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SVITLANA LINDA
ORCID: 0000-0001-6963-6101
Opole University of Technology, Poland
Lviv Polytechnic National University, Ukraine

# WHEN GEOMETRY BECOMES EMOTION: THE ARCHITECTURE OF MARIO BOTTA IN LVIV

# GDY GEOMETRIA STAJE SIĘ EMOCJĄ: ARCHITEKTURA MARIA BOTTY WE LWOWIE

A b s t r a c t

Mario Botta's Lviv project shows how simple geometry shapes a deep spiritual space. Using circles, squares, and brickwork, the architect transforms rationalism into emotion, where light inspires inner focus. The Divine Providence Center integrates into the city through its monumentality and proportions without copying the past. This sacred architecture becomes a symbol of identity, contemplation, and cultural continuity.

Keywords: *architecture, Lviv, Mario Botta, The Divine Providence Center*

S t r e s z c z e n i e

Projekt Mario Botty we Lwowie pokazuje, jak prosta geometria tworzy głęboką przestrzeń duchową. Wykorzystując koła, kwadraty i cegłę, architekt zmienia racjonalizm w emocje, gdzie światło inspiruje wewnętrzne skupienie. Centrum Opatrzności Bożej integruje się z miastem poprzez monumentalizm i proporcje, nie kopiując przeszłości. Ta sakralna architektura staje się symbolem tożsamości, kontemplacji i ciągłości kulturowej.

Słowa kluczowe: *architektura, Centrum Opatrzności Bożej, Lwów, Mario Botta*

## 1. INTRODUCTION

The Divine Providence Center of the Orionist Fathers in Lviv is one of the most outstanding examples of contemporary sacred architecture in Ukraine at the beginning of the 21st century. Its creation resulted from the combination of the Catholic congregation's spiritual mission, social responsibility, and architectural innovation. The complex, designed by the internationally renowned Swiss architect Mario Botta, demonstrates a new approach to the formation of sacred space, in which the church emerges not only as a place of worship but also as a centre of education, charity, cultural activity, and social integration[1].

[1] Texty.org.ua, *Vsesvitno vidomyi arkhitektor zbuduie modernu tserkvu u Lvovi* [*The world-famous architect will build a modern church in Lviv*], "Texty.org.ua", 18.11.2013, https://texty.org.ua/fragments/49724/Vsesvitno_vidomyj_arkhitektor_zbuduje_modernu_cerkvu_u-49724/ (access: 12.04.2026).; V.V. Vech-

The history of the complex's creation reflects a long process of developing its conceptual foundations, architectural identity, and functional structure. This allows the Divine Providence Center to be considered not merely as an individual architectural object, but as a comprehensive socio-cultural project aimed at the development of the local community, support for socially vulnerable groups, and the strengthening of intercultural and interfaith dialogue[2].

The aim of this article is to analyse the architectural concept of the Divine Providence Center of the Orionist Fathers in Lviv, identify the specific features of its spatial composition, structural solutions, and artistic and expressive approach, and demonstrate the relationship between architectural form, symbolic meaning, and the social function of the complex. Particular attention is given to the interpretation of Mario Botta's creative vision, the synthesis of Western European and Byzantine traditions in the design of sacred space, and the role of the Divine Providence Center as a contemporary spiritual, cultural, and social hub of Lviv.

## 2. STAGES IN THE DEVELOPMENT OF THE DIVINE PROVIDENCE CENTER OF THE ORIONIST FATHERS IN LVIV

The idea of creating the Divine Providence Center of the Orionist Fathers in Lviv emerged at the beginning of the 2000s in response to the need to establish a modern spiritual and pastoral complex that would combine religious, educational, social, and cultural functions. The Little Work of Divine Providence (Orionists), founded by Saint Luigi Orione, resumed its activities in Ukraine in 2001 and began implementing a large-scale project intended to become not only a centre of monastic life but also an open public space for the residents of Lviv[3].

After several unsuccessful attempts, the Orionists, through the mediation of the city authorities, received a plot of land in the northern part of the city, within a residential district built in the 1970s. "To give the periphery a centre" – this was the expression used to define the new initiative of Don Orione's followers. At the same time, the project was intended to integrate organically into the urban structure and become an inseparable part of the city. The design of the building was entrusted to the renowned Swiss architect Mario Botta. Mario Botta first visited Lviv in 2009 and, after seeing the site and its surrounding context, began developing the project concept. Later, he wrote: "I would never have come to Lviv if it had not been for the initiative, courage, and faith of certain people – the apostles of Don Orione..."[4].

In the programmatic document entitled "The Ideal Project", the Orionist community of Lviv outlined its main objectives, ideal directions of activity, and ultimate goals. The ideal foundation found its central core and synthesis in the so-called "guiding idea": a creative concept that, by imaginatively transporting the community into a desired and anticipated future,

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[2] E. Montanari (ed.), *Mario Botta: Tsentr Bozhoho Provydinnia. Lviv* [*Mario Botta: Center of Divine Providence. Lviv*], Apriori, Lviv 2018, pp. 55–60.; M. Botta., *My Architecture. The Orionist Monastery Parish Center in Lviv*, "Lviv Center", 4.11.2013, https://www.lvivcenter.org/en/discussions/contemporary-architecture/ (access: 10.04.2026).

[3] *Ibidem*.

[4] *Ibidem*.

enables it to activate the energy of hope and creativity in the present and begin shaping what does not yet exist. This guiding idea was formulated as follows: "The Orionist community is a small sign of love and communion..."

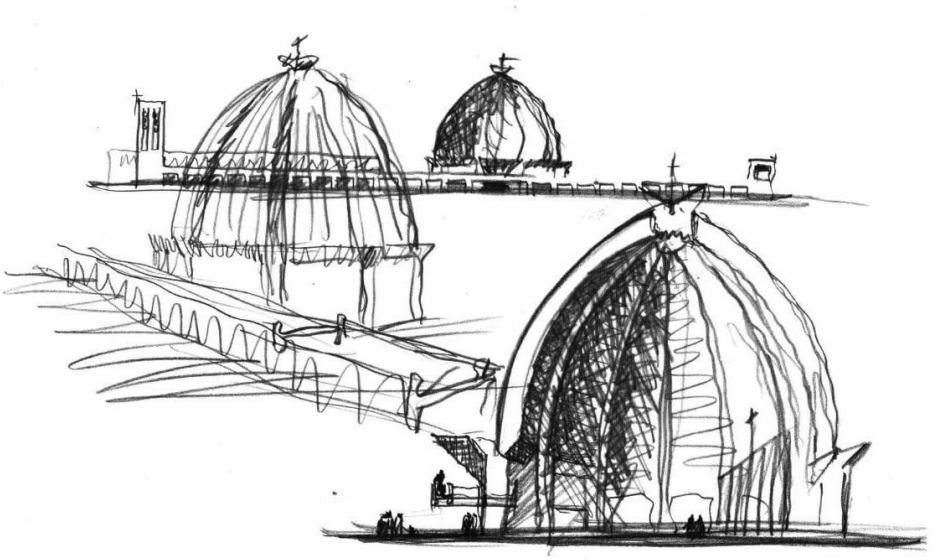
This concept concentrated the essential aspects of the community's life and activities, which were to correspond to the structural elements forming the architecture of the complex: the community required a "monastery", the parish required a "church", young people required an "oratory", people with disabilities required a "workshop-house", and the poor required a "centre of consolation". Thus, Mario Botta's project translated this concept into a specific architectural and spatial solution, which was reflected in the three main components of the complex: the monastery, the church, and the multifunctional social building. The implementation of the sacred-social complex of the Divine Providence Center was planned as a consistent process divided into three interconnected technological and functional stages[5].

The first stage, completed in 2013, involved the construction of the monastery building for the Orionist Fathers' community. From the outset, the building was designed with a dual purpose: the ground floor accommodated a small family-type shelter for children with disabilities, while the second floor was designated for monks' rooms, a student dormitory, and guest facilities. The total area of the building was 1,300 m². The bell tower, with a height of 17.3 m, became a distinctive vertical accent of the architectural composition. At the same time, a temporary Chapel of Saint Luigi Orione was established within the building (Ill. 1)



Ill. 1. Overall view of the monastery building with the bell tower (photo by S. Linda)

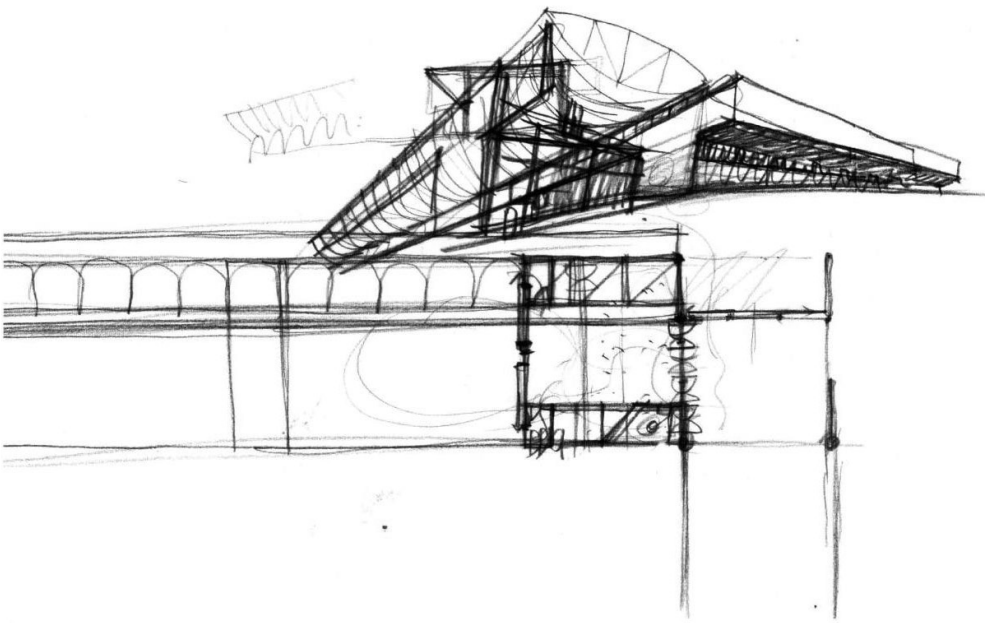
[5] *Ibidem*.



Ill. 2. Conceptual studies for the church dome by Mario Botta (source: Montanari, 2018)



Ill. 3. Overall view of the Church of Divine Providence (photo by S. Linda)



Ill. 4. Conceptual studies for the architectural image of the multifunctional complex by Mario Botta (source: Montanari, 2018)

The second and most significant stage was the construction of the main Church of Divine Providence, which became the architectural focal point of the entire complex. The erection of this 28-metre-high structure required unique engineering solutions developed by the Italian studio MSC Associati in cooperation with Ukrainian manufacturers. The structural system was based on 20 large prefabricated reinforced concrete arch-columns and more than 150 wall panels. In addition to its religious function, the space acquired an additional symbolic meaning as a memorial church dedicated to the Heroes of the Heavenly Hundred – participants of the Revolution of Dignity of 2014. Currently, the construction of the church is nearing completion (Ill. 2, 3).

The final, third stage of the complex's development is planned to include the construction of a multifunctional social and rehabilitation building. This block was conceived as an inclusive youth and educational hub, incorporating specialised workshops for people with disabilities, an open youth centre (oratory), as well as support services for low-income and socially vulnerable groups. The project envisages the creation of spaces for meetings, leisure activities, and the education of children and young people, including a large multifunctional hall, facilities for educational courses and catechesis, a recreational room, and workshops. At present, the project remains in the design stage (Ill. 4).

## 3. THE CONCEPTUAL DEVELOPMENT OF THE DIVINE PROVIDENCE CENTER OF THE ORIONIST FATHERS IN LVIV: A SYNTHESIS OF EASTERN AND WESTERN ARCHITECTURAL TRADITIONS

The concept of the architectural image of the Divine Providence Center in Lviv was based on the idea of a spatial bridge and dialogue between Eastern and Western Christianity. The primary objective of the project was to integrate the Italian cultural origins of the Orionist monastic order into the context of the Ukrainian Greek Catholic tradition. This approach resulted in a synthesis of Byzantine and Italian architectural influences, which defined a new interpretation of sacred typology and the spatial organisation of the church[6].

The Byzantine tradition of the East introduced into the project a sense of monumental tranquillity, sacred mysticism, and respect for the historical principles of Ukrainian church architecture. In contrast, the Western European influence was expressed through the rationality of the composition, geometric clarity of forms, tectonics of structures, and the expressive brickwork characteristic of Mario Botta's architecture[7]. Instead of directly reproducing either the traditional Western basilica plan or the Eastern cross-domed church type, the architect created a new hybrid typology that reinterprets the tripartite structure of the Ukrainian church through the language of contemporary modernism[8].

This conceptual synthesis directly determined the spatial and planning structure of the building. The basis of the volumetric and spatial composition is a centripetal arrangement combining the circle and the square, which has deep roots in Byzantine architectural tradition and the symbolic geometry of sacred structures. However, instead of a traditional dome on a drum, Botta integrated a contemporary skylight, which became not only the structural culmination of the building but also the principal element shaping the interior atmosphere of the church[9].

The Church of the Divine Providence Center of the Orionist Fathers in Lviv demonstrates clear compositional and visual parallels with the tradition of the Italian Renaissance, particularly with the Cathedral of Santa Maria del Fiore in Florence. However, Mario Botta did not create a direct historical replica; rather, he reinterpreted the principles of Renaissance sacred architecture within a contemporary context. The similarity is primarily manifested in the monumentality of the central volume, the clarity of geometric forms, and the dominance of the domed composition. Like the Florentine cathedral, the church in Lviv establishes a strong vertical accent within the urban environment and functions as a symbolic landmark. The dome serves not only as a structural element but also as an important spiritual image – a symbol of the heavens and the connection between the earthly and the sacred realms (Ill. 5, 6).

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[6] *Ibidem.*

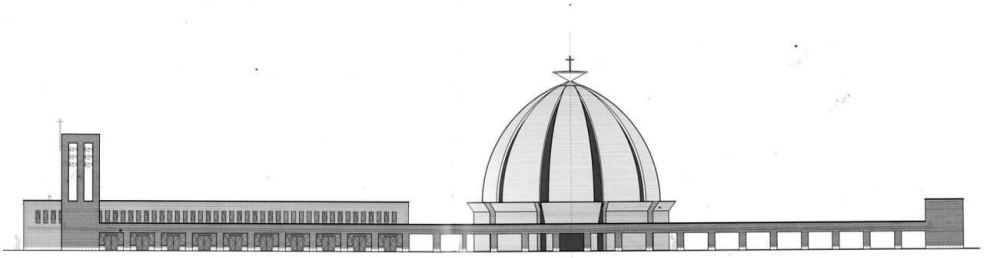
[7] K. Frampton, *Towards a critical regionalism: Six points for an architecture of resistance*, [in:] H. Foster (ed.), *The anti-aesthetic: Essays on postmodern culture*, Bay Press, Port Townsend 1983, pp. 16–30.

[8] E. Montanari (ed.), *op. cit.*

[9] F. Ronco, G. Bertola, E. Pupi, *Geometric operations in Mario Botta's architectural work*, "Nexus Network Journal" 2023, no. 25, pp. 431–445, https://doi.org/10.1007/s00004-023-00670-y (access: 12.05.2026).



Ill. 5. Iconic view of the dome of Santa Maria del Fiore Cathedral in Florence (photo by S. Linda)



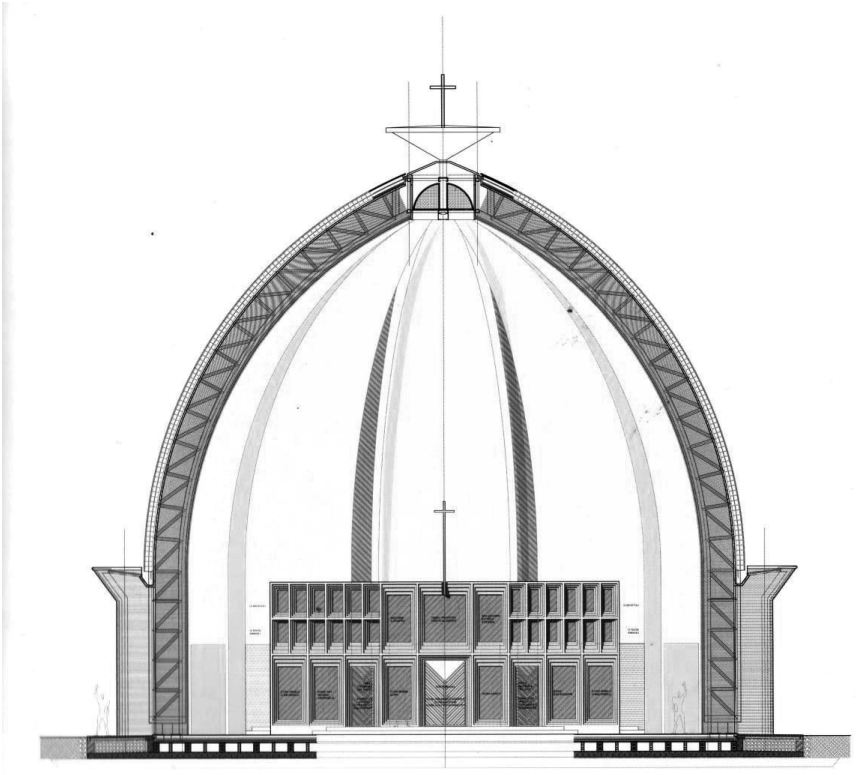
Ill. 6. Elevation of the monastery building with the bell tower and the dominant domed volume of the church (source: Montanari, 2018)

Similar to the arrangement of the dome of Santa Maria del Fiore in Florence, where the lantern plays an important role in completing the composition and distributing structural loads, the upper lantern of the Lviv church has been transformed into a central element of interaction between architecture and natural light. The rays of sunlight entering from above dynamically shape the minimalist interior, creating a space in which light becomes an active architectural element and a means of forming a sacred experience[10].

[10] G. Cappellato, *Mario Botta: Light and Gravity: Architecture 1993–2003*, Prestel, Munich–Berlin–London–New York 2004, p. 26.

This parallel with the Florentine cathedral is particularly evident at the level of structural load distribution and the tectonics of large spans. Both architects addressed a similar structural challenge: covering a large-scale centralised space without the use of intermediate internal supports, relying instead on a rigid geometric framework. However, while Brunelleschi applied a system of a double-shell dome with vertical ribs and horizontal ring connections in Santa Maria del Fiore, Mario Botta reinterpreted this principle through the use of contemporary structural materials and technologies[11].

Brunelleschi's main structural breakthrough was the rejection of traditional massive masonry construction in favour of a system of interconnected ribs that ensured the stability of the large-scale dome structure. In Mario Botta's project, a similar principle of tectonic spatial organisation receives a contemporary interpretation: the interior space of the Lviv church is formed by a framework of 20 powerful prefabricated reinforced concrete arch-columns that concentrate the main vertical and horizontal loads of the structure. The horizontal thrust of the construction, which in the Renaissance dome was counteracted by a system of concealed stone restraints, is resolved in the Church of Divine Providence through a modern ring beam. The upper sections of the arched columns are united by a massive monolithic ring that works in tension and provides the structural foundation for the upper skylight[12] (Ill. 7, 8).



Ill. 7. Cross-section of the church building (source: Montanari, 2018)

[11] K. Frampton, *op. cit.*

[12] E. Montanari (ed.), *op. cit.*



Ill. 8. Interior view of the church's domed space (photo by S. Linda)

As in Florence, where the lantern of the cathedral performs not only a finishing but also a structural and symbolic function, in the Lviv church the skylight completes the engineering system of the building while simultaneously creating the main spatial accent of the interior. This approach to the interaction of architectural mass, structure, and natural

light, reinforced by Botta's characteristic brickwork, creates an environment in which mathematical geometry acquires symbolic meaning and becomes a means of expressing the idea of spiritual unity[13].

The interior of the church continues this tectonic dialogue by transforming structural elements into a space of emotional and spiritual experience. The interior of the Church of Divine Providence is free from excessive ornamentation; its primary expressive means are the texture of light-grey concrete, the rhythm of warm ochre brickwork, and the upward orientation of structural lines towards the source of natural light. The architect devoted particular attention to the design of the altar area – the central zone of the Eastern rite. Instead of the traditional high iconostasis, which completely separates the sanctuary from the nave, Botta proposed a semi-open low structure that preserves the liturgical function of the iconostasis while simultaneously ensuring greater visual permeability of the space. This approach demonstrates the architect's intention to synthesise Eastern and Western Christian traditions, creating a sacred space that does not divide but rather unites the participants in the liturgy [14].

The altar is positioned on the central geometric axis of the building, directly beneath the skylight, which concentrates the vertical flow of natural light. The entire interior composition is subordinated to the interaction of light, geometry, and material: zenithal illumination emphasises the altar and is evenly diffused throughout the amphitheatre-like arrangement of benches, forming a space of contemplation and spiritual communication[15].

Thus, the architect created an environment in which the interaction of two traditions is based on the principle of complementarity. The dynamics of the interior space are governed by the idea of dialogue: light becomes an active architectural element, geometry becomes a carrier of symbolic meaning, and architectural form becomes a reflection of cultural and inter-Christian dialogue.

## 4. CONCLUSION

The symbolic and social dimensions of the Divine Providence Center in Lviv reveal it as a unique humanistic ecosystem, where architecture has become a material embodiment of the philosophy of the Orionist Fathers. For the patrons, this complex represents an "ideal project" for the order's mission, as it was intended to unite under one roof three fundamental dimensions of Christian service: religious life, historical memory, and selfless social assistance. The spiritual core of the complex is the main church, where the centripetal planning structure and carefully orchestrated interplay of zenithal light create a distinctive space for prayer and inner contemplation.

This effect is achieved through the rational application of sacred geometry: the primary forms underlying the building are the circle and the square – archetypal elements that, within Christian tradition, symbolise the earthly and the divine, the human dimension and the infinity of the Creator. Mario Botta's pure geometry here is devoid of abstract coldness; instead, it becomes a direct language of emotions, where the scale of the structure, the austere

[13] F. Ronco, G. Bertola, E. Pupi, *op. cit.*
[14] E. Montanari (ed.), *op. cit.*
[15] *Ibidem.*

materiality of concrete, and the warmth of brick appeal to human perception and inner experience. Rational geometry is transformed into a psychological experience: the alternation of light and shadow evokes a sense of protection, silence, and profound tranquillity, which are essential for spiritual concentration.

This sacred function is inseparably connected with national memory, as the integration of a memorial dedicated to the Heroes of the Heavenly Hundred directly into the structure of the active church transforms it into a national symbol of sacrifice and living history. The geometric strictness of the concrete arches and brick lines becomes a symbol of resilience, evoking a complex emotional response in visitors – from grief to hope and solidarity. The building's spiritual mission finds its earthly continuation in the social section of the complex, which includes a family-type shelter for children with disabilities and inclusive workshops. This space represents a practical embodiment of Saint Luigi Orione's principle of creating good for all, where the architectural environment, through thoughtful ergonomics, tactile qualities of materials, and emotional comfort, restores dignity to the most vulnerable members of society through daily care and rehabilitation.

In this way, Mario Botta succeeded in avoiding a separation between high aesthetics and practical functionality: sacred geometry and architectural emotion become the connecting element that unites the ideal proportions of the church with the psychological and functional needs of people. Prayer within the church naturally transforms into active charity, forming an integral philosophical concept in which architectural form serves human beings in all their spiritual, emotional, and physical dimensions.

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[7] Vecherskyi V.V., *Botta, Mario*, "Velyka ukrainska entsyklopediia" [Great Ukrainian Encyclopedia], 09.11.2021, https://vue.gov.ua/Ботта,_Маріо (access: 10.04.2026).

Author's Note

**Prof. Svitlana Linda, PhD, DSc, Architect**

Professor at the Department of Architecture and Urban Planning, Faculty of Civil Engineering and Architecture, Opole University of Technology (Poland) and Professor at the Department of Design and Architecture Fundamentals, Institute of Architecture and Design, Lviv Polytechnic National University (Ukraine). Her research focuses on issues related to cultural heritage, with a special emphasis on architecture and urban planning of the 19th–21st centuries.

s.linda@po.edu.pl