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SACRUM – TRANSCENDENCE OF CONCRETE. SACRALISATION OF MATTER IN MODERN MEANINGFUL ARCHITECTURE

SACRUM – TRANSCENDENCJA BETONU. SAKRALIZACJA MATERII WE WSPÓŁCZESNEJ ARCHITEKTURZE ZNACZENIOWEJ

Abstract

In sacral projects, architects use various materials to express sacrum through light and form. Nowadays, there is a sacralisation of concrete, which has become a symbolic building material in modern spaces of numinosum – a mysterious, sacral power, which fills one with fear and terror, and simultaneously attracts and enslaves you.

The development of new materials broadens creative possibilities while simultaneously avoiding the replacement of older, tried and tested materials. A revolution in architecture, and not only sacral, was the development of ferro-concrete by a French gardener, Joseph Monier, in 1867; however, only in 1892 did the French constructor, Francois Hennebique, patent a method for erecting unitary, skeletal ferro-concrete structures. The ease of receiving various spatial forms makes ferro-concrete a material commonly used by creators of sacral architecture. In the history of sacral architecture, the first building to possess all logical properties and consequently, to use a ferro-concrete structure, built in 1894–1904 by the architect and monuments conservator Antale Baodonat [1834–1915], was the Church of St. Jean in Montmartre, Paris. Concrete, primarily used to replace structural materials such as brick and stone, also made it possible to realise the guidelines of the Second Vatican Council on renewed liturgical space. However, only the works of Le Corbusier fully sacralise concrete, which thus becomes the new symbolic stone – material, which is simple and lasting. Le Corbusier, despite his agnostic worldview, designed three sacral buildings: Notre Dame du Haut Ronchamp chapel, built in 1953–1955; monastery of Dominican friars in La Tourette, built in 1956–1960; and church in Firminy, finished after the author's death. Interiors of all these buildings are a study of light, form, and matter. Despite the passage of time, the three buildings became a guidepost for many modern architects.

The article is an attempt at answering the question of what influence on shaping modern sacral interiors did the development of ferro-concrete have in relation to the role of light and matter. The paper analyses the works of modern architecture in which concrete and light are a particular narrational medium.

Keywords: sacrum, symbol, meaningful architecture, narration, modern sacral architecture, ferro-concrete

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Streszczenie

W realizacjach sakralnych architekci posługują się różnymi materiałami, aby wyrazić *sacrum* poprzez światło i formę. Współcześnie nastąpiła *sakralizacja betonu*, który stał się symbolicznym budulcem nowoczesnych przestrzeni *numinosum*, tajemniczej, sakralnej mocy, napawającej człowieka przerażeniem i lękiem, a jednocześnie pociągającej go i zniewalającej.

Wynalezienie nowych tworzyw poszerzyło możliwości twórcze, jednocześnie nie zastępując starych, wypróbowanych materiałów. Rewolucją dla architektury, nie tylko sakralnej, było wynalezienie przez francuskiego ogrodnika Josepha Moniera w 1867 r. żelazobetonu (żelbetu), ale dopiero w 1892 r. francuski konstruktor Francois Hennebique opatentował zasadę wznoszenia jednolitych, szkieletowych konstrukcji żelbetowych. Łatwość w uzyskaniu różnorodnych form przestrzennych powoduje, że żelbet staje się materiałem powszechnie używanym przez twórców architektury sakralnej. W historii architektury sakralnej pierwszym obiektem posiadającym wszelkie cechy logiczne i konsekwentnie użytą konstrukcję żelbetową jest zbudowany w latach 1894–1904 przez architekta i konserwatora zabytków Antale Baodonata [1834–1915], kościół St. Jean w dzielnicy Montmartre w Paryżu. Beton pierwotnie używany w celu zastąpienia dotychczasowego materiału konstrukcyjnego – cegły czy kamienia umożliwił też realizację zaleceń Soboru Watykańskiego II w stosunku do odnowionej przestrzeni liturgii. Jednak dopiero twórczość Le Corbusiera w pełni *sakralizuje beton*, który staje się nowym symbolicznym kamieniem – materiałem prostym i trwałym. LE Corbusier, pomimo agnostycznego światopoglądu, zaprojektował trzy obiekty sakralne: kaplicę Notre Dame du Haut Ronchamp, zrealizowaną w latach 1953–1955, klasztor oo. Dominikanów w La Tourette zrealizowany w latach 1956–1960 i kościół w Firminy ukończony po śmierci autora. Wnętrze wszystkich obiektów to studium światła, formy i materii. Pomimo upływu czasu, te trzy obiekty stały się drogowskazem dla wielu współczesnych architektów.

Artykuł jest próbą odpowiedzi na pytanie, jaką rolę na kształtowanie współczesnych wnętrz sakralnych miało odkrycie żelbetonu pod kątem roli światła i materii. W pracy zostaną przeanalizowane obiekty współczesnej architektury sakralnej, w których beton i światło są szczególnym medium narracyjnym.

Słowa kluczowe: sacrum, symbol, architektura znaczeniowa, narracja, współczesna architektura sakralna, żelbeton

*“A stone will be sacred thanks to the fact
that its form points to a participation in a specific symbol,
or because it contains a hierophany in itself,
memorialises a mystical act/.../
The object appears as if a gathering of an alien power,
which differentiates it from its environment and gives it sense and meaning”
M. Eliade*

Modern architecture not only brought a new view on style and form but also changed attitudes towards the material, which became noble thanks to its simplicity. Thus, a philosophical question appears: whether the material in objects of unique meaning obtains deeper

meaning itself? If it does, then we can assume a “sacralisation of concrete” occurred in the meaningful architecture¹.

Rudolf Otto began musings on the nature of the sacral experience², while Mircea Eliade calls every object of unanimated matter sacred, if it participates in a unique act – event, ritual, or liturgy³. The sacralisation of an object is connected not only to the source of the specific matter, but above all, with the intent of its creator.

Numerous varied phenomena, which occurred simultaneously, influenced the shape of modern architecture. Among the more crucial was the development of ferro-concrete in the second half of the 19th century and its introduction into common architectural use in the 30s of the last century. At the same time, the art of engineering was developing, strongly influencing the artistic assumptions of contemporary architects. The art of building is supposed to grow out of the philosophy of the rational Enlightenment. The most important feature of an object should be its functionality, which influences the remaining design solutions. Such ideological assumptions implied a semantic layer of the idea, fundamentally deprived of meaning⁴. Another crucial aspect that influenced the shape of new sacral buildings was the birth of a movement of liturgical restoration in Europe. A related factor in the creation of new temples was the Vatican Council and its guidelines on shaping new sacral objects⁵.

Sacral architecture has always been connected to the technical and structural possibilities of a specific era. The slenderness of Gothic cathedrals was not only a consequence of philosophical thought but was related to the technological progress of the time as well. Similarly, the structural properties of concrete influenced the works of top architects in the 20th century. The European avant-garde of early modernism, such as Le Corbusier, Walter Gropius (Bauhaus creator), Ludwig Mies van der Rohe, Rudolf Schwarz, Dominkus Bohm, and Otto Bartning were all designers of sacral buildings⁶. Although attempts at using new technology in sacral architecture were made before, the first building of a religious purpose built entirely using new ferro-concrete technology was Notre-Dame Church in Le Raincy near Paris, built in 1922–1923 by French architect August Perret. The church “stands at the beginning of the new sacral architecture, which frees itself from the influence of both the ornamentalism of the 19th century and traditional building materials”⁷. The building had the traditional longitudinal layout of a sacral building and the dominating element of the front façade was a tower, an exterior sign of a temple. The whole structure, both its construction and form, comes from the Trent liturgy. The longitudinal layout and soaring, open-work structure refers to the archetype of the sacrum. Similarly to Gothic, the interior seems light and transparent thanks to the ferro-concrete precast elements filling it.

¹ K. Kucza-Kuczyński, *Sakralizacja Betonu – Dariusz Kozłowski, Waclaw Stefański, Maria Misiągiewicz Droga Czterech Bram*. Wyższe Seminarium Duchowne Zgromadzenia Księży Zmartwychwstańców w Krakowie; Czasopismo – Architektura Betonowa, Grupa Medium Kraków 2006.

² R. Otto, *Świętość*, Warszawa 1968.

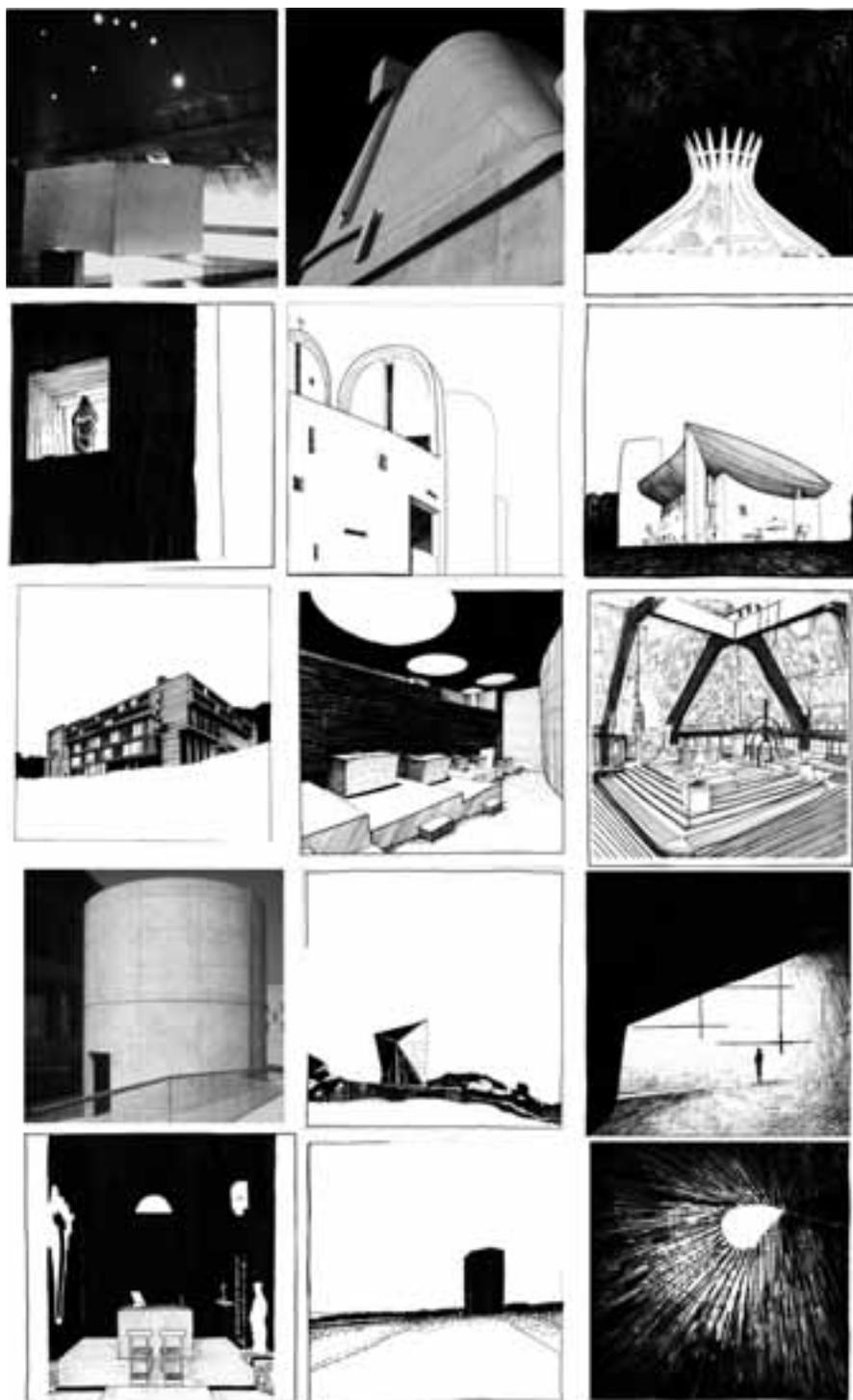
³ M. Eliade, *Traktat o historii religii*, Warszawa 1957.

⁴ Le Corbusier believed that a piece of art should leave an impression of a mathematical order, [in:] A. Kotula, P. Krakowski, *Architektura współczesna*, Kraków 1967, p. 75.

⁵ H. Nadrowski, *Kościół naszych czasów* Kraków 2000 p. 140.

⁶ P. Biegański, *U źródeł architektury współczesnej*, Warszawa 1972, p. 118.

⁷ W Koch., *Styl w architekturze*, Warszawa 1996, p. 283.



The temple is filled with an impression of lightness, and light and air may also be understood in a symbolic way⁸.

In Polish sacral architecture, both pre- and post-Council, there are numerous examples of using ferro-concrete as a structural material. In these buildings, the perception of the matter does not change; the new technology only replaces the old matter⁹.

The prominence of new ferro-concrete technology coincides with the beginning of the liturgical movement of the Catholic Church. The liturgical movement began in France and Belgium and was met with a very supportive atmosphere in Germany, embodied mostly by the richness of the monastic and liturgical life of the Benedictines from Beuron¹⁰. Romano Guardini¹¹, German liturgist, emphasised the role of active participation in the liturgy of not only the clergy, but also the secular devotees through direct contact with the presbyterium. One of the first attempts at a new spatial layout for a Catholic temple became a conceptual sketch made by the architect Emilo Steffanno in 1938, showing the devotees gathered around the altar island¹². Another crucial part of the design was also the freeing of this layout with simultaneous reduction of the supporting beams in order to offer devotees the best possible contact with the presbyterium. In this layout, concrete used for the bearing walls and supporting beams became the most adequate material. Guardini's ideas influenced not only Steffano, but also German architect Rudolf Schwarz, who was friends with Mies van der Rohe, Dominkus Bohm, and Otto Bartning. Their intellectual exchanges started an innovative search of the church's form¹³. The result of these musings were not only Schwarz's conceptual sketches – seven plans¹⁴ but also new Puritan objects which moved away from the previous ornaments. The semantics of sacral spaces was to be the layout itself, not the abundant ornamentation. The interior acquired special meaning through the Holy Liturgy. Freeing the form of the presbyterium was possible thanks to the new ferro-concrete structure. In this case, the new material facilitated realisation of assumptions of the renewed liturgy, as opposed to the previous uses of this material in the sacral architecture. Schwarz, in his work on the modern sacred space, wrote: *We cannot go back to the architecture of cathedrals of the early Christianity and simultaneously follow the examples of these times. This is exactly the error that historicism committed. And our new technologies would fail us. Of course, it would be possible to fully reconstruct the Romanesque or Gothic architecture. But would it be true? For us, architecture is something else. [...] The architecture must fully correspond with the condition and meaning of our Times. Only from the sacrum can the architecture of a temple grow. The sacral architecture grows not from the world, but from the faith, which*

⁸ Por. *ibidem*. p. 132.

⁹ Among Polish pre-Council sacral buildings, particularly noteworthy are: Church of St. Andrew Bobola in Warsaw, designed by architects Jan Bogusławski and Józef Łowiński (built in 1946–1956); Marian Fathers Church of St. Bonifacy in Warsaw, designed by architects Jan Bogusławski and Krzysztof Dyga (built in 1980–1990); Dominican Friars Church of St. Dominica in Warsaw, designed by architect Władysław Pieńkowski (built since 1983).

¹⁰ Ks. Jan Józef Janicki, *Ildefons Henwerger i Roman Guardini – Prekursorzy Ruchu Liturgicznego w Niemczech*, Folia Historica Cracovia, vol. 8/2002, p. 205–227.

¹¹ R. Guardini, *Znaki święte*, Poznań 1937.

¹² A. Zeto, *Spazi celebrative figurazione architettonica simblismo liturgico*, Italia 1994. p. 29.

¹³ K. Kucza-Kuczyński, *Znaki i symbole we współczesnej polskiej architekturze sakralnej* Warszawa 2001, p. 29.

¹⁴ R. Schwarz, *Vom ben de Kirche*, Verlag Autan Pustet, Salzburg 1998. I wydanie Wunburg 1938.

is an answer to our times. [...] Sacral matter, from which the church's architecture will be shaped, should be an active answer to needs of our generation¹⁵.

Schwarz's conceptual sketches of seven churches' plans and Steffanno's ideas resulted in the building of the Church of St. Laurentius in Monachium in 1955¹⁶. The presbyterium with an altar moved forward is located at the centre of the temple. Structural ferro-concrete pillars were removed to the exterior of the building in a way that would not disturb the form of smoothly plastered concrete walls. The narration of the interior is focused on the liturgy. In accordance with the assumptions of contemporary modernists, the interior is devoid of unnecessary decorations, the alcove of the presbyterium is emphasised only by a lapidary light. Munich church is one of the first realisations in the spirit of the renewed liturgy. Due to the small span, all structural elements were visually reduced in order not to disturb the community liturgy. The church became an anticipation of changes in the spatial system of the presbyterium, which happened after the Second Vatican Council. The new liturgical movement in Europe, as well as the appearing modernism, were an augury of changes of the sacral space, which were fully realised after the Second Vatican Council. The Church as a community of devotees was to gather people around one centrally placed altar. The church was supposed to become a perfect background for the liturgy, even more so since, due to the semanticness of the sacred space, the role of the meaning was often reduced to the layout, the matter, or the form of the building.

Functional plans of Brasilia, the capital city of Brasil, included a cathedral designed by Oscar Niemeyer and Joaquim Cardos built in 1970 and regarded as a tremendous achievement of worldwide architecture^{17, 18}. The building was designed on a central plan and placed underground so that the entrance would not interrupt consistency of the form. The structure of the building consists of bent concrete arches resembling a crown of thorns. The main nave has 71 m diameter, while sixteen ferro-concrete arches, which seem to lightly grow out of the ground, were connected 31 m above the floor of the temple. In the building, the ferro-concrete creates a new interior, as opposed to the sacral realisations, in which the material did not change the form of the object. The significance of the community of devotees was emphasised by the circular layout of the building. The innovative form of the building's exterior indicates its sacral purpose and its innovative shape was possible thanks to the structural properties of ferro-concrete. Meanwhile, the shape of the interior comes back to the roots of the Christian community. The cathedral in Brasilia became the most recognisable work of modernist sacral architecture.

According to the guidelines of the Second Vatican Council on building temples, presbyterium and gathering of the devotees should be a central element of the temple¹⁹. In new buildings, the interior was to be homogenic and architects tried to value the "sacred axis" in a variety of ways. These assumptions required shortening the way to the presbyterium and moving it towards the devotees. In the search for unity of the interior, sometimes a ferro-concrete structure was the only spatial solution without additional supporting beams. Among

¹⁵ R. Schwarz *The Church Incarnate* USA 1958 p. 8–9 I publication *vom Baum det Krich*, Heidelberg Germany 1938, [in:] E. Heathcote & L. Moffatt *Contemporary Church Architecture* Great Britain 2007 p. 3, translation of the author.

¹⁶ W. J. Stock, *Architectural Guide – Christian Sacred Buildings in Europe since 1950*, Bonn 2004, p. 133.

¹⁷ A. Benthues, *100 Katedr świata*, (Die 100 schönsten Kathedrale de Welt) Warszawa 2003, p. 196–197.

¹⁸ D. Underwood, *Oscar Niemeyer and the architecture of Brazil*, Milano, Rizzoli 1994.

¹⁹ A. Wierzbicka, *Architektura jako narracja znaczeniowa*, Warszawa 2013, p. 59.

Polish sacral buildings, created in the spirit of the Council's guidelines, particularly noteworthy is the Church of the Holy Spirit in Tychy, designed by Stanisław Niemczyk²⁰, whose system of elements connected with liturgy was described in detail in an article published in 2012²¹. The realisation of the design with polychromy by Jerzy Nowosielski received a SARP award in 1983²². Ferro-concrete girders allowed the freeing of the tent-like form of the building from unnecessary supporting beams, and the "stylistic separateness and escape from both dry modernism and decorative postmodernism resulted in an original work"²³. Achieving a new form relating to the early Christian tradition is possible only thanks to the ferro-concrete structure and, as the author of the project says himself, "The essence of the church is its vertical axis that connects heaven and earth. [...] Symbolism of the emanation of the Holy Spirit – we say "emanation", as if It emanates on us from the above. [...] The vertical axis integrates the whole church and gives it the connection that works both ways. We move within vocabulary which is understandable for us in all actions"²⁴. The church in Tychy is an example of combining new material with traditional form and rich semantics. Through contrasting austere girders with the warm, wooden lining of the interior, the designer minimalised the need for lighting and completed it with detail rich in symbolism²⁵. The examples named above point out a new direction of search for sacral interiors, in which the assumptions of the designers grow out of the spirit of the post-Council liturgy. In realisations like these, the new material allowed them to achieve the larger structural spans needed in centralised layouts.

Decisions of the Second Vatican Council occurred at the same time as the development of modernism in architecture²⁶. The asemanticness of the movement, braking off tradition and the semantic layer, was in contradiction to sacral architecture, in which signs and symbols are the basic layer of communication. Thus, in its radical variety, modernism could not fulfil fundamental assumptions of sacral architecture, since its basis lay in extreme rationalism and sometimes materialism. However, works of creators of modernism such as Mies van der Rohe and Le Corbusier, as well as buildings and theoretical works of Schwartz, Böhm, and

²⁰ S. Niemczyk, *Zespół sakralny pod wezwaniem Ducha Św. w Nowych Tychach*, „Architektura” 5,6/1985, p. 66.

²¹ A. M. Wierzbicka, *Detal i narracja we współczesnej architekturze sacrum*, [in:] *Czasopismo Techniczne, Definiowanie przestrzeni architektonicznej. Detal architektoniczny dziś*, Politechnika Krakowska, Kraków 2012, 5A/2/2012, no 109, v.2, p. 628–632.

²² Opinion of jury of SARP Competition 1983, *Architektura* 5,6/1984 p. 66.

The church was appreciated for unique attempt at defining sacral space, [...] lapidary architectural form". The main space of the building was planned as a rectangle, on which the elevated altar space is placed symmetrically to the sides of the rectangle. The devotees gather around three sides of the altar, which allows them nearly simultaneous visual access to it. The whole space was covered with a pyramidal roof, and the light is directed at the central point.

²³ K. Kucza-Kuczyński, *Nowe kościoły w Polsce*, Warszawa 1991, chap. 18, p. 57.

²⁴ S. Niemczyk, *Krajobraz pierwotny*, interviewed by: P. Boguszewski, A. Jabłoński, A. Mikulski, *Architektura i Biznes*, 12/2002, p. 34.

²⁵ P. Boguszewicz, *Architekt buduje domy*, *ibidem*, p. 38.

²⁶ H. Nadrowski, *Kościół naszych czasów*, Kraków 2000 p.140 „The purpose of the whole space of the church – both internal and external – is to shape the community, to simplify relating Truths of the Faith, to create atmosphere of a dialogue with God, both for an individual recipient and, in a particular way, for the specific liturgical community. Through the interior of the church, new people of God are created. The church is a building of unique service and unique action”.

Steffanna prove the impossibility of ignoring the significance of the modernist movement for sacral architecture. By breaking with tradition, modernists looked for new forms of sacral buildings. Modernism created new possibilities for designers, whose actions were no longer limited by one canon of sacred space. Schwartz and Steffanna looked for semantic meanings in the interior layout itself. Other architects, while searching for new forms, went back to the source of primal meaning – cosmological symbols, which were not changed by culture throughout history²⁷. The new movement did not give an unequivocal answer to questions about the shape of the modern temple and the nature of the modern sacrum. Extreme rationalism rejected the semantic layer of the matter, reducing the transcendental needs.

Simplicity, sincerity, and the structural possibilities of the concrete caused it to be commonly used. Not by accident did Le Corbusier use concrete for the realisation of his three sacral buildings. Le Corbusier was sceptical of the Church and even more so of designing temples²⁸. Raised in a strict Protestant family, he did not approve of religious practices and organisations connected to the Catholic Church²⁹. He considered himself to be agnostic, which did not contradict his fascination with sacral symbolism³⁰. Le Corbusier's sacral projects, despite their mathematical basis, contain transcendental mystery.

His first sacral project, realised between 1950 and 1955, is Ronchamp pilgrims chapel in France³¹. The temple, raised in place of a destroyed building, awoke extreme emotions immediately after its consecration, from awe to harsh criticism. It is noteworthy, however, that this small project is to this day the most iconic realisation of the modern sacral architecture, “*This tiny church, built on a forest-covered hill, [...] consecrated on 26 June 1955, soon became known in the whole world. Architectural and sculptural elements combined themselves into a perfect entirety*”³². The chapel deviates from the previous rigorous layout. Its plan has been drawn on an irregular layout, while thick concrete walls were shaped so the interior would resemble a primitive shelter – a cave. Coarse concrete walls let in the light uncovering a certain mystery, while irregular openings increase the impression of a sacred space. The key element of the structure is the roof constructed in the shape of a shell – the wings of the plane cause various associations. The concrete cover is “*an empty concrete shell, and plasticity of forming the space compliments the austere concrete*”³³. The interior is austere and devoid of any unnecessary elements. The matter–raw concrete and light coming through colourful stained-glass windows– creates this space, “white, softly designed walls supporting an uplifted, concave ferro-concrete roof, resembling organic forms similar to a giant mushroom in its shape”³⁴. Le Corbusier himself said that when designing the chapel, he could immerse himself in problems for which no utilitarian purpose was needed, exactly through the austere and primal like a rock matter of concrete³⁵. The Ronchamp chapel became not only an

²⁷ J. Hani, *Symbolika świątyni chrześcijańskiej*, Kraków 1998.

²⁸ W. Leśnikowski *Wyznanie agnostyka*, Architektura i Biznes 7/8 2007, p. 44–49.

²⁹ A. Flint, *Le Corbusier – architekci jutra*, Warszawa 2014, p. 189–214.

³⁰ G. Gresler, *Le Corbusier it program liturgical*, Sacred Conrad 2001, USA, pp.7–8.

³¹ F. Samuel, I. Linder- Gaillard, *Sacred Concrete, The Churches of Le Corbusier*, Birkhauser 2013, p. 82–113.

³² A. Kotula, P. Krakowski, *Architektura współczesna*, Kraków 1967, p. 159.

³³ W. Koch, *ibidem*, p. 284.

³⁴ A. Kotula, P. Krakowski, *ibidem*, p. 160.

³⁵ A. Kotula, P. Krakowski, *ibidem*, p. 160.

inspiration for numerous creators by restating a primal perception of the space of sacrum, but also caused the revaluation of the matter. Concrete in the project creates consistent meaning along with the sacred space.

The second sacral building designed by Le Corbusier is the monastery of Dominican friars in La Tourette³⁶. As opposed to the previous project, the building grows out of the modernism while not being a contradiction to the centuries-long tradition of Christian architecture. Located on a steep hill, it blends in with the rolling landscape. The function of the building comes from the needs of the congregation, while the cells for the friars were designed in accordance with the “module” ratio. The whole monastery, both the utilitarian and sacral elements (chapels and cloister garth) are designed in a raw concrete, as simple as the Dominican habit. As Le Corbusier declared himself, the interior of the monastery reflects the total poverty of the monks³⁷. Both interior and exterior of the building were designed to reveal the coarse texture of concrete. The building is simple, honest, and legible in its structure and matter. Unfortunately, due to the imperfectness of contemporary technology, it did not withstand the passage of time; however, it is still a crucial testimony in which matter obtains a sacral character.

The last sacral project of Le Corbusier is the Church of St. Peter in Firminy, France, designed in 1960-68 and built in 1968-2006 with the help of the architect Jose Oubrerie^{38,39}. The building had already been highly controversial during its design stage. The entirety of the building, just like the previous realisations, is designed in raw concrete, the main nave is covered with a frustum of a cone, rising from a square basis and the church is filled with solar symbolism. “On the wall of the cone located behind the altar, Le Corbusier placed a series of small, round openings that resemble a constellation”⁴⁰. [...] Above the presbyterium, an irregular net of small glazed openings is placed in the shell of the nave: the Orion constellation – a symbol of the eternal, cosmological order of God⁴¹. The church was supposed to complete other functions in the city, however, it was finished many years after its architect’s death. This seemingly heavy mass of church, just like Ronchamp and La Tourette, is an affirmation of simplicity, poverty, and truth⁴². As Kucza-Kuczyński rightfully points out, Le Corbusier’s sacral projects are irrefutable proof that the emotional atmosphere is vital to the final understanding of the *sacrum* space⁴³.

Modern art is suffering from a crisis. The sacral architecture has always fulfilled a particular role, being a reflection of deep transcendent needs. Looking for a new form, systems, and meanings leads to looking for cosmological symbols. Concrete, in its many forms, has become “current stone”. Used in various forms by modern creators, it never limits itself to only a few solutions, as shown in numerous examples of modern sacral

³⁶ A. Flint, *Le Corbusier- architekt jutra*, Warszawa 2014, p. 124–153.

³⁷ Le Corbusier as cited in: *ibidem*, p. 208.

³⁸ W. Leśnikowski, *Wyznanie agnostyka*, *Architektura i Biznes* 7/8 2007, p. 44–49.

³⁹ K. Kucza-Kuczyński, *Ostatni kościół modernizmu*, *Tygodnik Powszechny* 13.01.2009; <http://tygodnik.onet.pl/1.19682druk.html>.

⁴⁰ W. Leśnikowski, *op.cit.*

⁴¹ K. Kucza-Kuczyński, *op.cit.*

⁴² A. Flint, *ibidem*, p. 124.

⁴³ K. Kucza-Kuczyński, *Analiza współczesnej architektury sakralnej w 40 lat po Soborze*, Warszawa 2003, p. 15.

buildings using concrete technology⁴⁴. Honest, noble, and true matter states the truth about the subject.

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⁴⁴ Currently, there are numerous examples of modern buildings in which „sacralisation of concrete” took place, such as: Tadao Ando’s *Water Chapel* in Tomamu on Hokkaido in Japan, built in 1985–1988; Light church in Ibaraki, Japan, built in 1989; place of meditation and prayer in Parisian UNESCO complex, first building designed by Ando in Europe, built in 1995; a private chapel in Douro, Portugal, designed by Alvaro Siza in 2001; a chapel in Oberrealta, Switzerland, designed by an architect Christian Kerez and built in 1992; a private chapel in Vallecercón, Spain, designed by Sancho-Madrídejos agency and built in 2001; a church in Foligno, designed by Massimiliano & Dorian Fuksas, built in 2009.

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