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LATE ANTIQUE CENTRALLY PLANNED BUILDINGS AND THEIR INFLUENCE ON RENAISSANCE ARCHITECTURE

INTRODUCTION

There are several different types of central structures according to the general typology of architectural structures. From the Roman period, especially from the time of Late Antiquity the centrally planned buildings of various types were developing almost simultaneously. Material that can be separated for that purpose through a historical survey of architecture is different in quality and quantity. Analyzing available examples it can be concluded that their development was almost certainly induced by functional requirements and symbolic reasons, tending to spatially unite structures of monumental expression, no matter how big the structure really was. In Late Antique time this type became closely connected to the settled layers of symbols and memories of them. They are, above all, the cult of the dead and immortal godlike characters which was materialized through various cult and burial structures (mausoleums, herons, martyriums and memories), and the cult of celestial power executed through the figure of the ruler in numerous ceremonies and rituals. A great ability of the centrally planned buildings to combine spatially and organically with other architectural forms gives it a special place and value in the development of architectural forms, especially from the time of Renaissance and after.[1]

LATE ANTIQUE CENTRALLY PLANNED BUILDINGS

Centrally-planned building is a building in which the sides are of equal length and in which the main space is symmetrical when bisected laterally and

[1] N. Kurtovic-Folic, *Typology of Architectural Forms-Strong and Weak Typological Characteristics*, Facta Universitatis, Vol.No 2. (ed. K. Hedrih), University of Niš, 1995, pp.227-235; idem, *Triconch - Its Origin and Place in the Development of Architectural Forms*, Facta Universitatis, Vol.1, No 4, (ed. K.Hedrih), University of Niš, 1997, pp. 473-482. A. Grabar, *Martyrium*, Recherches sur le cult des reliques et l'art chretien antique, Tom I, Paris 1946; engravings of Roman mausolea see also in: G.B. Montano, *Le cinque libri di Architectura*, Scielta di varii tempietti, Roma 1684.

longitudinally. A centrally-planned building may be square, round, octagonal, or of other geometrical form, and often a Greek cross. The most important feature of a centrally-planned building is the open space at the center of the building, developed around a vertical axis.

In Roman architecture central forms were developed in several different architectural programs:

- as a memorial buildings;
- as a type of temples;
- as a rooms in thermae;
- as a rooms in residence of the rulers and the wealthy patricians.

If we want to trace central forms as memorial buildings one of the oldest graves is Caecilia Metella from the 1st century BC. (fig. 1) In that type have occurred a number of other graves, of which the most monumental is the Mausoleum of Hadrian, from the 2nd century AC, later converted to Castel Sant'Angelo. In Late Aantique memorial buildings a trend toward the monumentality is emphasized, although buildings do not have to be large. It was achieved by unifying the internal space, which was enabled by central plan. A variety of late ancient tombs is Evidence of favor towards the central plan:

- Galerius Mausoleum (cylindrical structure, 306 AC) (fig. 2)
- Diocletian Mausoleum (octagonal plan, turn of the fourth century AC)
- Gala Placidia Mausoleum (greek cross plan, around 430 AC)

Fig. 1 Tomb of Cecilia Metella;
Сл. 1 Гробница Цецилије Метеле;

Figure 2 Mausoleum of Galerius
Сика 2 Галеријев маузолеј

In some cases, in which, due to certain problems, instability of the central core was noticed, elements which strengthened it are applied.[1] These elements could be built at the same time or added later, when stability is violated. (fig. 3) This fact is of great importance for early Christian and Renaissance buildings built after them.[2]

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2 A. Grabar, *Martyrium*, Recherches sur le cult des reliques et l'art chretien antique, Tom I, Paris 1946; engravings of Roman mausolea see also in G.B. Montano, *Le cinque libri di Architectura, Scielta di varii tempietti*, Roma 1684.

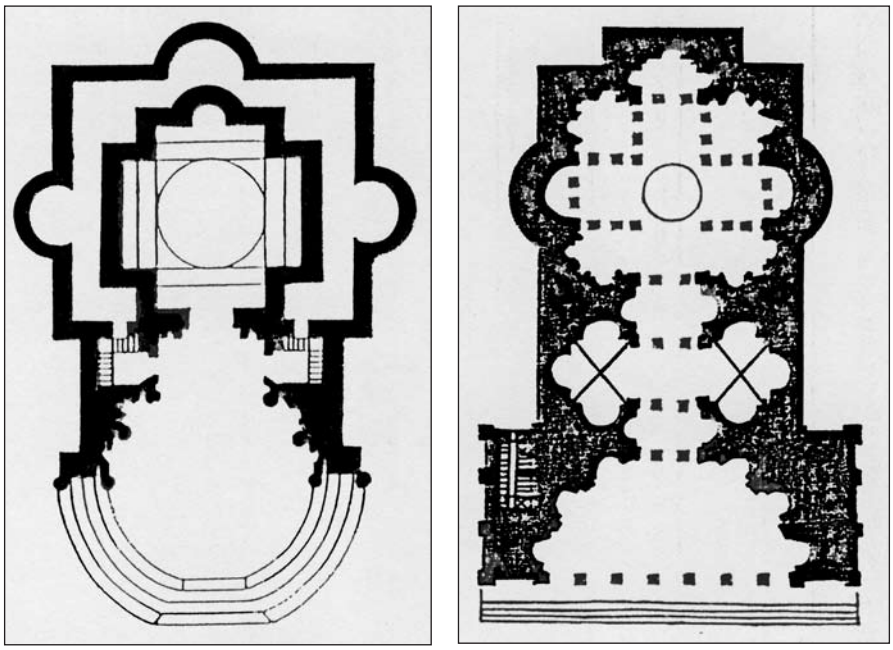

Fig. 3 Mausoleums plans were usually centrally planned

Sl. 3 Mauzoleji su obično imali centralni plan osnove

Fig. 4The Temple of Hercules Victor in the Forum Boarium and the Temple of Vesta in the Roman Forum in Rome

Сл. 4 Храм Херкула Победника на Тржном форуму и храм Весте на Римском форуму у Риму

If we want to examine central form as a type of temple: Vitruvius in De Architectura Libri Decem describes the type of central building plan, and the number of centrally planned temples significantly increases from I century AC.[3] (fig. 4)

Pantheon is the culmination of the development of centrally planned construction, famous for its outstanding achievement in solving integrated area with overall view of interior design, which will significantly affect all following periods. It is also famous for its original construction and a large diameter of the dome.

The Roman house, which most of the citizens of the Roman Empire aspired to, was one with a large richly decorated reception room, the tablinum, often completely open onto a central space, atrium. The dining room of the house was termed the triclinium. Under the Empire this room became one of the most important in the house, and is easiest to identify because of the central plan which was most often applied.[4] (fig. 5)

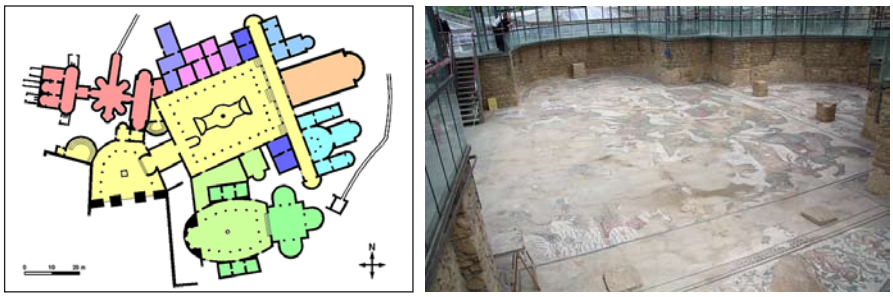

Fig. 5 Triclinium in villa of Piazza Armerina, Casale
Сл. 5 Триклинијум виле Пјаца Армерина у Казалеу

When one thinks of Rome, visions of giant baths or thermae often cross the mind's eye. These were indeed the first attempts to provide communal bathing on a grand scale. But the thermae were only one part of the Roman bathing world. Before Emperor Agrippa designed and created the first thermae in 25 BC, the smaller, more frequent balneum had been enjoyed by Roman citizens for more than 200 years. The thermae became the pet project for all Roman emperors following Agrippa. Each tried to out-do his predecessor, making his bath more spacious, more splendid, more popular A public bath was built around three principal rooms: the caldarium (hot bath), the tepidarium (warm bath) and the frigidarium (cold bath). Some thermae also featured steam baths: the

3 Vitruvius, Pollio (transl. M. H. Morgan, 1960), *The Ten Books on Architecture*, Courier Dover Publications, pass.

4 S.P. Ellis, *Roman Housing,* London, Duckworth, 2002, p. 27.

sudatorium, a moist steam bath, and the laconicum, a dry steam bath much like a modern sauna. Of all above mentioned rooms, only the caldarium and laconicum were almost usually built as centrally planned spaces.[5] (fig. 6)

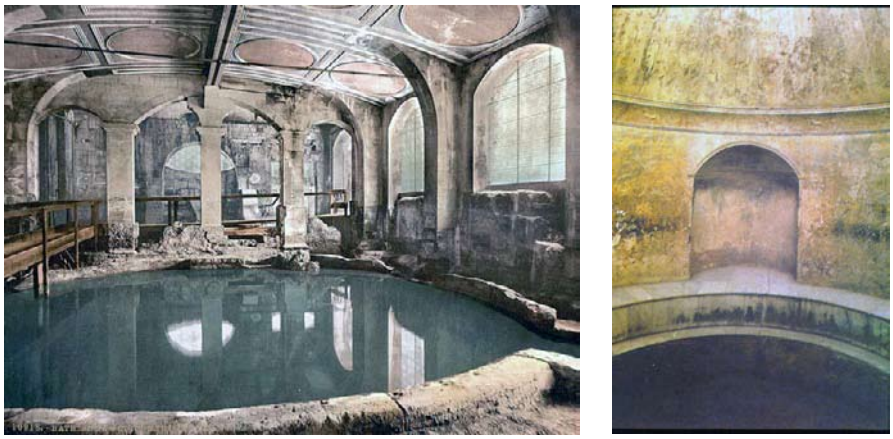

Fig. 6 Circular Caldarium-Abby Bath; Engraving of the circular bath room with basin

Сл. 6 Кружни калдаријум у термама у Бату; гравира кружне собе у купатилу са базеном

Analyzing available examples from different periods and various regions through the early history of Christian architecture, it can be concluded that the development of the cella memoriae was almost certainly induced by functional requirements and symbolic reasons tending to spatially unite structures of monumental expression, no matter how big the structure really was. Researching a specific architectural form in its complexity and estimating realistically its importance in the history of building still represent a rare form of research work for a variety of problems appearing inevitably when the form spreads through a long period of time and over a vast territory.

All those occupied with the development of architectural forms point out that making of its original base, spatial organization and connections between its meaning and origin have not been founded yet on firm evidence, e.g. they are in the sphere of assumptions. Therefore, the subject of the research had to be focused on determining important notions contributing to the comprehension and identification of this form through the history of architecture and how the transmission of this plan was introduced in the renaissance architecture.

Those notions are, above all, the definition and meaning of the basic form, symbolism of details and the whole, original functions, spatial and constructive structure and temporal and territorial diffusion. The research of architectural development can be based on various characteristics of structures, chronological or geographic conditions and many other elements.

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5 F. Yeg□t, *Bathing in the Roman World*, Cambridge University Press, 2009; G.G. Fagan, *Bathing in Public in the Roman World*, The University of Michigan Press, (reprinted), 2002.

Considering the previous experience, the method of typological studying seems to be the most appropriate for this case study. Defining types is one of the most fruitful ways to find out more about heritage, because through the classification of structures some categories are determined as focuses establishing typical relations among elements. The focuses can be related to a function, spatial arrangement, symbolism, meaning, historical period etc. Identification of the basic cella memoriae "type" shows a great dependence among its function, symbolism and spatial structure. Hence, the typological generalization of cella memoriae forms can be performed on the basis of Q. de Quincy's definition from the beginning of XIX century. It says: "The type does not represent the image of a thing it emulates, as much as the idea of an element serving by itself both as a rule and a model..."[6] The quoted definition of type corresponds exactly to the form of cella memoriae, as there is not just one element of criteria having a dominant role in the classification of its examples. In the case of cella memoriae one must take into consideration its planimetry, volume, central space value, axes of symmetry, symbolic meanings of parts and the whole, i.e. a choice of physical and intangible elements that all together contribute almost equally to the classification of the form. (fig. 7)

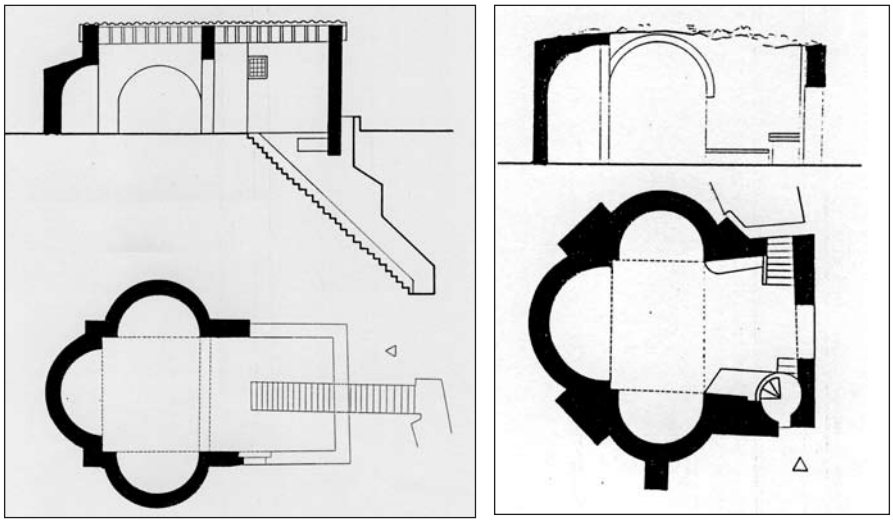

Fig. 7 Cella memoriae of St. Sisto and cella memoriae of Sta. Sotera, both in Rome

Сл. 7 Cella memoriae Св. Сикста и Св. Сотере у Риму

It appears that fragments or parts of this type can leave their place within the type and be stressed out to the extent that attracts the attentions of believers so much that those elements often become the founders of some new types in the process of Christian architecture development. The architecture has long

6 A.C.Q. de Quincy, *Dictionnaire historique d'architecture compprenant dans son plan les notions historiques*, descriptive, archaeologiques, biographiques, theoriques, didactiques et pratiques de cet art, 2 vol. 1, (reprinted) Paris 1932.

been considered as a system of formal acquiring of knowledge, i.e. as one of the systems that employ symbols and concepts. In a system like this a type can be determined by different elements as symbolic signs which are to be defined and recognized as architectural features. Between different groups of elements that can be used for making a typology, the most important are spatial relations as strong typological elements. They can be defined as:

Group of elements which have an everlasting symbolic meaning and are applied whenever there is a need to memorize somebody in the architectural praxis through history

Group of elements which clearly represent organization of some structure or precisely present different parts of one structure.

In the complex architecture created in the fusion of different architectural types, a new type is made by selecting elements of each individual type that, apart from their physical function, have a certain symbolic meaning according to which belongin to a certain type is recognized. A tendency to combine and fuse the cella memoriae as centraly planned with another architectural type, the memoria is determined, above all, by the general conception of the new structure in which the parts of cella memoriae will have their function. Cella memoriae belongs to a group of buildings expressed by the language of symbols, and therefore in the analysis of its form iconographic reasons are always present, whether it is the original form or its elements applied through the principle of „pars pro toto". It is precisely this characteristic of a strong symbolic expression which seemed to be the main reason for associating cella memoriae with other, mostly longitudinal forms of early Christian architecture, creating completely new types of church buildings. In time this type became closely connected to the settled layers of symbols and memories of them. They are, above all, the cult of the dead and immortal godlike characters which was materialized through various cult and burial structures (mausoleums, martyriums and memories). The basis for all discussions about symbolism, meaning and usage, as well as for the cella memoiae typology is the simplest, elementary type which can be regarded as a founder of all more developed forms and type variants. The special significance belongs to buildings from the reign of Emperor Constantine the Great, in particular graves dedicated to his mother Helena and his daughter Constantia. The remains of the Mausoleum of his mother, St. Helena was a large circular building with an octagonal interior decorated with niches. The ruins are called today Tor Pignattara. The Mausoleum of Santa Costanza is named for Constantine the Great's daughter Constantia or Constantina. The round mausoleum probably built in the 360s or 370s, was shaped after pagan mausolea types. (fig. 8)

In Late antiquity, centrally planned buildings were also correspondent with special needs of Christians. Because of that, some forms were almost entirely taken over for baptisteries, while for the liturgical needs longitudinal plan types were suitable. Many large churches began as martyria, and were later transformed into longnave churches for the accommodation of pilgrims. The Constantinian Church of the Holy Sepulchre in Jerusalem was built as a rotunda, with an attached nave, and many others.

Fig. 8 The mausoleum of St. Helen (Tor Pignattara) and Rotunda of St. Constanza in Rome
Сл. 8 Маузолеј Св. Јелене (Tor Pignattara) и ротонда Св. Констанце у Риму

Summarizing all the above mentioned types, the centrally planned buildings have to be understood as the best architectural heritage that Roman civilization could have offered to the Renaissance architects.

TRANSFER OF CENTRAL PLAN TYPE IN RENAISSANCE ARCHITECTURE

Centrally planned building, the church which is equally developed in all directions around the vertical central axis, was the ideal for Renaissance architects and all Renaissance theorists were dealing with this topic.[7] The use of the centrally planned building justifies the application of ancient forms in Renaissance architecture, because in Late antiquity obviously existed stronghold that the Christian buildings may be of the same plan as pagan, but with altered function. In addition, the central plan is linked to the symbolism of circle and square, what also contributed that these forms are used in the Renaissance:

Circuit is the most perfect of all forms and as such sign is absolute. Circular shape indicates a spiritual, invisible, and transcendental. According to Christian belief, it is upper world, the sky where God dwells, beginning of everything, the center, the truth, and eternity. In architecture and architectural style of all civilizations circle is one of the basic elements of construction.

Square symbolizes the earth with four horizons and it is the antithesis of the spiritual - a circle. Square shape is considered as antidinamic form, which contains the concept of mode, static and strength. It is a symbol of the earthy, antithesis of transcendental, stopped, and the selected moment, the appearance of rest and strength in perfection. So, in the general symbolic of forms, a square is considered as the primary form of space, a circle is considered as a basic form of time, but together they evoke the idea of movement[8]. If the central core of

7 See: A.A. Payne, *The Architectural Treatise in the Italian Renaissance*, Architectural Invention, Ornament, and Literary Culture, Cambridge University, Press 1999; M. Gelernter, *Sources of architectural form*, A critical history of Western design theory, Manchester University Press, Manchester and New York, 1995; R. Wittkower, *Architectural Principles in the Age of Humanism*, New York 1965.

8 The symbolism of the circle and square, as well as its combination in spatial structure, are derived as a synthesis of the entire range of data about the symbolism of certain

buildings is seen as a cube covered with dome, it is actually materialized interpretation of the dialectic relations between earthly and heavenly, imperfect and perfect.[9]

The succession of a few generations of renaissance architects, their theoretical investigations and architectural practice, show the development of application of centrally planned buildings. (fig. 9)

Filippo Brunelleschi, known as the father of renaissance architecture, assumes a central plan with no explanation other than obvious emulating of existing buildings, as a result of his practical research in Rome, where he spent 2 years. His Old Sacristy was begun in 1419, when the plan for rebuilding the Church San Lorenzo was first established, and it was built quite rapidly between 1421 and 1428. Since the sacristy was finished before the rest of the church, it may be considered as one of the first centrally planned buildings of the Renaissance, in a very general way.[10] It is square in plan, but more important is the fact that the walls are equal in height to the sides of the square plan, so that building as a whole forms a perfect cube. On one side, the wall is divided in three, the central third being opened to provide the entrance to a small altar-room which is also square in plan and, like the main sacristy, has a hemispherical dome over it. In this way, the Old Sacristy consists of two related cubical blocks and the building as a whole forms a perfect cube.

His also very famous work, a small building in the cloister of church Sta Croce, generally known as the Pazzi Chapel, was another experiment in investigation of centrally planned structures. It has a plan similar to, but still a more complicated version of Old Sacristy: a central square with a dome over it, one side of it opened to form a smaller square, choir. The square of the choir is balanced by a square vestibule which is extended on either side to match the lateral extensions or "transept" attached to the central space. In this way, each of four

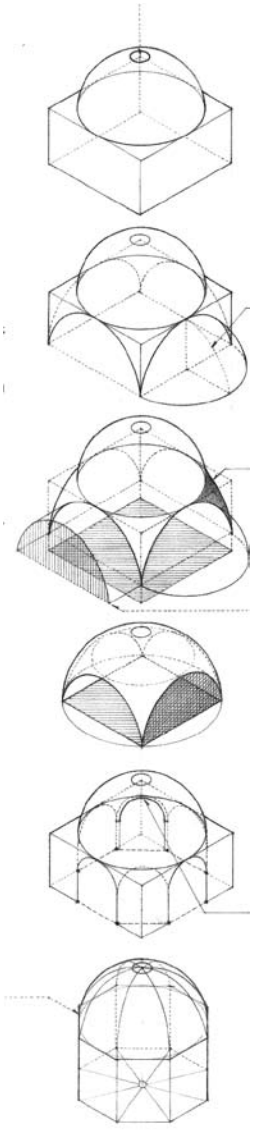

Fig. 9 Central core of building - seen as a cube covered with dome - materialized interpretation of the dialectic relations between earthly and heavenly, imperfect and perfect

Сл. 9 Језгро грађевине – коцка покривена куполом – материјализована интрепретација дијалектичког односа земаљског и небеског, несавршеног и савршеног

geometric figures and shapes: J. Chevalier, A. Gheebrant, *Rječnik simbola*, Zgreb 1983; L. Hautcoeur, *Mystiques et architecture, Symbolisme du cercle et de la coupole*, Paris 1954; N. Kurtović-Folić, *Razvoj arhitekture i naselja,* Knjiga 1, Arhitektonski fakultet, pp.11-12.

9 B. Smith, The Dome, *A Study in the History of Ide*as, Princeton 1950, 3-9.

10 P. Murray, *The Architecture of the Italian Renaissance,* Thames and Hudson, 1998, p. 40.

sides of the main square is modified, and each part retains a mathematical relationship to the original unit. As a result, the spatial feeling is far more complicated than in Old Sacristy.

The third of Brunelleschi's central plan buildings would be The Church of Sta Maria degli Angeli (abandoned unfinished in 1437) which is the first true central plan of the 15th century. The Church derives directly from the so-called Temple of Minerva Medica in Rome[11], consisting of a central domed octagon surrounded by a ring of chapels opening off the sides. It is conceived on an entirely different principle from Old Sacristy and the Pazzi Chapel, because the forms are now thought of as solid sculptural masses with the air flowing round them, whereas in the earlier work they are thought of as flat planes having geometrical relationship one to another but lacking in any plastic quality. The dome of Sta Maria degli Angeli seems to have been massively classical and based on the type represented by the Pantheon, which is different from Brunelleschi's earlier ribbed forms. The Church was begun immediately after his journey to Rome which can be understood as a renewed classical influence. (fig. 10)

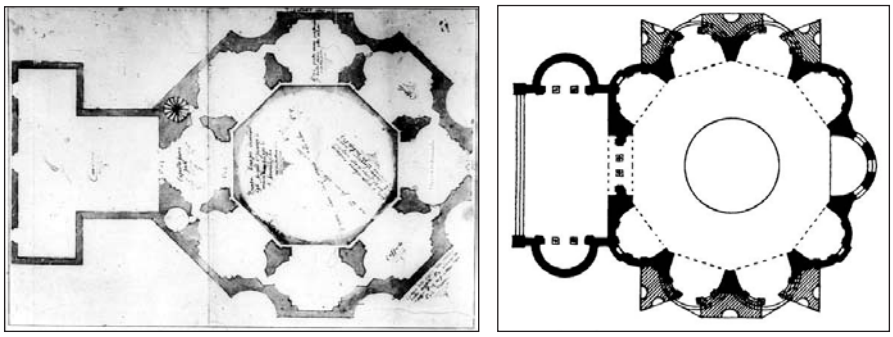

Fig. 10 Brunelleschi - Church of Sta Maria degli Angeli - the first true central plan of the 15th century;

The nymphaeum in Horti Liciani, so-called The Temple of Minerva Medica, 4th century

Сл. 10 Брунелески – Црква Свете Марије од Анђела – први прави централни план из XV века; Храм Минерве Медике, IV век

DEVELOPMENT OF CENTRAL PLAN TYPE IN RENAISSANCE

Leon Battista Alberti belongs to the second generation of renaissance architects. His serious research of Vitruvius and his personal introduction to the Roman buildings are together transformed into the first real renaissance theoretical text De Re Aedificatoria Libri X. Alberti's treatise contains the first complete program of ideal, centrally planned buildings. In the seventh book Alberti is engaged in buildings and ornaments of sacred architecture and big part of the discussion is devoted to the reasons for the application of the central plan. Alberti says: „All temples consist of a portico and, on the inside, a cella; but they differ in that some are round, some quadrangular, and some polygonal.

[11] *Ibid*., p. 47-48

It is obvious from all that is fashioned, produced, or created under her influence, that Nature delights primarily in the circle. Need I mention the earth, the stars, the animals, their nests, and so on, all of which she has made circular?"[12]

Nature itself, as claimed, prefers a circular shape, what can be seen by her creations, such as earth, stars, trees, animals and their nests, and many other things. Alberti recommends seven basic geometric shapes for church buildings which are all determined by the circle. These basic shapes can be enriched by adding a chapel at the sides of the central plan.[13]

Renaissance architects owed, or thought to owe, their delight for ideal central plan buildings to classic antique structures, although they did not have many examples of ancient temples of circular shape. Even Vitruvius does not mention the central plan in his list of seven basic types of temples – he mentions it separately. However, the Renaissance architects for a number of circular and polygonal ruins believed to have been ancient temples, even though most of the buildings of the central plan were from the Early Christian period. Among the churches that have been known to them are: the Roman Pantheon, the church of St. Constance, San Stefano Rotondo, San Lorenzo in Milan, and Florence octagon Baptistery from 12. century. All of them were believed to have originally been Roman pagan temples, later converted to Christian churches**.**

From this, it can be concluded that Alberti in these buildings saw the continuity of the ancient sacred architecture and early Christian churches, feeling that it was the historical justification for the return of dignity forms of ancient temples[14]. Alberti consciously connected ancient ideas with those from the period of early Christianity and his famous application of triumphal arch to the front of sacred buildings is generally known as Hristianization of pagan[15]. He was interested in Roman Emperor Constantine in particular, as well as other people of his time, since then pagan architecture has been mixed with the spirit of faith and purity of the early Christian church.

Investigating the architectural practice of Leon Battista Alberti, his church San Sebastiano in Mantova shows almost all of the theoretical requirements laid down in his treatise. San Sebastiano was begun in 1460 and was still unfinished when Alberti died in 1472. Its plan is the first of a long series of Greek cross structures many of which date from the 16th century. It is obvious that in theory Alberti regarded the centrally planned church, of which the Greek cross is a good example, as being a perfect form in itself and symbolizing therefore the perfection of God. On the other hand, it is very likely that he was also influ-

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12 L.B. Alberti, *On the Art of Building in Ten Books*, (transl. Rykwert, J., Leach, N., and Tavernor, R.), The MIT Press, Cambridge, Massachusetts, London, England, 1989, VII. 4, p. 196.

13 Н. Куртовић-Фолић, *Теоријски ставови и креативне способности архитеката италијанске ренесансе у XV веку*, Саопштења XXXIV-20, Београд, 215-238.

14 E.R. De Zurko, Alberti's Theory of Form and Function, *The Art Bulletin* XXXIX, 1957, pp. 142-45.

15 J. Summerson, *The Classical Language of Architecture*, Revised and enlarged edition, Thames and Hudson, London 1983.

enced by Early Christian churches, and the near-by city of Ravenna provides at least two possible prototypes – the Mausoleum of Galla Placidia of about 450 and the Church of Sta Croce of about the same date.[16] (fig. 11)

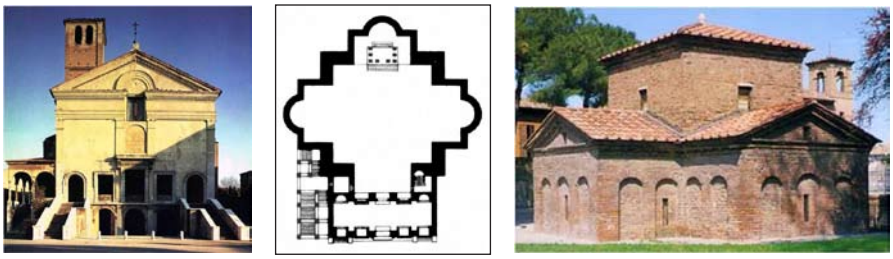

Fig. 11 Alberti - San Sebastiano - the first of a long series of Greek cross structures, influenced by Mausoleum of Galla Placidia and the church of Sta Croce

Сл. 11 Алберти – Св. Себастијан – прва из низа цркава основе грчког крста, настала под утицајем маузолеја Гала Плацидије и цркве Св. Крста

Based on the arguments of Alberti and general inclination towards the adoption of the Roman form, in next generation of architects the use of a central plan is intensifying, as well as theoretical research of capabilities of various forms of multiplication and connection with the longitudinal type of buildings. The next step in the application of ancient forms made Donato Bramante in his works in Milan. His merit is the fact that he used central plan completely free, not only by looking at the complete buildings, but also at the spaces of the ancient thermae and residence architecture, skillfully combining them with a sacred purpose.

Bramante, who was to become the greatest architect of his generation, lived in Milan from approximately 1481 until the fall of the city in 1499. His earliest known building was the reconstruction of the church of Sta Maria presso San Satiro, a small 9 century building, famous for the perspective illusion constructed on its east end as a result of the narrow street running across the end of the building, so Bramante was forced to evolve ingenious illusion. While working on this church, Bramante studied surviving Early Christian buildings from the 5th and 6th century in Milan itself. Those buildings were the principal evidence of good architectural style of its time and the main source of classic inspiration in his work. Bramante remodeled original church of San Satiro from 9th century, particularly on the exterior. He potentiated the plan – a Greek cross inscribed in a square inside a circle – which was a typical Early Christian design. By using four arms of the Greek cross rising out of the cylinder Bramante combined and superimposed two possible sources by: the Mausoleum of Santa Costanza and the Mausoleum of Galla Placidia. For the small baptistery at San Satiro, he made mixture of Early Christian prototypes with ancient Roman thermae.

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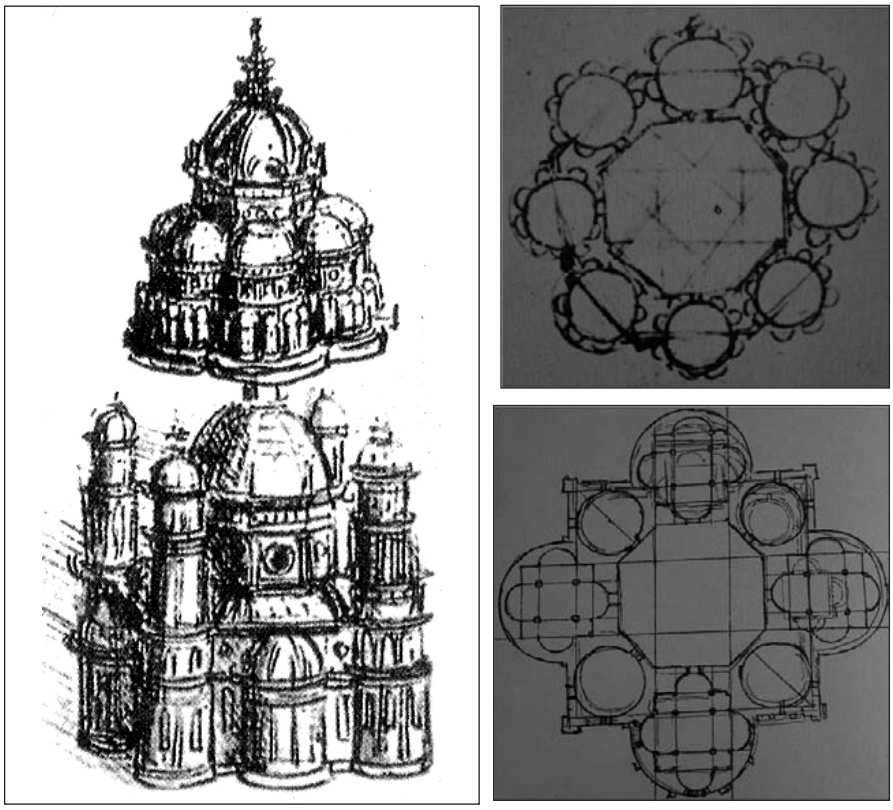
16 P. Murray, *The Architecture of the Italian Renaissance,* Thames and Hudson, 1998, p. 58-59

The same general ideas can be seen in his larger work – the tribune added to the east end of the large church of Sta Maria delle Grazie, also in Milan, begun in the late 1480s. Bramante wanted the effect of independent centrally planned building loosely attached to a long-nave church of another author.

At approximately the same time Leonardo da Vinci lived in Milan. He arrived in Milan in 1482, remained there until 1499 and was occupied in painting the Last Supper, a very famous 15th century mural painting that covers the back wall of the the refectory of the convent Santa Maria delle Grazie. Leonardo also did some research into anatomy and began to work on a series of centrally planned architectural drawings. He takes a number of centrally planned forms and evolves more and more complex forms from the simple shape. Many of these are exercises in architectural theory. (fig. 12)



Sl. 12 Leonardo da Vinci - series of centrally planned architectural drawings

Сл. 12 Леонардо да Винчи – низ цртежа са црквама централног плана

Leonardo never actually built anything, but his drawings and speculations were profoundly influential on Bramante, and through him, affected the

whole current of architectural thought in the 16th century. There is even reason to believe that Bramante's early design for St Peter was very much influenced by Leonardo's drawings of centrally planned structures.

After moving to Rome, in direct contact with the remains of ancient buildings, Bramante made a highlight of, not only the transfer of form, but of the basic idea of the perfect central building, designing Tempietto. The Tempietto was built for Ferdinand and Isabella of Spain, on the spot that traditionally saw the martyrdom of St Peter. Bramante's intention was to place the tiny centrally planned church in the center of a larger, centrally planned cloister. Tempietto is similar in spirit to San Satiro in Milan, but the choice of a circular plan is of great importance. It is often said that Italian 16th century architects, in their passion for centrally planned churches, were eagerly pursuing pagan ideals, but, as we have already seen, the earliest Christian monuments were of two types, the martyrium and the basilica. Martyria were almost always small and almost always centrally planned. They were erected in places with some religious association, such as the spot where a martyrdome had taken place. They did not serve as a parish churches, but as commemorative monuments (the needs of a congregation were met by the basilica). It is clear, therefore, that to anyone interested in Early Christian antiquities and late antique architecture, there were only one possible solution – to build a small church to mark the spot where St Peter was crucified – and Tempietto is therefore circular. The rest of it was Bramante's desire to recreate antique forms in the service of modern Christian needs. Several antique sources underlie the Tempietto. The most important are: small round temple near the Tiber, believed to be a Temple of Vesta in 16th century, the Temple of Hercules Victor, and the famous Temple of the Sibyl at Tivoli.[17] (fig. 13)

Fig. 13 Bramante – Tempietto - a highlight of the transfer of form and of the basic idea of the perfect central building; temple of Sybil at Tivoli

Сл. 13 Браманте – Темпијето – врхунац преноса форме и идеје о савршеној грађевини централног плана

[17] For antique sources that had influenced work of Bramante in Rome, see: *ibid*., 124-127.

Bramante's project for the St. Peter's Basilica for which the foundation stone was laid in 1506, was the plan in the form of an enormous greek cross with a dome. Its association directly derived from the Tempietto - Bramante was designing a martyrium on an enormous scale. Further, he wished to associate an Early Christian basilica with this martyrium, redesigning an ancient Roman building within the same framework as that which had limited Constantine's architects in the 4th century.

Interest for central plan continues throughout the 16th century, in architectural theory and practice. In his theoretical treatise I Quattro Libri de Architetura, Andrea Palladio also discusses: „Temples are made round, quadrangular, of six, eight, and more sides; all of which terminate in the capacity of a circle, in the form of a cross, and of many other forms and figures, according to the various inventions of men, ... But the most beautiful, and most regular forms,and from which the others receive their measures, are the round, and the quadrangular..... the round one is such, because it is the only one amongst all the figures that is simple, uniform, equal, strong, and capacious,... in which is to be found neither beginning nor end, ...it is exceeding proper to demonstrate the infinite essence, the uniformity, and the justice of God"[18]

In his architectural practice the only church of the central base, in the spirit of Renaissance architectural theory of ideal forms, which was built by Palladio, was Tempio Barbaro in Mazer. Solid, homogeneous structure of the core and lateral apses puts this tempietto in jewels that make up the Renaissance architecture. However, Palladio translated the idea of central plan to residential architecture, making a transposition of a sacral symbol into a civil one. The Villa Almerico Capra, generally known as La Rotonda, was conceived as a country residence and is now considered to be the universal icon of the Palladian villa - "the perfect house." La Rotonda is not a villa-farm as many of Palladio's other buildings are, but rather a villa-temple, ideal in a platonic

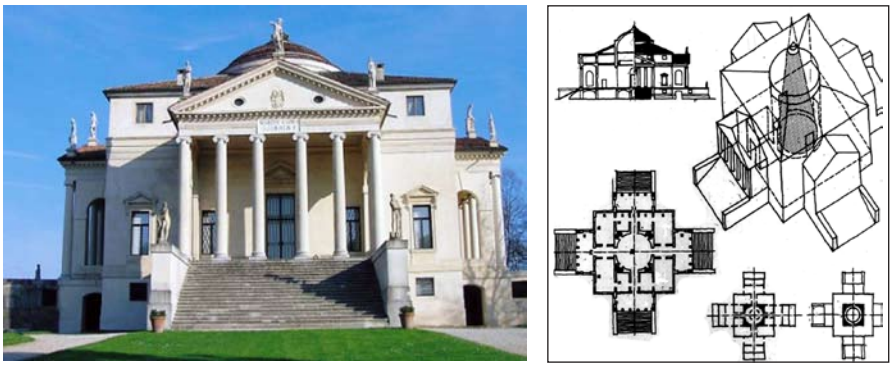


Fig. 14 Palladio - La Rotonda – translation of the idea to residential architecture and transposition of a sacral symbol into a civil one

Сл. 14 Паладио – Ротонда – пренос идеје у стамбену архитектуру и претварање сакралних симбола у профане

[18] A. Palladio, *The Four Books of Architecture*, Dover Publications, New York 1965, p. 79

sense, centrally planned, composed as a combination of square and circle, with elements of high order and harmony and a beautiful circular dome rising out of its center. (fig. 14)

CONCLUDING REMARKS

Investigating the influence of late antique centrally planned buildings on Renaissance architecture and trying to establish, or make, precise typology of centrally planned buildings used in Renaissance architecture, we came to conclusion that there is not a Renaissance as the overall state of mind, but rather there is a million individuals who have lived in Italy in the 15th and 16th century and who reacted to similar or identical stimulus of their time (such as urban area, relatively mass educational opportunities, the invention of printing and many other), mixed with architectural heritage of their past, in various possible ways.

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КАСНОАНТИЧКЕ ГРАЂЕВИНЕ ЦЕНТРАЛНОГ ПЛАНА И ЊИХОВ УТИЦАЈ НА РЕНЕСАНСНУ АРХИТЕКТУРУ

Грађевине централног плана различитих типова настале у римском периоду, нарочито касноантичком, симултано су се развијале и постојале у различитим архитектонским програмима. Анализом различитих примера може се закључити да је њихов разлог несумњиво био проузрокован функционалним захтевима и симболичким разлозима, са тежњом да се просторно обједини унутрашњост и постигне монументални израз, без обзира на стварну величину грађевина.

У касноантичком период овај тип је био уско повезан са низом симбола и сећањем. То се, углавном, односило на разне култове и гробне структуре, као и култ небеске моћи исказан кроз улогу владара у разним церемонијама и ритуалима.

Изразита способност грађевина централног плана да се просторно и органски комбинују са другим архитектонским облицима дајући нове просторне вредности веома је утицала на развој ренесансне архитектуре. Од Брунелескија, преко Албертија, до великих теоретичара XVI века, као што је Паладио, низ креативних умова реаговало је на сличне или идентичне подстицаје свог времена, сједињене са архитектонским наслеђем своје прошлости, на различите могуће начине.