Abstract
The article is an attempt to show the relationship between architectural ideas and concrete matter in the implementation of Polish architecture of the beginning of the 21st century. The second part shows examples in which the perfection of architecture is associated not only with the metaphor principles of 20th century architecture, but also with what we define as the search for aesthetics in appropriate geometry of forms.

Keywords: concrete architecture, idea, matter, expressionisme

Streszczenie
Artykuł podejmuje próbę przedstawienia związku między ideami architektonicznymi a betonem jako materią w tworzeniu polskiej architektury początku XXI wieku. Druga część przedstawia przykłady, w których doskonałość architektury postrzegana jest nie tylko w odwołaniu do metaforycznych podstaw architektury XX wieku, lecz także w związku z tym, co można by zdefiniować jako poszukiwanie estetyki w odpowiedniej geometrii form.

Słowa kluczowe: architektura betonowa, idea, materiał, ekspresjonizm
1. Searching for perfection – rational concrete

One hundred years ago, Adolf Loos talked about the ruling “barbaric splendour”. This statement revealed a deeply rooted belief that modern architects had different standards of perfection. In the history of Western art, there is another aesthetic idea – the idea of aesthetic restraint, which is strictly connected with a classical tradition. According to Ernst Gombrich, a purposeful rejection of too many ornaments always pointed to the classical influence. When it became a point of pride as in the times of the Italian Renaissance or the 18th century Neoclassicism, focusing on form rather than on decoration was the sign of the self-aware artistic virtue [1, p. 18]. Such understanding of rationalism gives us the explicit answer to the question about the participation and sense of architectural detail in creating meanings of elementary architecture. According to this principle, architecture should be self-describing and introvert. Thus, a language used by a designer should strictly derive from logic, simplicity, geometry and numbers – from technique. Rational architecture without a distinguished detail should point to a difference between this which is “inside” and this which is “outside”. Architecture “outside style” is the main formal function for architects searching for objective beauty. For the architects who repeat that “an architect does not create anything, an architect only transforms reality” the honesty of matter eliminates this which is unnecessary, but it also searches for sense in this which we call continuation.

“Rational concrete” as an obvious part of contemporary landscape has become, through its naturalness, neutrality, syntheticity, an ideal material for architects who believe in formal reduction. It is the matter produced by an anonymous technique. It is the matter of things that do not have consolidated meaningful and aesthetic references. Concrete as matter suited for stylistic reductions finds its sources in aesthetics that becomes impersonal and devoid of references. As non-imitating, non-shocking, non-present material concrete is a perfect material to deprive art from the possibility of analysing the way of creation.

Robert Konieczny’s own house in Brenna in Beskid Śląski, built in 2015 (Fig. 1), is close to the idea of formal reduction. The building shows one more meaning of “the house” form whose architectural expression is reduced to the geometric essence of the archetype (the architect calls it “the Ark”). The concrete object is situated on a slope. Although it was built as the result of matching to geological and legal conditions, it is exceptional in its approach to form incorporated in concrete. In the architecture of the Arc, the standardisation and simplification of form become a purpose, where reduction is understood as the function of the simplest solution. The house has a gabled roof, a foundation analogical to the roof, four walls, a panoramic window, an entrance. Everything is bound by a pure greyness of monolithic concrete and carefully performed roof without chimneys. The succinctness of the house resembles Christian Kerez’s chapel in Cazis (1993) where the simple rhetoric of architecture reaches the moment when a reference to minimalistic means defines calculations: what and how many elements are needed to build an architectural object. It seems that for a purist such as Konieczny, “a physical” approach to an object is superior towards the idea of the object. The architect reduces to the minimum its artistic value, reduced cannon of succinct forms –
Fig. 1. Robert Konieczny, KWK Promes, The Ark, Brenna 2015
such as a rectangle, a triangle, a plane, an edge. He consciously gives up giving quality to the structures of a surface – he gives up everything that can define unnecessary and additional narration of architecture. Konieczny’s “neutral concrete” is a process of transposition of the ideal material for the “architecture of simplicity” where nature and geometry do not ask about the content, but about the methods defining elementary space.

The house designed by DB2, Iwona Wilczek and Mariusz Tenczyński team and built in Bierkowice near Opole (2015; Fig. 2) is an uncompromised and explicit explanation of what is a contemporary living space. A 452-m² building is a carefully designed structure cast in raw concrete and completed with a system of glazing opened to the inner part of the plot. This rectangular block reveals to us its double face – its border is a monolithic wall demarcating the entrance part (with a concrete square) from the living part whose open plan, together with ordered corridors and openings, is a counterpoint for a solid north-eastern facade. The unsophisticated and simple concrete of the entrance does not hide its own nature. Its imperfection creates the sense of a very simple and regular thing whose elementary function is to build a space of silence, wealth and privacy hidden behind an impenetrable wall. The entrance to the house outlines the way through a clear composition of blocks, planes, facing and furniture framed by the concrete overhang. All of it is surrounded by a pool and defines a complete composition.

The inventiveness of this building consists in a consistent and rational way of achieving the shape of architecture. For the designers, “discover” means “to find again”, “to re-order’ this
which is hidden in a creative subconsciousness and which finally means the abstracting of
architecture towards Euclidean geometry that is pure and full of references. This compositional
rigor is a manifest of reducing form to its essence or creating the ideal. For a rationalist, such
“need of creation” is also “a need of form” where balance between the most important elements
is a dominant feature. The idealisation of form in the house near Opole is searching for this
body, which would be able to “reveal the soul” of the neat concrete-glass architecture.

**The Gate of Poznań** – the **Interactive Centre of the History of Ostrów Tumski** (Ad Artis
Architects, 2014; Fig. 3) is an example of revealing the universal laws of geometry. The object’s
pure architecture is a vital factor in recording the precise and perfect idea of architecture as
the world of pure blocks. ICHOT is situated opposite the Poznań cathedral in an area where
the Polish idea of state was born. In this historically priceless area, the architects built a stark
rectangular form which was designed as the background for Ostrów Tumski monuments. The
importance and hierarchy of this place are emphasised by a diagonal slot cutting through the
congcrete set of ICHOT – a glass “split” of the block opens the view from the inside onto the
towers of the cathedral. The designers said: “the museum was built from concrete and light”
– but also from the ideal geometry of a square. Indeed, the building attracts attention because
of its unusual simplicity of space, where the light of concrete architecture creates the shape of
a selfless thing – an artefact filled with a pure image of a monolith. ICHOT refers to Claude-
Nicholas Boullée’s theory of *beauty as the system of relations*.

![Fig. 3. AD ARTIS Studio, The Gate of Poznań – the Interactive Centre of the History of Ostrów Tumski, 2014](image)
A mutual arrangement of masses, together with light and shade, will convey the impression connected with the character of the building. In this building without exhibits (there are only multimedia and educational presentations), the interior of the building is as minimalist as its exterior; black dominates in the hall and the corridors. The floors were made from basalt plates. The ticket office and the information point were covered with black plate, some walls are also black. This stark monolithic space should focus the visitors’ attention on the exhibition.

The simple and subtle concrete majesty of these solutions might stir emotions. However, the consistent feeling of the geometry of the building is based on the conviction that the idea incorporated in the building can resist the cultural-civilisation changes and that is the essence of searching for contemporary meanings. ICHOT building proves that a simple block might be a striking realisation of an idea through the impression of geometry in concrete and establishing the connections between its physicality, minimal purity and the substance of the programme. Conservatism referring to the timeless qualities of architecture within the material meanings or a mannerist geometrical simplicity of forms might become a way in the search for timelessness.

The building Infinity Dreams (designed by Przemo Łukasik and Łukasz Zagala from Medusa Group, 2012; Fig. 4) depicts the rationalisation of form and the unpretentious treatment of concrete. This small office building in Gliwice is a model example depicting the principle of “a mute form” – which refers to the idea of ascetic architecture where architects used purely IT and economic thinking. The austerity of the building and a technical or even industrial character of the interior proves the profound awareness of a building process, the acceptance that the physicality affects the final result of design; the awareness of the material and the technology. A paradigm for this type of architecture is obviously the style of Swiss architects from Eidgenossische Technische Hochschule (ETH) in Zurich. The models seem to be the works of Peter Märkli (Gantenbein House in Grabs, 1995), Luigi Snozzi (Guidotti House in Monte Carasso, 1984) or Anette Gigon and Mike Guyer (Substation in Zurich, 1999). In the 1990s, these works established the foundations of thinking about the relations/connections between an idea and matter in the concrete stylistic of rationalism.

In the Gliwice building, prefabricated elements/units were chosen as the main material – the material that becomes an excuse to search for aesthetics “without qualities”, showing a nonchalant detail as the effect of a joint between the austere technology of prefabricated concrete, exposed installations and the smoothness of glazing and floors. Infinity Dreams in its programme and “genetic” simplicity and the roughness of detail creates its own code, which creates an endless range of systems in an a priori programmed process of creating architecture. According to the authors – these are not avant-garde or contemporary actions – this is just the idea for contemporary architecture where there is space to reveal the rules of design and also space for the traces left by the used tool which is concrete.

Medusa Group rhetoric of architecture reveals/discovers one more logic of using concrete as the ethical material – revealing its material honesty and technological simplicity. We owe it to Le Corbusier18 – the first time when it was accepted that an unhidden defectiveness of the material might become the tool of the moral message of architecture. Up to now, the defectiveness of concrete has become an ethical cognitive tool – the function of showing the world as it is, a message hidden in matter that the true beauty is the quality of virtues, not bodies.
Such architecture gives a man the sense of identification, which is his basic psychological need. When we define the qualities of concrete architecture, we must emphasise the superior relations between a structure and its aesthetic meaning – which create a contemporary meaning of the word decorum. It is for decorum that the architects from Medusa Group try different forms in their search for artistic expression in a physical structure.

Fig. 4. Medusa Group, *Infinity Dreams*, Gliwice 2012

Fig. 5. W. Obtulowicz, *Com-Com Zone*, Kraków 2008
The Com – Com Zone building (designed by Wojciech Obtułowicz, 2008; Fig. 5) in Nowa Huta in Kraków follows the same trend. The leisure centre is a clear compositional image. It incorporates elements required by the programme: pitch areas, small architecture, water spaces, footbridges, half-pipes, an amphitheatre. Everything created in concrete – that is why the designed space is perceived as the coherent whole. A 16-metre high viewing tower is a structurally important architectural element.

Both, the exterior and the interior of the object are built from monolith, cast without any special care about the arrangement of the formwork tops and face structures. It gives the object its stark industrial character. Obtułowicz’s work does not pretend that masses of reinforced concrete are something more than just a building material. The building lacks any detail work – the walls only reflect a basic technological process. Pitches, a swimming pool, a skate-board square are covered with a homogenous structure of steel skylights resembling factory roofs. To highlight the socio-aesthetic meaning of the object, the architect revealed the interior arrangements of the structure, its passageways, installations and downspouts. This was the architect’s way of showing the young people who use the object the anatomy of buildings and their technological solutions. Raw concrete is the outside shell of the hall – it is also the main material used for the interior.

The naturalness and authenticity of the building rely on the idea of architecture understood as copying lifestyle – one of the concrete walls was left to be decorated by graffiti artists. Such architecture creates a dynamic picture of a building written in a plan of a city in a language of foreshortening and recapitulation of context, a briefly drawn sign in the space of a city.

Obtułowicz admitted that he had always dreamt about creating such a building “sculpted in concrete”. With that design, he wanted to prove that concrete still works perfectly for architecture and it is unfair to treat it as a plain, coarse material. A decisive character of the object was an architectural counterpoint for dull and expressionless public buildings, which were built during the time of economic transformations in Poland. He once said: “Architecture must be devoid of pathos; it must be simple and functional”.

The question regarding the rules of adequate building has always appeared in the theory of architecture. Mies van der Rohe reminds us that the essence of architecture is understanding how one stone is laid on the other. If architecture is an attempt to organise space, therefore a structure is the organisation of matter to stabilise the object. Hence, the importance of the used material and the understanding of the ways of bonding – in order to prolong its life. Owing to that, architecture is not only the art of forms, but it is mainly the art of structural things. As in music, an individual note moved to another staff will cause changes in the melody. In the same way, mortar between stones or formwork may define artistry, precision or their lack in an artist and his work.

The works of Bolesław Stelmach refer to the words of Mies van der Rohe – architecture must have a ritual subtext and logic consisting in the fact that each thing should revive another thing through arrangement, repetition and profound understanding, transformation and purification of structural principles. This situation might be treated as giving the forms their “representative” character and the beginning of transforming technique into architecture. However, it seems that the architect limits the range of the search for perfection: architecture is such a transformation, which moves from the principle of decorating to the search for adequate forms.
In his search for “adequate” forms, Stelmach looks for the qualities of architecture created through subtracting. The architect says that subtracting must be a feature of each moment of a designing and building process. Each stage must find its own quality in the conjunction of reduction – “only then they become as obvious as digging a hole or building a hill”. The search for a reduced structure is the way to the idealised simplicity of geometry, the used materials or their finishing work. A reduction to three or four materials creates opportunities for a stronger reception of individual spaces.

Stelmach proves in all his works that by building out of raw “rational” concrete, one can create a variety of forms, which can trigger/provoke different moods, emotions and impressions. The Park of Science and Technology in Lublin (2014; Fig. 6) or Zana House (2008) were built from the simplest concrete, which, completed with glass, steel and wood, retained the rigor of thinking about the idea of architecture as something affecting senses. By diversifying the texture of materials, Stelmach created sensual planes, which were far from the traditional interpretation of minimalism. This way of treating material coexists with maximally simplified blocks of buildings. All of it creates the harmonious, serious balanced whole, which corresponds well with the function of the object.

According to this assumption, each building “substance” composes the weight or lightness, smoothness or roughness, peace or anxiety. One may think that a building and a detail should have only as much as it is necessary to create a perfect building – nothing can be subtracted here without losing its quality. A characteristic feature of Stelmach’s architecture is to show the technology used to create a building – each space must reveal the technique of creating a fragment or a detail. Formwork traces, welds of steel elements, visible knots and screw connections of the substructure must speak through their “honesty” of treatment. What is more, they should become information about the structure and the process of building [2, p. 124–128]. Each detail should strengthen the sense of realism in the object and create the essence of this architecture – lasting in time beyond styles and trends.

Fig. 6. B. Stelmach, The Park of Science and Technology, Lublin 2014
References