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## INTUITION AND RATIONALISM IN CREATING THE FORM

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### INTUICJA I RACJONALIZM W KSZTAŁTOWANIU FORMY

#### Abstract

Depending on the time of creation of particular buildings or building complexes and the nature of the transformation processes during subsequent stratifications and additions, it can be assumed that the dynamically developing architectural space constantly acquires a new image built on eternally modified assumptions. Therefore we meet with the coexistence of separate or coherent compositions created over the centuries, where each successive form is dependent on the context of the environment, but also the existing object can take on a new face appropriate to the context changing in the background. The constant basis of the activities of the creators, both old and modern, are both rational factors, expressed by the need to adapt the building to the basic requirements of use, as well as emotional, aimed at giving the form a perfect shape. The overarching motive is the constant striving for beauty, order and harmony, the desire to combine both functional and aesthetic criteria into one whole, on the basis of rationalism and creative intuition.

*Keywords: architectural form, creative intuition*

#### Streszczenie

W zależności od czasu powstania poszczególnych obiektów czy zespołów zabudowy oraz charakteru procesów przeobrażeń w trakcie kolejnych nawarstwień i uzupełnień można przyjąć, że dynamicznie rozwijająca się przestrzeń architektoniczna uzyskuje wciąż nowy obraz budowany na ustawnie modyfikowanych założeniach. Spotykamy się zatem ze współistnieniem odrębnych lub spójnych kompozycji tworzonych na przestrzeni wieków, gdzie każda kolejno powstająca forma jest uzależniona od kontekstu otoczenia, ale zarazem istniejący dotychczas obiekt może przyjmować nowe oblicze adekwatnie do zmieniającego się w tle kontekstu. Niezmienną podstawą działań twórców, zarówno dawnych, jak współczesnych, są czynniki racjonalne – wyrażające się potrzebą dostosowania obiektu do podstawowych wymogów użytkowych, jak również emocjonalne – zmierzające w kierunku nadania formie doskonałego kształtu. Motywem nadrzędnym jest ustawiczne dążenie do piękna, ładu i harmonii, chęć połączenia w jedną całość kryteriów zarówno funkcjonalnych, jak i estetycznych, na podłożu racjonalizmu oraz intuicji twórczej.

*Słowa kluczowe: forma architektoniczna, intuicja twórcza*

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Among theses of the seventeenth *Defining the Architectural Space* Scientific Conference is a statement related to the periodic reflection about the direction in which architecture is going. It is inclined to express the strength of individual forms, creating a complicated architectural composition – both in the sense of compositional arrangements and different times of coexisting objects or bands.

While older centuries were characterized by transparent sequences of development and a well-established, coherent style with defined means of expression, from the period of historicism, we are observing the growing process of experimenting with form within an increasing detachment from traditional patterns. The creators shaping the image of the new architecture were, however, still guided by the same basis of action based on two grounds: rational – to meet the necessary standards and expectations, guaranteeing the achievement of signs of usefulness, and empirical – in the name of constantly defining another, even better and previously unknown shape, as a new foundation of beauty and harmony.

Despite the evolution of stylistic views and changing directions in searching for a means of expression – from modelling on the experiences and timeless compositions of antiquity known from the treatise of Vitruvius, by using the dominant canons of a given era, up to attempts to create avant-garde, previously unknown solutions – the influence of the invariable creative factor based on the balance between both rational considerations, expressing the need for adapting the architectural structure to the basic requirements of use, as well as emotional, aimed at obtaining an ever higher level of perfection of form, can be observed.

In each architectural composition, the unique expression of the word is evident, which was created both on the basis of the technique and the ideology. However, it is difficult to determine whether achieving a balance between rational and empirical considerations would be the basic determinant of aesthetics – the road leading to the perfect composition. An architectural work can emanate the beauty contained in the elaborate elements of its structure or in the concise simplicity determined by the basic geometrical relationships. In both situations the level of perfection may be fully equivalent and not necessarily associated with the excessive amount of elements forming the structure of a given work.

Rational considerations indicate that it would be unjustified to fill in an architectural object with decorative motifs throughout its entire space, because such a composition could be deprived of the necessary background and become less expressive. However, actions on the basis of intuition can create a new level of references, including the second plan to the object, which may be the closest neutral environment, putting the main composition in the foreground. Juliusz Żórawski, describing the principles of building an architectural form, claimed that *It is good when a rich form happens on a poor background*<sup>1</sup>. This theorem can also be extended to the mutual dependencies in the spheres of intuition and rationalism in architecture. Therefore, it is good when creative intuition is accompanied by the necessary rational considerations, but it would also be desirable that rationalism does not deny the intuitive approach to modelling the form. It even seems that architecture should, to a certain extent, be irrational, overcoming the aspirations to subscribe to a well-established framework that is considered “correct”. This would involve shaping such traits as: uniqueness, novelty, innovation, which in the long run may lead to the formation of precursory composition arrangements, or even a new architectural style.

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<sup>1</sup> J. Żórawski, *O budowie formy architektonicznej*, Warszawa 1962, p. 69.

Different ways of approaching the formation of an architectural object could illustrate the best an object that has the same function, but has been repeatedly erected in various places and designed by different creators. In Polish architecture, such buildings, and at the same time one of the most spectacular manifestations of actions on the basis of intuition and rationality, are the chapels created in the Renaissance and Baroque on the basis of the process of creating replicas, which are perfect in proportions and details of Sigismund's chapel in Wawel Cathedral, built in 1519 – 1531 by Bartolomeo Berecci.

This avant-garde for the time, small Renaissance building, without an earlier direct model, was accepted as the basic canon for the modern sacred form of the central building. Numerous equivalents created in both mentioned periods and then in the era of historicism are at the same time an excellent research field of different ways of shaping the architectural layout of an object with the same function.

It was the intention of the founders of chapels to maintain clear formal connections with the Wawel archetype, but also to give the new building individual characteristics by introducing innovations that serve to commemorate and emphasize the importance of one's own family or express a specific ideology. These intentions, from a rational point of view, maintaining compositional cohesion with the royal chapel, but assuming the re-modelling of the original Renaissance system guided by the creative intuition, resulted in the creation of a significant number of equivalents of the same pattern. Each new chapel, containing a sufficient range of legible references to the first fully renaissance work in Poland, was at the same time a separate, unique architectural creation.

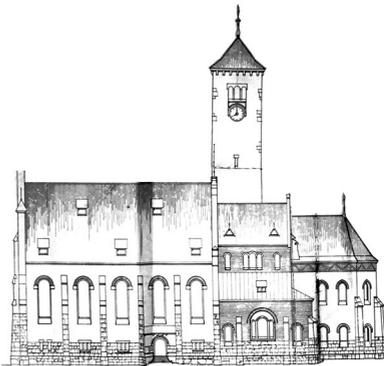
A special example of the interpretation of the Renaissance prototype is the Baroque chapel built more than a century later – the mausoleum of the Vasa dynasty. Rational reasons combined with creative intuition led to the creation of a new object, which became an almost faithful copy of the Renaissance prototype, and thus an outstanding manifestation of historicism in the 17th-century European architecture<sup>2</sup>. Despite the different conditions associated with the new era, the Renaissance structural arrangement and architectural composition were thoroughly repeated, introducing radical innovations in articulation and interior decoration. Small external differences did not affect the disruption of the coherent layout of these two chapels (ill. 1).

Thanks to this solution, from an ideological point of view, the clearly formed architectural composition, symmetrically flanking the foreground of the southern entrance to the cathedral, has become a symbolic, modern triumphal gate connecting two epochs and two dynasties into one. In the cohesion of both structures one can also see another message: the need for showing the permanence of the kingdom, which, despite dynastic changes, was a homogeneous, though multinational organism.

In the external composition, however, small differences appeared. On the façade, the coat of arms of the state and the dynasty were placed, the other cover of the dome was made and no crown was put in the finial of the lantern. Other differences, such as the lack of an inscription on a frieze or a slightly different arrangement of details, are invisible. Therefore, these were rational actions in the name of maintaining the compositional harmony of neighbouring objects. However, the way of clearly emphasizing the southern entrance with the same buildings, as an extremely important place, because this way entered the cathedral monarchs for the ceremony of coronation, bore the features of the project implemented on an intuitive

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<sup>2</sup> K. J. Czyżewski, *Kaplica Wazów – czyli ostatnie mauzoleum Jagiellońskie na Wawelu*, Studia Waweliana, tom XVII, Kraków 2016, p. 108.



basis. The main, western portal of the cathedral was already preceded on both sides by two Gothic chapels (ill. 2). In order to preserve a similar solution from the southern side, in the Baroque era a monumental frame of the second entrance was created, “completing” its western flank with a neo-renaissance chapel.

A different manner of expression is characterized by a mannerist chapel founded by the Krakow Voivode Mikołaj Firlej in 1600 as a family mausoleum. The chapel was added from the southern side of the nave of the Gothic church of St. Nicholas in Bejsce, eastern elevation in the plane of the west chancel wall. Compared to the interior, the facade decoration is significantly reduced. The building is supported by a slightly protruding stone pedestal, two external corners of smoothly plastered walls accentuate narrow pilasters, while the filigree architectural detail appears only in the final zone. It consists of cornice corresponding to the classical order, pilaster heads, extensive decoration of the lantern, bands around the oculus and figures in two corners of the roof of the body (ill. 3).

This way of decoration was probably not due to rational (economical) reasons, but the need for accentuating the rich architectural form of the mausoleum, “extrude” it to a limited extent outside, as a harbinger of developed perfection, which can be fully experienced only after being in the inner space. It is difficult to say why the foundation of the dome in the form of a tambour was abandoned, inserting three oculi in the upper part of walls of the corps, just under the arcade between pendentives. Perhaps the need to maintain proportional relations between the size of the space of the temple and the interior of the chapel, or the need for organising better the natural lighting of the exceptionally extensive, artistic ornamentation of the walls was of great importance here. Intuition would then give grounds for the decision to drag down round windows, because filigree architectural details, lit by sunrays falling at a small angle through the eastern and southern windows, appropriately to the change in the position of the sun, could emanate a dynamic visualization of the chiaroscuro giving an additional, deepened dimension of space. Thus, already at the stage of planning the building, the need for clear exposure of the interior furnishings was taken into account, which could have affected the shape of the chapel.

The rational basis for organizing the composition of the architectural form and the intuitive correlation of many stylistic motifs found special expression in the Renaissance Chapel of God’s Sepulchre in Miechów, which was erected inside the cloister court of the monastery of the Holy Sepulchre Order in the 1530s<sup>3</sup>. Its layout was determined by three basic criteria: striving to reproduce the stylistics of the Wawel Jagiellonian mausoleum, reference to the

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<sup>3</sup> F. Mróz, *Sanktuaria i kaplice Bożego Grobu w Polsce*, Peregrinus Cracoviensis, z. 8, Kraków 2000, p. 84.

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- Ill. 1. Wawel Cathedral, southern entrance, photo by J. Czechowicz
  - Ill. 2. Wawel Cathedral, western entrance, photo by J. Czechowicz
  - Ill. 3. Firley’s family Chapel in Bejsce, eastern elevation, photo by J. Czechowicz
  - Ill. 4. Miechów, the Chapel of the God’s Sepulchre, photo by J. Czechowicz
  - Ill. 5. Krakow, church of the Immaculate Conception, eastern elevation. On the left: Archive of the Krakow Province OCD, sign. ANPK 44/6, K. Brzeziński, Projekt budowy konwentu oo. Karmelitów na Prądniku Czerwonym, 3.06.1908. On the right: existing state, drawn by J. Czechowicz

Jerusalem basilica of the Holy Sepulchre, and consideration of location conditions. The time of the building's erection coincided almost exactly with the construction of the Sigismund Chapel, which was reflected in very clear references to the significant compositional elements of the Renaissance original. Until recently, it was supposed that the inner walls were decorated with polychrome<sup>4</sup>. During the conservation works, in 2009 the original painting layer of the walls was revealed, thanks to which Renaissance polychrome motifs of decorations appeared. Among them, the geometric arrangement of coffers filling the dome's vault, whose drawing and appropriately guided chiaroscuro, according to the lighting direction from the lantern, is particularly distinguished, created an illusion of spatial structure coherent with the modular division of the interior of the dome of the Sigismund Chapel.

The architectural composition arranged inside a separate tomb is the result of a synthetic approach to at least two arrangements: The Sigismund's Chapel and the Holy Sepulchre in Jerusalem. The object was given the character of an aediculae standing in the middle space of the chapel. In this way, a reduced spatial arrangement was created, referring to the location of Christ's Tomb inside the rotunda – anastasis. The facade system has also been reduced and processed in relation to the Wawel prototype. Basic partition zones of the walls have been preserved: the pedestal, the middle part with panels and cornice. In such a small space it was impossible to use a full geometrical program, as in the Sigismund's Chapel. Only the most characteristic compositions were recalled: prominent profiled cornices, sets of three panels with rhombuses (but in a vertical arrangement) and fluted pilasters in corners. Probably the second important reference of a similar size and character, more direct in the sense of spatial arrangement and function, may be the tomb of Rucellai in the church of S. Pancrazio in Florence, the work of Leon Battista Alberti<sup>5</sup>.

Thanks to the advanced compositional thought, the interior of the Chapel of the Holy Sepulchre in Miechów is a suggestive representation of the modern Jagiellonian mausoleum, where in one perspective there are two characteristic structures: divisions of the external facade in a reduced form and painting interpretation of the interior of the dome (ill. 4). Perhaps the author of this concept was B. Berecci, and the contractor was a stonemason from the Wawel workshop<sup>6</sup>.

The external character of the chapel does not promise a rich interior design. The walls, with small oculi, are plastered smoothly, the walls support a plinth, the dome has a cylindrical lantern with narrow, semi-circular windows. The only extensive decorative element is a profiled cornice under the eaves of the roof. Such laconic structure probably resulted from rational considerations: the building was located in a small and narrow monastery yard, which did not allow proper display of exterior elevations from the desired distance<sup>7</sup>. The entire architectural and decorative setting was placed in the internal space, accessible through two portals in the western wall of the cloister.

Taking into account rational criteria and the intuitive ability to shape an architectural structure is particularly important in objects erected in several stages. The original form decides to a large extent about the layout and character of the extension, sometimes affect-

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<sup>4</sup> *Ibidem*, p. 84, 85.

<sup>5</sup> J. Z. Łoziński, *Grobowe kaplice kopułowe w Polsce*, Warszawa 1973, p. 53, 54, ill. 19.

<sup>6</sup> *Ibidem*, p. 54.

<sup>7</sup> *Ibidem*, p. 48 (ill. 8).

ing in principle further design decisions that cannot be completely detached from the oldest structure.

An interesting example is the two-phase Discalced Carmelite Church of the Immaculate Conception, in Krakow, designed in the Neo-Romanesque style by Tadeusz Stryjeński. Construction began in 1908. Because of the high price of the church's construction, further works were entrusted to the builder from Krakow – Kazimierz Brzeziński, who reworked the project, allowing the work to be divided into two stages and the first part completed in a way that would ensure the church's functioning<sup>8</sup>.

The scope of the first phase included a presbytery with a side chapel and a tower. The arcade of the wall closing the presbytery (the zone of later expansion) was filled with a wall, in which a semicircular portal and a Neo-Romanesque triforium were added, illuminating the temporary music choir. The elevation from this side of the church, however simplistic, with its proportions and well-thought-out geometry of architectural elements, was a harmonious, closed composition, so it was not entirely a temporary arrangement.

The temple's nave body was built in 1929–1931. Aiming to reduce costs, the implementation of a large, five-span hall according to the design of T. Stryjeński was abandoned, preferring a smaller, three-span basilica system<sup>9</sup>. The implementation of these plans and the construction management was entrusted to the Krakow architect, Franciszek Mączyński. He treated the existing part of the church as the basis for the composition of the nave band, but departed from the neo-Romanesque concept of T. Stryjeński creating his own intuitive vision of combined neo-romanticism and neo-gothic with the interpretation of historical details in the avant-garde, modernistic character (ill. 5).

One of the modern buildings whose architecture reflects the intention to emphasize the function and the relationship with the surroundings, is the new building of the Szczecin Philharmonic. Designers: Fabricio Barozzi and Alberto Veiga, while developing the architectural layout, were guided primarily by the purpose and location of the object. Architectural composition referred to the musical instrument (original church organs served as a prototype), creating a combination of rhythmic prismatic systems covered with planes with different angles of inclination. The uniform, reflective glass shell combines this dynamic group of forms into one whole, similar to a block of buildings composed of narrow tenement houses, which is coherent with the mannerist urbanism of the Hanseatic city. The clear interior layout has been subordinated to individual functions, with the possibility of adapting to the changing needs for the organization of concerts<sup>10</sup>.

The creative intuition combined with the rational consideration of location conditions and the principles of the philharmonic's functioning resulted in an interesting architectural space with clear connections with music (which is a background for it) and urban planning (complementing it).

It is difficult to predict which way of proceeding is more suitable for obtaining the optimal vision of the created composition. It seems that equally intuition and rationalism are important factors in building a form and it is difficult to consider these basic foundations

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<sup>8</sup> J. S. Wroński, *Krakowskie kościoły karmelitańskie zbudowane na początku XX wieku*, Folia Historica Cracoviensia, Kraków 2004, p. 481.

<sup>9</sup> St. Słowik, *Dziennik dobudowy kościoła oo. Karmelitów Bosych w Krakowie 1929*, Kraków 9.01.1933, rps, arch. Krak. Prowincji OCD, sygn. ANPK 33, p. 16.

<sup>10</sup> P. Fiuk, *Filharmonia dla Szczecina*, Przestrzeń i Forma, nr 10, Szczecin 2008, pp. 332–338.

of creative activity separately. It would be more desirable to find an appropriate proportion between them, but not equivalent to any architectural composition. To realize complex intentions: ideological, practical, stylistic or compositional and to fulfil the functional and technological requirements, there is a constant need for making the right individual choice, appropriate to a specific structure, requiring such and no other solutions.

The architectural work is the result of combining form, function and construction into one whole<sup>11</sup>. Regardless of the time of creation, it reflects the universal principles of forming spaces based on the foundations of rational and intuitive manifestations of creative thought.

## References

- [1] Bogdan M., *Piękno formy i odpowiedniości w architekturze*, Zeszyty Naukowe Politechniki Śląskiej, seria Architektura, z. 19, nr 1110, Gliwice 1992.
- [2] Czyżewski K. J., *Kaplica Wazów – czyli ostatnie mauzoleum Jagiellońskie na Wawelu*, Studia Waweliana, tom XVII, Kraków 2016.
- [3] Fiuk P., *Filharmonia dla Szczecina*, Przestrzeń i Forma, nr 10, Szczecin 2008.
- [4] Łoziński J. Z., *Grobowe kaplice kopułowe w Polsce*, Warszawa 1973.
- [5] Mróz F., *Sanktuaria i kaplice Bożego Grobu w Polsce*, Peregrinus Cracoviensis, z. 8, Kraków 2000.
- [6] Słowik S., *Dziennik dobudowy kościoła oo. Karmelitów Bosych w Krakowie 1929*, Kraków 9.01.1933, rps, arch. Krak. Prowincji OCD, sygn. ANPK 33.
- [7] Wroński J. S., *Krakowskie kościoły karmelitańskie zbudowane na początku XX wieku*, Folia Historica Cracoviensia, Kraków 2004.
- [8] Żórawski J., *O budowie formy architektonicznej*, Warszawa 1962.

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<sup>11</sup> M. Bogdan, *Piękno formy i odpowiedniości w architekturze*, Zeszyty Naukowe Politechniki Śląskiej, seria Architektura, z. 19, nr 1110, Gliwice 1992, p. 9, 10.