aesthetics of material imitations leads to a loss of the sense of authenticity of the building. The text aims to show the differences in the perception of the nature of concrete – the artificial one, which is a carrier of falsehood, imitating other materials, and the authentic one, based on the aesthetic identity of concrete developed by the creators. The fact that the materialization of form is most justified only when the technology of building things results directly from the combination of constructional and aesthetic properties of a given material was once obvious. Today we live in the ‘insincere’ reality and material fiction of the built world. An excellent carrier of both these phenomena in architecture may turn out to be a universal material which is concrete. The analysis of the collected material leads to conclusions reflecting the crisis of aesthetic authenticity of the nature of the matter in the contemporary world of architecture and indicates the remedies.

Keywords: authenticity of matter, falsehood of matter, sincerity of matter, aesthetics of concrete, concrete architecture

Streszczenie

Współczesne technologie sprzyjają fałszowaniu prawdy o materiale tworzącym fizyczną postać dzieła. Powszechna estetyka imitacji materiałowych prowadzi do utraty poczucia autentyczności budowli. Celem tekstu jest ukazanie różnic w postrzeganiu natury betonu – tej sztucznej, będącej nośnikiem fałszu, imitującej inne materiały, oraz tej autentycznej, opartej na wypracowanej przez twórców estetycznej tożsamości betonu. To, że materializacja formy jest najbardziej uzasadniona tylko wtedy, gdy technologia budowania rzeczy wynika wprost z łączenia własności konstrukcyjnych i estetycznych danego materiału, było kiedyś oczywistością. Dziś żyjemy w „nieszczerej” rzeczywistości i materiałowej fikcji świata zbudowanego. Doskonałym nośnikiem obu tych zjawisk w architekturze może okazać się uniwersalny materiał, jakim jest beton. Analiza zebranych materiałów prowadzi do wniosków obrazujących kryzys autentyczności estetycznej natury materii w dzisiejszym świecie architektury i wskazuje na środki zaradcze.

Słowa kluczowe: autentyzm materii, fałsz materii, szczerłość materii, estetyka betonu, architektura betonowa

1. INTRODUCTION

Contemporary architecture is accompanied by a kind of aesthetic dualism which is responsible for the creators' use of the diverse nature of matter to give specific expression to the form of the building. It is based on the ethics of using true or false aesthetics of materials. The true aesthetics exposes the authentic plastic qualities of the material. Its use in architecture combines constructional properties with aesthetic values resulting directly from its nature. It is then that we speak of the principle of 'sincerity of material'. In turn, the false aesthetics of matter usually uses some materials to create visual imitations of others, thus deceiving the viewer. Such 'insincere' matter may then participate in the 'great lie of art', but in a way that is stripped of the sense of authenticity that comes from the need to reproduce the form of the work in the matter proper only for it. Against this background, concrete gains in importance, proving over the last century that it has its own, original and distinctive aesthetic identity, resulting from the principles of its use in avant-garde works of architectural art. These principles have been developed by artists, sculptors, architects – all those who have recognized the potential of this matter and have consciously shown it in their projects and realizations. This would not have happened without the support of engineers, material scientists, technologists, but the overriding value was the goal of a work of art. Today there are two basic faces of concrete aesthetics that are developing alongside each other. That is the authentic one – based on the sincerity of using the monolithic nature of concrete. There is also a falsified face, consisting of rendering the aesthetics and textures imitating the character of other materials in a concrete imprint. Both these faces are commonly accepted today in the world of art – the serious, monumentally pathetic one, as well as the ironic, humorous one, drawing the audience into the illusion of impressions of constructed forms or the happiness of kitsch. This makes concrete a universal material, which fits into the aesthetic pluralism of creative doctrines of our times, where the anonymity of globalism naturally promotes the need to see originality as a guarantee of media success of the building. When, then, can a given material be considered as desirable and noble in architecture? The answer comes to the fore – when there are imitations of it, created with the use of other materials. After many decades of use, this happens to concrete. Today, there are plasters that pretend to be fair-faced concrete, terracotta that reproduces the colour and pattern of concrete, various imitations of concrete aesthetics are created in the form of panels, plastics, prints or even paints, through which one can achieve the effect of 'artificial', not necessarily cheaper, concrete on the wall. Not without a reason, this material is also considered by many to be a 'stone of the modern times', i.e. a noble material used for the realization of the physical form of avant-garde and culturally significant works of architectural art. During his speech given after the completion of the *Unite d'Habitation* in Marseille, Le Corbusier himself noted that: "It seems to be really possible to consider concrete as a reconstructed stone, worthy of being exposed in its natural state."¹

2. AESTHETICS OF CONCRETE IN THE ERA OF PLURALISM OF CREATIVE ATTITUDES

The architectural form has always been accompanied by the aesthetics of the matter in which it was realized. Steen E. Rasmussen claims that "even the noblest materials lose their

¹ [After:] S. Giedion, *Przestrzeń, czas i architektura*, PWN, Warszawa 1968, p. 573.

character when employed without skill and understanding.”² These words gain importance in the context of the use of visual aspects of concrete, bearing in mind its aesthetic evolution in the last century – from the inferior material of purely structural and utilitarian value to the sophisticated and noble material of contemporary times. Not without a reason, the book *Experiencing Architecture* refers to an appeal by the Danish architect P.V. Jansen-Klint about the materials, addressed to the students in 1919, which was summed up by the following statement: “(...) and if ferro-concrete becomes a building material do not rest until a new style is found for it.”³ Rasmussen claims that unlike the concept of void, the “building material is the medium of architecture”⁴ in the concept of creating structural forms. In turn, one of the leading and recognized contemporary creators – Rem Koolhaas – describes reinforced concrete as ‘architects’ plastic’, not only in the context of artificiality but also in the context of flexibility and universality of applications that enhance the material aspect of the work. He claims that: “Infinitely malleable at first, then suddenly hard as rock, reinforced concrete can objectify vacuity and fullness with equal ease: it is the architects’ plastic.”⁵

Both the shaping (design) of the material characteristics of concrete and the versatility of using this material on many levels of the process of shaping the physicality of an architectural object, offers the possibility to maintain the individual style of the creator. Concrete becomes an architectural means of expression allowing to combine two ideologically considered concepts, that is universalism and individualism. Universalism manifests itself in the wide and global possibilities of using this material, influencing the process of realization of an architectural thing without any major limitations as to its technological availability in various corners of the world. Individualism, in turn, results from the sensitivity and personal abilities of the creator in using this matter. The ability to create the visual qualities of the material through the mastery of specific technologies is also of key importance for creating a recognizable expression of architecture. Therefore, the appropriate use of aesthetics of concrete can also become a material carrier of features of individualism and authenticity of a style of a given creator, which can be observed on selected examples illustrating this phenomenon.

In his architectural works, Peter Zumthor tries to use materials in a precise and sensual way. Many of his buildings have been realised in the aesthetics of concrete, revealing its proper essence and nature. In the book *Thinking Architecture*, he writes that the materials are important to him because

they can assume a poetic quality in the context of an architectural object, although only if the architect is able to generate a meaningful situation for them since materials themselves are not poetic. The sense that I try to instil into materials is beyond all rules of composition, and their tangibility, smell, and acoustic qualities are merely elements of the language that we are obliged to use. Sense emerges when I succeed in bringing out the specific meanings of certain materials in my buildings, meanings that can only be perceived in just this way in this one building.⁶

This way of thinking about the matter can be seen in the concrete *Bruder Klaus Field Chapel* (Ill. 1), constructed in Mechernich (Germany, 2007) or Peter Zumthor’s private house and studio in Haldenstein, a small village in Switzerland (1986).

² S.E. Rasmussen, *Odczuwanie architektury*, Murator, Warszawa 1999, p. 165.

³ *Ibidem*, p. 169.

⁴ *Ibidem*, p. 46.

⁵ R. Koolhaas, *Deliryczny Nowy Jork*, Karakter, Kraków 2013, p. 282.

⁶ P. Zumthor, *Myślenie architekturą*, Karakter, Kraków 2010, p. 10.



III. 1. *Bruder Klaus Field Chapel*, Peter Zumthor, Mechernich, Germany, 2007. Source: <https://archello.com/story/30180/attachments/photos-videos/7> (access: 24.04.2020), photo: René Spitz



III. 2. Cylindrical *Single-family House in Losone*, Mario Botta, Ticino, Switzerland, 1987–1989.
Source: <http://www.botta.ch/en/SPAZI%20DELL-ABITARE?idx=8> (access: 24.04.2020),
photo: Mario Botta Architetti

Mario Botta, in turn, used exposed concrete blocks for his house projects from the 1970s and 1980s – a solid and seemingly trivial material, which here gained a new aesthetic expression through the architect's skilful use. Botta's design work is characterized by strong opposition to treating nature as a factor that directly inspires architecture. As he stresses, architecture must be "a counterpoint to Nature, a dialogue with Nature. Architecture is an artificial factor. The only means of paying tribute to Nature is to be in exact opposition to her, in confrontation. (...) Architecture is a violation of landscape; it cannot simply be integrated, it must create a new equilibrium."⁷ The concrete material is perfectly suited for the realization of this creative philosophy, whether as a prefabricated block (e.g. a cylindrical single-family house in Losone (Ill. 2), Ticino, Switzerland, 1987–1989) or as a monolithic casting (e.g. a single-family house in Stabio, Ticino, Switzerland, 1965–1967). As an artificial material, a newly created stone made of cement binder, sand, water and aggregate, concrete is to serve architecture as a universal material that can be shaped in various ways to meet the requirements of art's 'artificiality'.

Tadao Ando is one of the leading creators of concrete architecture. He has been building an individual architectural trend, rooted in geometric modernism and minimalist aesthetics, successively and consistently for almost half a century. The aesthetics of the concrete casting have been brought practically to perfection in his realizations. He based most of his realizations on it. Jürgen Tietz, a German historian and author of books in the field of contemporary architecture, clearly indicates the role of concrete matter in Ando's work. He writes:

Ando's projects do not seem to be influenced by Japanese cultural and historical tradition. On the contrary, for many observers, they are thoroughly modern solutions. The reason for this is the building material used by the architect, especially concrete, which he uses more perfectly than other 20th century architects, not excluding Le Corbusier himself. Due to strict proportions, well-thought-out light guidance to emphasize the shape of the space, and the restrained downright ascetic use of materials, Ando's buildings seem to relate concretely to Mies van der Rohe's dictum 'less is more'.⁸

Among his numerous realizations, it is worth pointing out those which, although small in scale, most clearly express Ando's creative character and style, combining the minimalist, introverted form of the building with ascetic, even puristic elegance and exceptional quality of concrete material. These are: the narrow *Azuma House*, constructed in Osaka (1975) and the *Meditation Space* closed in a concrete cylinder (Ill. 3), built at the UNESCO headquarters in Paris (1995).

The expression of concrete forms is a recognizable feature of Zaha Hadid's work. As Wojciech Niebrzydowski points out: "Hadid believes that reinforced concrete poured in-situ is 'the best material to achieve sculptural expression and constructionally ambitious large spans and overhang.'"⁹ The expression of concrete forms evolved in Hadid's work. The fire brigade building on the premises of the Vitra factory in Weil am Rhein (1993) or the tram depot building in Strasbourg (2001) present the dynamism of the sharpened elements, frozen in uncovered reinforced concrete. With time, the expression of sharp angles is transformed

⁷ P. Gössel, G. Leuthäuser, *Architektura XX wieku*, Taschen-TMC Art., Köln 2006, pp. 447–449.

⁸ J. Tietz, *Historia architektury XX wieku*, Könemann, Köln 2001, p. 98.

⁹ [Quoted after:] W. Niebrzydowski, *Beton i żelbet a formy architektoniczne XX wieku*, Wydawnictwo Politechniki Białostockiej, Białystok 2008, p. 67 (Rozprawy Naukowe – Politechnika Białostocka, No. 163).



III. 3. *Meditation Space*, Tadao Ando, Paris, France, 1995, photo: Paweł Mika

into more and more rounded forms with an organic character. Hadid often uses a combination of expressions of dynamic forms – ‘sharp sketched’ with rounded edges, rotund angles and arched curves. This creative transformation process can be traced back to the Bergisel ski jumping hill building in Innsbruck (1999), the building of the *Phaeno Science Centre* (Ill. 4) in Wolfsburg (2005) or the MAXXI building of the National Museum of the 21st century in Rome (2009). In each of them, fair-faced concrete played a special aesthetic role, intensifying the effect of dynamic sculptural forms.

Peter Zumthor’s poetic concrete forms embedded in postmodern neo-rationalism, Mario Botta’s houses meticulously accounted for all the concrete blocks, the geometry of monolithic minimalism expressed in the exceptionally smooth concrete of Tadao Ando and the expression of Zaha Hadid’s sculptural forms are just a few different examples of the use of concrete aesthetics, which is characterized by the individuality of the way the matter is applied. Just as the visual character of concrete was used differently by Le Corbusier and Louis I. Kahn, contemporary creators are also looking for new meanings and applications of concrete to achieve the right visual effect for the designed forms of buildings. Apart from the experimenters, there are also imitators who make use of the methods proven by their predecessors. However, through their vision of architecture, they also give this material the spirit of a new aesthetic expression. Concrete projects of contemporary architects, such as those created in the studios of Luciano Kruk, Alberto Campo Baeza, Kazunori Fujimoto, or by the duo of architects Mauricio Pezo and Sofia von Ellrichshausen, show that the faces of concrete aesthetics can still surprise, give a sense of authenticity and individuality to a work of architecture, even as small as a house.

3. THE AUTHENTICITY OF CONCRETE AESTHETICS – EXPRESSING THE METHOD IN THE MATTER

‘Concrete architecture’ is a term that emphasizes the aesthetic use of concrete or reinforced concrete in façade engineering, revealing the true nature of this material without covering it with others. The realization of an architectural form in the concrete matter has a legitimate *raison d’être* when the building technology combines constructional properties with the aesthetic properties of a given material. Technology, in turn, determines the nature of contemporary detail, through which the truth about the stages and manner of construction is reflected. This principle seemed to be obvious in previous eras and constituted a clear link between form and material and its application techniques. Contemporary technologies used in the construction of modern architectural structures are conducive to the falsification of the truth about the material creating the physical form of the work based on widely understood imitations of building materials. This is often influenced by economic considerations or legal requirements that prevent the use of aesthetics of specific materials in a particular place of the body or inside the building. This happens in the context of stringent fire safety regulations. Then imitations imitating visually desired materials come to life. A significant part of modern technologies also uses various attempts to mask problems that come from incorrectly solved problems related to building physics. This is when the authenticity of a building’s structure, manifested in its proper matter, is hidden behind plaster, cladding or other coatings. In his text *Nieszczera szczerłość materiału* [Insincere sincerity of material], Wojciech Niebrzydowski has focused on this issue, trying to explain the principle of material sincerity and indicate the role played by the awareness of using a given matter in the architect’s professional practice. He writes:



III. 4. *Phaeno Science Centre*, Zaha Hadid, Wolfsburg, Germany, 2005, photo: Przemysław Bigaj

The principle of 'sincerity of material' in architecture consists in revealing the true character, nature of given building material. It says that an architect should use the material in such a way as to show its most important features, to bring out only what it really is. The observer, on the other hand, should not experience feelings other than those which a given material carries due to its essential property.¹⁰

The issue of 'truth' in architecture takes place not only in the ideological field or in theoretical deliberations on the essence of the validity of the form. Being a medium that materializes architectural thought, contained in the shape of things, the material plays a key role in making credible the material need to create a given work in a specific spatial context. Its significant role emphasises the sincerity of the ethical message behind the physicality of the form of a built thing. In post-war brutalism, the authenticity of the applied means of expression did not mask the errors and technological faults resulting from the executive shortcomings in the use of concrete. Monolithic reinforced concrete structures with their physicality demonstrated the strength of existence in space to such an extent that functional and structural logic was often overshadowed by the massiveness of matter. It seemed that the most appropriate and naturally oriented aesthetic trend was found for concrete. Later, different tendencies appear in architecture, e.g. minimalistic ones, looking for universal matter, allowing to express the idea of concise forms synthetically. And here the aesthetics of concrete once again proved its worth in technologically refined smooth surfaces of a monolithic casting. Tadao Ando's works seem to reflect this phenomenon well. Minimalism, like brutalism, needed authenticity and nobility of matter to emphasize the truthfulness of creative intention and sincerity of conduct. These two examples have left a certain division in the way of perceiving the aesthetics of concrete, into those who accept the flaws of concrete casting, not devoid of defects, faults or imperfections, as well as those oriented towards the perfection of a monolithic 'flawless' casting. Both Le Corbusier's 'loyal concrete' and Ando's 'silky' smooth concrete use the authenticity of this material for aesthetically different purposes. This is the basis for the universality of matter, which depends not only on the technological awareness of the use of concrete but also on the ability to form it properly for the work. New ideas based on the rejection of the splendour of façades and the escape from unnecessary ornamentation have directed architecture in various periods of modern times towards 'material loyalty', in which concrete has found a special place because of its puristic, original elegance. The authentic face of the nature of concrete has also found an important place in enhancing the expression of many buildings of contemporary architecture, as proved by numerous examples in Tomasz Kozłowski's book entitled *Tendencje ekspresjonistyczne w architekturze współczesnej* [Expressionist Trends in Modern Architecture]. The analysis of the buildings, including, among others, the ones by Zaha Hadid, reflects the essence of emphasizing the expression of a form, using the appropriate character of concrete matter. Referring to the *Landesgartenschau* building (Weil am Rhein, Germany, 1999), Kozłowski writes:

It is still the same expression of Hadid's architecture, but a different setting in the context of the surroundings and above all – a different concrete. And the concrete here demonstrates its austerity of the casting made on-site in 'ordinary' formwork and shows the beauty of the Corbusier béton brut. The surface of this concrete does not encourage sensory experience; the casting is uneven, rough, without the care for execution that is possible to be achieved. The

¹⁰ W. Niebrzydowski, *Nieszczera szczerłość materiału*, Czasopismo Techniczne, 2006, 103(9), p. 317.

concrete texture appears to contradict the planned refined form of the gentle curves of the building-road that can only be crossed by thought, a structure with suddenly, unexpectedly and dynamically ending planes of sloping walls. (...) We interpret this building in a completely different way in the photographs in architectural albums, where we can find elegant forms of smooth concrete walls, and in a different way in contact with the reality of grey concrete available at our fingertips.¹¹

Regardless of the aesthetic goals that concrete matter serves, its essence of authenticity derives directly from the expression of the method of construction in physical material. This method should be planned in such a way that technological discontinuities and other nuances of formwork and casting art would determine the contemporary detail or ornament resulting directly from the building technique. As one of the fathers of concrete architecture – Louis I. Kahn – put it: “If we were to train ourselves to draw as we build, from the bottom up, when we do, stopping our pencil to make a mark at the joints of pouring or erecting, ornament would grow out of our love for the expression of method”¹².

4. THE FALSE FACE OF CONCRETE AESTHETICS – THE ‘INSINCERITY’ OF THE IMITATIVE MATTER

Apart from the aesthetics of ‘sincerity’ of concrete, thanks to its versatile application possibilities, this material is used today as a visual substitute for other building materials, showing an imitation of their arrangement on the facade or falsifying their texture. Concrete is often referred to as ‘artificial stone’. The phenomenon of material imitation in architecture is not new. It was already criticized by Adolf Loos in his moralising essays. In a text from 1898, entitled *Building Materials*, he chastised the widespread use of imitation materials. He writes:

Over the past few decades imitation has dominated the whole of architecture. The wall covering is made of paper, but on no account is it to show the fact. So it had to be given silk damask, gobelins or carpet patterns. The doors and windows are made of soft wood. But because hard wood is more expensive, they had to be painted as such. Iron had to imitate bronze or copper through applications of those metals. But in the face of precast concrete, an achievement of this century, one was entirely helpless. It is a magnificent material in itself, but the only thought about how to apply it, the same thought that comes to mind with every new material, was: what can it be used to imitate? It was used as a surrogate for stone. And since precast concrete is so extraordinarily cheap, it was wasted on a most common thing, in a truly parvenu manner. The century has been dominated by a real cement blight.¹³

This ‘insincerity’, pretending to be different materials in the finishing layer, is even today dictated more by economic calculation than by the architectural need to manifest the material truth in the work. Nowadays, this state seems to be further deepening. Concrete is often

¹¹ T. Kozłowski, *Tendencje ekspresjonistyczne w architekturze współczesnej*, Wydawnictwo PK, Kraków 2013, pp. 177–178.

¹² [After:] C. Jencks, *Ruch nowoczesny w architekturze*, Wydawnictwo Artystyczne i Filmowe, Warszawa 1987, p. 256.

¹³ A. Loos, *Materiały budowlane*, 1898 [in:] A. Loos, *Ornament i zbrodnia. Eseje wybrane*, Fundacja Centrum Architektury, Warszawa 2013, p. 96.

presented as the main perpetrator of this state of affairs. It is also a result of the fact that contemporary legal requirements, standards and norms can more and more often compromise the aesthetic authenticity of matter, hiding it behind layers of insulation, plaster and paint. The living environment of man increasingly resembles the world of forms dressed in illusory 'outfits' (materials). Paradoxically, investors are often unable to accept the authentic aesthetics of concrete, while they are eagerly and willingly choosing false imitations of other materials imprinted in the concrete face. Writing about 'disliked concrete' in his text *Architektura betonowa albo o betonie architektonicznym* [Concrete Architecture or on Architectural Concrete], Dariusz Kozłowski explains the source of this aversion of many people to the aesthetics of concrete. He does it in the following way:

Architectural structures constructed on the basis of fair-faced concrete concepts are appreciated by architectural critics, architects, individuals with an aesthetic taste and art-sensitive communities. In others, concrete raises doubts, arouses mistrust and seems unfriendly. It is an effect of the association with the 'great panel' concrete technology, which was widespread not only in Poland, used for industrial, mass production of residential building elements, a technology which was not technically the best at the time. Critics of this architecture, referring to the aesthetic values of the thing, forgot that the purpose of the idea was to be practical: cheap buildings to solve the housing problem.¹⁴

Imitation has become commonplace today. The falsification of the matter is part of the play with the recipient – the observer. This visual illusion has been accepted, and such an effect has often even become desired by the artists themselves who look for old aesthetic solutions using new technologies. However, the recognition of authenticity is instinctive and strongly rooted in human nature, oriented towards the sensual perception of things. In his book *Experiencing Architecture*, Steen E. Rasmussen devotes a chapter to the perception of different textures in architecture, also in the context of fair-faced concrete. As he notes:

It is difficult to explain why minute differences in textural character, barely large enough to be measured by scientific instruments, affect us so strongly. But when we consider that the essential difference between the tones of a fine violin and those of an ordinary one can only be ascertained by the human ear, it is understandable that the sensitive eye can perceive the difference between a firm, noble texture and a rather poor and shoddy one, even when there is no surface pattern and the materials are of the same stuff. You cannot give a reason for your different evaluations but the difference you perceive is real enough. Words can put you on the right track but you have to experience the textural effects yourself to realize what it is all about.¹⁵

This is also true for concrete. The perception of texture nuances exposes the falsity of even the best cast surface and, under the influence of light, reveals the falsity of a structure of a different material than that which at first sight seems to be imprinted in the concrete face. Since the emergence of specialist texture matrices fitted as liners for formwork sheathing, it seems that the audience has accepted the commonness of imitation in concrete architecture. In turn, architects and creators have gained new possibilities in creating 'the great lie of architecture', without the need to ethically justify their aesthetic experiments and proceedings, and

¹⁴ D. Kozłowski, *Architektura betonowa albo o betonie architektonicznym* [in:] Z. Pilch (ed.), *Konkurs Architektura Betonowa 2000–2009*, Wydawnictwo Polski Cement, Kraków 2010, pp. 11–12.

¹⁵ S.E. Rasmussen, *op. cit.*, p. 163.

by redefining the rule that it is possible to reproduce the method of constructing a building in the matter most appropriate only for it. When using structural matrices, the architect has a practically unlimited range of patterns and textures at his disposal, which he can either invent for the needs of a specific realization or use ready-made – catalogue solutions. These patterns and textures should be divided here with regard to the issue of ‘material sincerity’ in architecture, i.e. into surfaces imitating other textures and surfaces with an autonomous drawing that does not reproduce other materials, which are sovereign in their geometric and abstract graphics. Among the textures imitating materials, we might find an artificially shaped, i.e. ‘insincere’, image of a wood structure imprint with rings and knots, the arrangement of bricks on the facade or the rustic way of laying stones in the wall, as well as many other examples of this type of material imitation. Concerning the issue of ‘material sincerity’, this is a form of sophisticated deception, as the way these textures and surfaces are imitated is deceptively similar to real structures made of brick, stone or wood. However, the sense of non-original technology can be felt in the repeatability and too much unnatural perfection of the casting. Among the textures and surfaces that do not imitate natural materials known from the natural world, one might find all kinds of geometrically sculpted surfaces containing ornamental patterns, relief arrangements, symbols and signs carrying cultural content. Both of these principles of shaping the aesthetics of concrete allow the architect to reconstruct or creatively search for the desired structure for the face of concrete, testifying to the versatility of this material.

It appears that the false face of concrete aesthetics is now widely accepted by many architects and investors. The insincerity of the matter, its ability to ensure illusory reproduction or imitation of other materials, is considered by part of the creative environment as an element of the nature of concrete. Material surrogates do actually dominate contemporary architecture and have become part of the illusion of temporary aesthetic values dictated by the need of a moment. Adolf Loos, however, points to the universal value of material truth and to the inevitable instinct of the recipient who can sense this falsehood, which causes inner distress in man. Loos appealed to artists who succumbed to this temptation of material deception with the following moralistic words:

But no, you imitators and surrogate architects, you are making a mistake. The human soul is too elevated and sublime for you to dupe it with your little tricks and tactics. You have our pitiful bodies in your power. They have only five senses at their disposal to distinguish real from counterfeit. And at that point where the man with his sense organs is no longer adequate begins your true domain. This is your realm. But even here – you are mistaken once more! Paint the best inlays high, high up in the wood ceiling and our poor eyes will have to take it on good faith perhaps. But the divine spirits will not be fooled by your tricks. They sensed that even those (wood carved) decorations more skillfully painted to look ‘like inlay’ are nothing but oil paint.¹⁶

5. CONCLUSIONS

The material sincerity, which builds a sense of aesthetic credibility of the work, is a desirable element in the world of contemporary material forgeries. The fact that concrete is also becoming a frequent carrier of these falsifications thanks to its versatile and universal application

¹⁶ A. Loos, *Zasada okrycia*, 1898 [in:] A. Loos, *op. cit.*, p. 103.

possibilities is widely accepted today. This illustrates a certain state of crisis in the authenticity of the nature of the matter in modern architecture. Over a hundred years of experimentation with the aesthetics of concrete has brought technological solutions that have given it the status of refined matter used in avant-garde architectural works. The effect of the monolithic structure seems to be of key importance here. Nowadays we observe two ideologically different faces of concrete, existing as if side by side, rejected by some, accepted by others. The authentic expression of concrete is determined by the truthfulness of the artistic message, whose sources and details are rooted in realization technologies specially dedicated to this material. The false image of matter, in turn, is the result of concrete's participation in creating visual imitations of other materials, which build a sense of universally accepted – visual falsity of the built world today. The desire for such a state of affairs not only by the investors but also by the creators themselves has become a kind of justification for ethical attitudes in architecture. The architectural form has always been accompanied by the aesthetics of the matter which it was realized with. A good example here is vernacular architecture, which made rational use of the aesthetics and physical properties of used and locally available natural materials. Contemporary times, in turn, provide one with materials produced artificially, usually in an industrial way and following technological and engineering needs, necessary for the realization of forms consistent with current doctrines in architecture, based on the pluralism of creative attitudes. The ongoing and permanently rooted in the social consciousness widespread nostalgia for vernacular forms and the aesthetics of the building material that followed it created the foundations for creating, based on modern technologies, imitation and replication of textures and colours of natural materials, desired by individual investors. This is already the basis for the 'great lie' of contemporary architecture. The skill and sensitivity of the creator determine how they will shape the specificity of such an exceptional matter as concrete so that it would be able to meet the ideological assumptions contained in the work. Concrete understood as an architectural material gives the creator a virtually infinite opportunity to create an aesthetic expression of form, captured and limited only by the framework of its application technology. These possibilities are still inexhaustible, as the specificity of concrete is subject to constant and continuous material evolution. Newer and newer records of engineering and structural application of reinforced concrete are followed by intensive work on the development of aesthetic possibilities of using concrete itself. This evolution is a natural process, lasting for decades, allowing to gradually tame the aesthetic nature of concrete, whose most spectacular achievements have frequently been explained by the imperative of engineering utilitarianism or economics of the adopted solutions. The need to express an architectural idea defined by the creator in the relevant matter is only justified if it creates a coherent relationship based on a sense of authenticity and truth. This relationship is built on the method of building realization, which reflects information about the process of technological materialization in the adopted aesthetics and detail. This allows one to turn to the principle of 'material sincerity'. In the past, this principle naturally existed since the dawn of time in man's construction activity. This does not mean at all that concrete cannot be successfully used ideologically as a material that is an element of a carrier of detail, understood from the perspective of historical architecture, rooted in local tradition and culture. However, it is then an element that consciously interferes with the material identity of the building. The existing crisis of authenticity of the aesthetic nature of matter is a common fact in contemporary architecture. Can it be stopped? Most probably not, but it is possible to show the way to the proper conduct, which was outlined by Adolf Loos in his 1989 text entitled *The Principle of Cladding*, where he wrote:

Every material has its own formal language, and no material can lay claim to the forms of another material for itself. Because forms have arisen out of the usability and mode of production of every material, they have developed with the material and out of the material. No material permits an intervention into its range of forms. Anyone who tries such a thing will be branded by the world as a forger. But art has nothing to do with forgery, with lies. The paths of art may be thorny, but they are clean.¹⁷

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Chair of Housing and Architectural Composition. A research and didactic assistant professor at the Faculty of Architecture at Cracow University of Technology. The main area of the author's scientific interest focuses on the possibility of using the aesthetic properties of fair-faced concrete in residential architecture with particular emphasis on monolithic technology. The study of relations between form and the matter that creates it is the aim of the author's search for the essence of architecture, especially the one whose poetics of the idea has been expressed in a specific building material, which determines the originality of the artistic expression of the architectural work. Games and plays with concrete forms and their aesthetics also become a pretext for the author's theoretical and practical experiments as part of didactics conducted with students of the Faculty of Architecture at CUT.

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¹⁷ *Ibidem.*, p. 99.