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BİZANS MİRASI MİMARLIK VE SANAT

Genco Berkin¹

ÖZET

Bizans mimarisi, yapı, ikon ve mozaik sanatları açısından çok zengindir. Bizans mimarisi başta Avrupa ve Amerika olmak üzere birçok yapıya esin kaynağı olmuştur. Bu yüzden üzerinde daha fazla araştırma yapılması gerekmektedir. Bizans mimarisi ve sanatı yeni bir akım olan Neo-Bizans akımını ortaya çıkarmıştır. Bizans mimarisi 15. Ve 19. Yüzyılda Avrupa mimarisini derinden etkilemiştir. Bizans mimarisinin Doğu ve Batı kültürlerinin gelişmesi ve ilerlemesi üzerinde büyük katkısı olmuştur. Bu çalışmada geçmiş ve bugünün Doğu-Batı mimari etkileşimleri karşılıklı olarak irdelenmiştir.

Anahtar Kelimeler: Bizans Mimarisi, Bizans Mozaikleri, Neo Bizans Akımı

THE LEGACY OF BYZANTINE ARCHITECTURE AND ART

ABSTRACT

Byzantine architecture is extraordinarily rich in terms of the buildings, iconography and mosaics that have survived in the course of two millennia. Byzantine architecture and art was overlooked for a long period. Byzantine influence on architecture and art has widespread through Europe and America. Byzantine influence on several professions consisted of architecture, paintings, poetry, decorations and jewelry. Byzantine architecture and art was so spectacular that in the following eras it whether created a revival or became the spring of Neo-Byzantine style. Byzantine architecture had impressions on European Architecture from 15th century to 19th century. Byzantine Empire has served as a bridge of cultural transportation between East and West civilizations throughout its birth till the present time. This study aims to find the reciprocal influences between the past and the present architectural and artistic style intervals mainly shaped by Byzantine Empire.

Keywords: Byzantine Architecture, Byzantine Mosaics, Byzantine Art

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INTRODUCTION

This paper examines how Byzantine art and architecture have reached at a climax and how Byzantine craftsmen became so skillful and creative that have shown great influence on both Western and Eastern civilizations. It would also be mentioned that how the interactions of different disciplines that Byzantine masters has blended the aesthetics and functional requirements in every design.

Byzantine architecture and art was overlooked for a long period. The interest for Byzantine architecture and art was derived from the curiosity about ancient Greek and Roman Empires. It is interesting to note that Byzantine influence on architecture and art has widespread through Europe and America.

The word 'Byzantine' refers to the culture of the Eastern Roman Empire which was founded by Emperor Constantine in circa 300 A.D. The term is also used to describe the art and architecture which flourished throughout the empire encompassing the Mediterranean Sea. Byzantine architecture is extraordinarily rich in terms of the buildings, iconography and mosaics that have survived in the course of two millennia. This achievement can be attributed to Byzantium citizens' sophistication in the philosophy and theology. The Archimedes codex has been snatched from Hagia Sophia church during the conquest. This shows that Byzantine intellect rests on Greek philosophy and art. Another aspect was the visionary and powerful emperors of the empire. Byzantine architects tried to surpass Roman architecture. They looked for ways to build a rectangular basilica with a central dome. They found the oracle in Eastern Architecture of Syria and Armenia. Improved derivations of Eastern architecture's features lead the way to form a new style. Byzantine travelers transferred their special style of round arched building technique through Western states of the empire. Many buildings reflecting this essence were built with Byzantine assistance like San Marco in Venice and Norman churches of Palermo. Byzantine influence on several professions consisted of architecture, paintings, poetry, and jewelry. Byzantine architecture and art was so spectacular that in the following eras it whether created a revival or became the spring of a new style. Being the most outstanding edifice of Byzantine architecture, Hagia Sophia church became the model for a magnificent series of domed mosques in the city of Istanbul and throughout the Ottoman Empire.

BYZANTINE CITY PLANNING

Byzantines have built their cities with meticulous planning. They have considered the topography, the climate, the prevailing winds and the sun path. Since they have been deeply influenced by theology, they have adduced many genius of loci points to indicate node points for the main roads in Constantinople (Grant, 1998, s.99). They have also introduced the grid iron plan in the sense of democracy. The grid iron plan enabled the equal distribution of land among citizens. Byzantine architecture had principal axes, the town forums, and the circumference of its walls. Byzantine architecture's restrained; precise forms are supposedly three-dimensional realizations of an objective reasoning process. There is other geometrical planning for settlements. For planning the city of Constantinople, a tetrahedron has been implemented as a starting point. Cyril Mango has cited in his book *Byzantine Architecture* that both Romans and Byzantines have divided their cities into 14 zones (Duzguner, 2006).

The streets of the city plan in Byzantine Empire have also been designed according to the prevailing winds and moist conditions. This shows that architects were taking good care of citizens' health at those times. They have also anticipated the sprawl of the city. The city planners pre-designed the roads so that they end up with rather a harbor or a forum. Archaeological evidence from both Europe and Asia Minor shows that there was a considerable increase in the size of commerce and they built big harbors for trade ships in circa 900.

The main streets in their capital, named decamenus lying straight ahead east to west and cardo lying between north and south. In the course of time, many cities were planned with reference to this plan with adapting to their topographical conditions (Duzguner, 2006). The cardo served as the center of economic life. The street was lined with shops, merchants, and vendors. Most Roman cities also had a decamenus, an east-west street that served as a secondary main street. Due to varying geography, in some cities the decamenus is the main street and the cardo is secondary, but in general the cardo maximus served as the primary road. In Constantinople, the Mese, the principal avenue of the city served as the decamenus. Along this road there were several squares and central columns. It was 25 meters wide and served as the spine for the city with aqueducts and forums. There were short cardos like the Makros Embalos which had shops on both sides. In Constantinople, cardos ended up with the city's main harbor. These harbors were unearthed during a subway excavation

in Yenikapi in 2007.

BYZANTINE ARCHITECTURE

“Hagia Sophia stimulates remembrance and induces one to honor those memorialized...”(Crouch, 1985)

The 6th century was the peak point of the Byzantine Empire. The reign of Justinian saw a period of unprecedented expansion and prosperity. When Italy was reconquered by Byzantine Emperor Justinian in the 6th century, politically East and West have been bridged and the many buildings initiated by its rulers show the influence of the nascent Byzantine Style (Baker, 2002). Three main types of religious buildings occurred in Byzantine architecture in time: The basilica, churches with a central plan and domed cupola and lastly the cruciform type of church with five cupolas. These buildings were designed to reflect the mystic ambiance of pre-Christianity. A huge, propagandizing program of building works ushered in a period of architectural innovation, which saw the Early Christian forms into the Byzantine Style. While the basilica remained predominant in the West, in the East there was an increasing tendency toward centralization, with square domed bays being introduced into rectangular plans (Baker, 2002). The new centralized plans focused attention on the nave, which became a stage for the processions, while the congregation watched from the aisles, the galleries, and the narthex. The introduction of the domed centralized plan was made possible by the pendentive a curved triangle spanning between arches. While the Romans were able to build domes only over circular spaces, the pendentive allowed the Byzantines to build domes over square plans. The form probably originated from Syrian architecture. Squinches had been a feature of Armenian church building and were also used in Islamic architecture. They comprised a small arch or niche placed at the corners of a square bay to form a base for a dome. Masonry, often consisted not of pure brick but of alternating bands of brick and ashlar, arranged in courses. This technique was employed in Constantinople and the Aegean from the 5th century. Sometimes brick masonry was strengthened with single courses of ashlar. Another key element in the introduction of domed spaces was the use of brick for construction, with thin bricks laid in thick beds of mortar. The brick was superior to stone in the perspective of forming delicate structures. Where vaults in concrete and stone could span only small spaces, brick could be used to create thin, light vaults, allowing greater flexibility and larger spans,

with fewer, thinner supports (Baker, 2002). This was the surpassing technique concerning the structures of Byzantine architecture to Roman.

A high intellectual interest of the citizens rising from the philosophy and theology of the city scope has demanded a great church of perfection. Emperor Justinian has decided to build a church resembling his power and success of the empire. He has ordered his architects to create an extraordinary edifice. Hagia Sophia church (532-567) is huge and simple in form; this has created a glorious power effect in the perception of the space. This ambiance had been created with the help of the window arrangements and the orientation of the building. According to Orhan Bolak (1967), the windows of the dome resemble a necklace of light. Hagia Sophia's apse is oriented towards the South-East so that the Christmas morning liturgy is celebrated with the participation of sunlight. Hagia Sophia's semi dome over the apse has sunlight reflection architecture by focusing rays on a paramount icon. In this way of sunlight effect, the icons are illuminated indirectly by tilting the window sills according to the sun's angle of incidence and with the arrangement of windows on a semicircular axis.

Byzantine architecture in the West gave way to Romanesque and Gothic architecture. In the East it exerted a profound influence on early Islamic architecture. Byzantine architecture has been flourished as ecclesiastical use. According to J.B. Bullen (2006), the Byzantine architecture has been a pattern for Gothic architecture. St. Vitale church in Ravenna was built with Byzantine architecture conventions. St. Serge and Bacchus church in Istanbul, might have served as a model. Many churches from 5th and 6th century of Ravenna feature Byzantine capitals.



Figure 1: Hagia Sophia, Istanbul



Figure 2: Interior of Hagia Sophia

Neo-Byzantine architecture incorporates elements of the Byzantine style associated with Eastern and Orthodox Christian architecture dating from the 5th through 11th centuries. At the end of the 19th century few designs have ever been so widely accepted and copied. We see a Byzantine connection in Viennese architect Otto Wagner's concepts. He was occupied with the proportions of Hagia Sophia (Bullen, 2006). This is obvious in his St. Leopold am Steinhof building in Vienna. Even

Frank Lloyd Wright in the twentieth century could not do better for an Orthodox church than base his design on the tradition of Hagia Sophia (Crouch, 1985). From 1850 to 1880 a related style known as Bristol Byzantine was popular for industrial buildings which combined elements of the Byzantine style with Moorish architecture in Bristol. Representative examples of Neo-Byzantine architecture are Paul Abadie's Sacre Coeur in Paris (1875-1919) and John Francis Bentley's Westminster Cathedral (1894-1903). They have simply blended Byzantine and Romanesque architecture (Banham, 1997).



Figure 3: Westminster Cathedral, London

PROPORTIONS

Byzantine architects' philosophy was concerned with defining the indefinable and led to an interest in finer points of religious doctrine, in which ceremony was given important symbolic functions (Banham, 1997). On the contrary to Ruskin's and other citations about the irregular use of proportion in Byzantine architecture there are dissenting opinions claiming that it was a well-proportioned architecture with geometrical principles (Bullen, 2006, Crouch, 1985). Robert Ousterhout (2008), has discussed in his book *Master Builders of Byzantium* that Byzantines had used geometric ways to determine the elevation of the buildings. By this way they could arrange proportional relationships in a rational technique. Architects have employed a modular growth system in both plan and elevation. The height of to the cross arms of a cross-in-square church is equivalent to the width of the naos, or twice the basic

module.

In both Myrelaion and the Chora churches, the relationship of the height of the dome to the overall length begins to approximate an equilateral triangle. In some buildings, the design was controlled both by a system of measurements and by a system of geometric proportions (Ousterhout, 2008). Rowland Mainstone (1998), has drawn attention to the proportions of the Hagia Sophia church in his same titled book; he quoted that “Unity is achieved by an underlying geometrical discipline that becomes obvious only at the level of the semi-domes and dome...” Byzantine architects were aware of quadrature construction; they used it on both plan and elevation. In church construction plans, the ratios are $1:\sqrt{2}$, $1:\sqrt{3}$, $1:1+\sqrt{2}$ and $1:2$. In Hagia Sophia the column height is decreased and/or increased by factor $\sqrt{2}$ of the analemma (Hoffman, 2005; Ousterhout, 2008).

BYZANTINE ART

Byzantine art was mainly based on mosaics and iconography. The figures were idealized and unrestricted by time and space. Symbolic signs and emblems were integrated as figures and reliefs in architecture. The two basic media of expression in this art were its colors – intense, luminous, evoking the mystical joy of a world permitted by the light of God and the extended perspective of its figures, violating laws of volume and gravity and lifting them to a level of pure ecstasy and solemn splendor.

It is vital to compare Roman and Byzantine mosaics in order to trace the progression. While Romans used opaque marble cubes for mosaic art, Byzantines used reflective glass cubes. Roman pieces of mosaics had smooth flat finishes while the Byzantine surfaces left uneven so the work sparkled. Roman mosaics were limited in color due to the use of natural stone. Owing to the glowing glass use, Byzantine artists enabled use of wide range of colors. The mosaics in the Roman period were found on the floors of houses. The Byzantines used mosaics on walls and ceilings of churches. Also the subjects differ in the Roman and Byzantine usage of mosaics. The Roman depicted the secular subjects like battles and games. The Byzantine subjects were about Christ and his apostles (Strickland, 1992). This excellence of Byzantine art had a profound influence on European art of the Middle Ages.



Figure 4: Mosaics in Chora Church

The rich and genuine use of mosaics of Byzantine has highly influenced other sects of Christianity all over the world. The decoration of St. Paul's marks a considerable change in what British Protestants were prepared to tolerate in church interiors. The mosaic revival, encouraged by royal patronage, drew attention to the peculiar beauty of Byzantine art, but the greatest force behind the Byzantine Revival in Britain was the Arts and Crafts movement. Several notable individuals with personal motives for wishing to build domes or basilicas developed the style in architecture.



Figure 5: Iconastases in Chora Church

Byzantine murals were executed in oil or tempera on dry plaster. They handled the same subjects as the mosaics but generally in a cruder style. The iconostases were painted on panels of plaster. A pioneer painter of Art Nouveau style, Gustave Klimt has been deeply influenced from Byzantine art. He has traced the angelic faces from the Byzantine icons. This is obvious from the motifs drawn in his painting the 'Expectation'. With Klimt, Byzantine iconography has been entirely secularized (Bullen, 2006). According to Alexander Speltz (1996), Byzantine influence penetrated as far through Ireland and Scotland in which it is found intermingled with Celtic Art.



Figure 6: Painting by Gustave Klimt

CONCLUSION

Byzantine Architecture is of paramount importance that its doctrine has to be unveiled and rediscovered. Byzantine architecture has influenced almost all the countries so far. Early Byzantine architecture was built as a continuation of Roman architecture. Artistic drift, structural advancement, and a rational use of spaces formed a distinct style gradually emerged which imbued certain influences from the Near East and served as an inspiration reference for church architecture in the

following centuries. Buildings were designed according to geometric conventions. Byzantine Architecture is of paramount importance that almost all the secure buildings of Europe have been influenced by its sophisticated architectural presence. In Hagia Sophia the architects created a rectangular basilica with a central dome. The pendentive, was the Byzantine contribution to engineering. For the first time four arches forming a square supported the dome. Ottoman architects, following the traces, developed the centralized plans in their mosques.

Byzantine art became a unique independent art school in circa 500. One feature common to all religious buildings of the Byzantine architecture was their sumptuous internal decoration, consisting of facings and columns in precious marble, mosaics, paintings and iconostases in carved stone or painted panels. It can be concluded that Byzantine architecture and art has been a cradle of culture by uniting the Eastern and Western civilizations.

REFERENCES

- Baker, P. (2002), *Early Christian and Byzantine*, in: *The Grammar of Architecture*, ed., Emily, C., E, Bulfinch Press, Boston, 148-165
- Banham, J. (1997), *Encyclopedia of Interior Design*, Fitzroy Dearborn Publishers, Chicago
- Bogdanovic, J. (2017), *The Framing of Sacred Space: The Canopy and the Byzantine Church*, Oxford University Press
- Bolak, O. (1967), *Camilerin Aydinlatilmasi Uzerine Bir Arastirma*, (in Turkish) (A Research on Mosque Lighting), Istanbul Technical University, Faculty of Architecture, Istanbul,
- Bullen, J.B. (2006), *Byzantium Rediscovered*, Phaidon
- Crouch, D.P. (1985), *History of Architecture*, McGraw-Hill, New York
- Duzguner, F. (2004), *Iustinianus Doneminde Istanbul'da Yapilar*, Arkeoloji ve Sanat, Istanbul
- Duzguner, F. (2006), Istanbul: an Anatolian miracle designed in Byzantion period (in Turkish), *Mimarist* 21, 91-102
- Fitoz, I., Berkin, G. (2007), Space, light and beliefs the use of daylighting in churches and mosques, *Arkitekt*,/04-05 (p.12-24)
- Grant, M. (1998), *From Rome to Byzantium the Fifth Century AD*, Routledge

Hoffmann, V. (2005), *Der Geometrische Entwurf Der Hagia Sophia in Istanbul*, Ausstellung, Germany,

Mainstone R.J. (1998), *Hagia Sophia*, Thames and Hudson, London,

Mango, C. (2006), *Bizans Mimarisi*, (in Turkish) (Byzantine Architecture), trans. M. KADIROGLU, Rekmay, Ankara,

Ousterhout, R. (2008), *Master Builders of Byzantium*. University of Pennsylvania, Philadelphia,

Schibille, N. (2014), *Hagia Sophia and the Byzantine Aesthetic Experience*, Ashgate, England

Speltz, A. (1996), *Styles of Ornament*, Bracken, London

Strickland, C. (1992), *The Annotated Mona Lisa*, Andrews Mc Meel