FROM ROMAN TO UMAYYAD: THE FORMATION PROCESS OF THE GREAT MOSQUE OF DAMASCUS AND THE SURROUNDING URBAN TISSUES

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ABSTRACT

This research reconstructs the formation process of the Great Mosque of Damascus and the surrounding urban tissues by re-interpreting them as a result of a continuous transitional process. Previous studies have not provided sufficient evidence on the nature of the transition from a temple to a church and to an early mosque. This research investigates the transitional phases between the major transformations i.e., between the 2nd-3rd and 5th-6th Centuries. These phases witnessed an increase in the Roman military presence in the region. As a result, we found strong correlations between some of the preserved fortified enclosures located in the Syrian region with parts of Umayyad Mosque enclosure. This indicated that there were intersecting periods in which partial changes took place on the parts of the inner enclosure of the temple's temenos during the empowerment of the military organization inside the old city of Damascus. A number of morphological analyses we performed on the surrounding urban tissues have revealed that the temenos was part of a larger urban fabric probably formed to include various building types similar to the military quarter at the old city of Palmyra (Isaac, 1990). The structural elements forming the inner columns at the western hall of the mosque are found similar with 1) the remaining arcades belonging to the early construction phases of the church and 2) the propylaeum's pediment belonging to the temple's peribolos. This seemed to be an indicator of a continuation process exhibited in their alignment and building styles; as

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they both comprise a pulvin on top of the capitals supporting the arches and comprised of stone ashlars. Similarly, the inner architectural order of the prayer hall of the mosque resembles the layout of church of Saint Apollinare Nuovo in Ravenna. Furthermore, the study sheds the light on the mosaic panel of Theodoric palace located at the same church (Camiz, 2008) and its similarity with the northern façade of the prayer hall. These comparisons aided to reconstruct the evolution process of the mosque by demonstrating their chronological and typological order. The study theorizes that the old enclosure resembles a continuation process which interrupted twice to serve a different purpose rather than religious ones, before it was transformed totally into a mosque.

Methodology

The analyses we adopted to reconstruct the different phases of the mosque and the ancient enclosure were mainly based on the notion of building typological continuation and the hypothesis which suggests that the history of the city is written within its urban fabrics (Neglia, 2012). Therefore, the methodology we employed was depending on comparing the available textual evidence with an emphasis on the physical evidence gathered by reading the current urban fabrics and examining recent archaeological data collected from various sources.

Spatial transformations of the historical built environments were investigated by Saverio Muratori in 1930s which were described as naturally occurred process and could be traced by a series of morph-typological analyses. Canggia and Maffei (1938) represented the spatial transformation of historical urban towns by following Muratori's methodology which reinforced the theory of buildings as living organisms. They stated that buildings are in continuous evolution process and are analysed in relation to their synchronic and diachronic variants. Their methodology considers the presence of building aggregates as a result of a simultaneous settlement process and begins from the early formation of routes of the territories to the network of roads formed surrounding the urban tissues inside the city.

This research will refer to the above-mentioned methodologies to reconstruct the typological process of the mosque and the surrounding tissues in addition to the historical sources and chronological order references. In this respect, sources used in this research are mainly focused on two parts: First, textual sources derived from historical texts of Byzantine chroniclers and Muslim early historians. Second, digital analyses using floor plans, photographical documentations, and digital cartographies.

Literature Review

The earliest schematic plan of the mosque and the surrounding elements were found in the study of Pococke (1704-1765, P: 120-121) and Porter (1855). The representation of the remaining columns was seen in both studies. The style of the preserved arcades located at the western side of the mosque indicated the earliest formation of the church built around the fourth century AD (Porter, 1855). Furthermore, an inscription to be read "Thy kingdom, O Christ, is an everlasting kingdom, and the dominion endureth throughout all generations" at the southern gate of the transept -still is seen- indicates a spot where the church had been located at the southern part and its entrance from the same structure of the transept. Porter added that the church was enlarged after its conversion under Theodosius' son, Arcadius, to include an enclosed atrium at the southern part of the mosque. The enlarged area included an arcade running from both eastern and western side enclosing the space similar to the western and eastern arcades' order. These parts were later included in the imperial palace which housed the Byzantine governor in the end of the fifth century (Burns, 2005) and the Umayyads governors starting from the mid of the 7th century named by Al-Khadra palace (Al-Muqaddasi, 1906, as cited from George, 2021, P: 60). Atrium spaces were found in many examples of the early churches built in the Syrian region and its spatial organization is typical of the fourth and fifth century churches (Bitard, 1929). Likewise, Spiers (1905) added that the structure of the propylaea found near the western colonnades belonged to the temple's phase and was erected when Damascus became a Roman provincial capital during the time of Emperor Trajan, who collaborated with the Damascene architect Apollodorus of Damascus during the first century AD.

In the early decades of the last century debates on the location of the church had started. Dussaud (1922) believed that the mosque was entirely a physical continuation of the church which built in the Byzantine era. He added -later supported by Watzinger and Wulzinger (1921)- that the Emperor Theodosius the Great erected the church along the southern wall of temenos with an entrance to the church located at the middle of the wall where the inscription was found preserved. On the contrary, Creswell (1969) contradicted Dussaud's theory that the church erected along the southern wall of temenos claiming that the church was at the central part of the temenos on the place of the temple's alter or otherwise located in the space which is recently referred to as a mosque (vol. I, p. 68).

Many researchers studied the temple to reconstruct its original form and evolutional process. Watzinger and Wulzinger

(1921) and Sauvaget (1949) believed that the temple was located at off the-centre towards the west near Bab al-Bareid oriented towards the east. Both researchers hypothetically reconfigured the plan of the temple by setting its components and referring to the survived Syrian temples existed during the Roman era. The plan of the temple is based on the typical design of sanctuaries across the Roman territories of the Syrian region and the elements exhibited around the temenos, dating back to its early formation. The plan sums up the main components of the temple the belonged to Jupiter Damascenus which included an outer enclosure peribolos, inner enclosure temenos, the alter cella, market area gamma (Γ) and a fountain nymphaeum. (See figure 1).

Recent study by Neglia (2012) showed that the area surrounding the mosque indicated the inheritance of the former temple's structures by observing the measures and the orientation of the medieval blocks and the regularity of the street patterns. According to Neglia, these findings indicated a regular form which was part of the temple's Peribolos as seen from the reconstruction plan of the previously discussed. It is worth noting that the methods used in Neglia's study were represented by highlighting the surrounding aggregate and the traces of the temenos of the temple of Jupitar Damascenus (Neglia, 2012: p. 239).

Study by Akili (2008) aimed to survey the mosque and parts

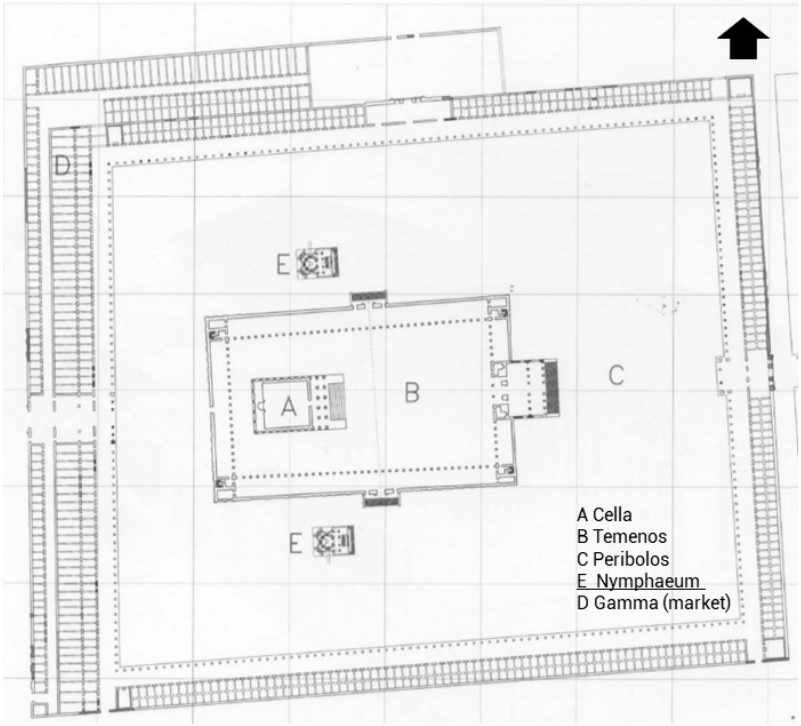


Fig 1. Reconstruction plan of the temple of Jupiter and its building conponents.Sauvaget, 1949 (As cited from Akili, 2008, p. 32).

of the surrounding elements. He presented an evidence of the temple's peribolos by outlining the remained columns and walls scattered around the mosque (Akili, 2008: p. 28). He believed that the church was located along the southern-west access of current mosque, including the southern west tower but were totally demolished when al-Walid decided to build the mosque (Akili, 2008: p. 46). He also believed that the area was more complying with the historical texts written by the Arab historian Ibn 'Asakir (1163/1954) and number of other Arab historians who mentioned the division of the sanctuary between the Muslim and Christian populations in the old city during the early Umayyad periods in which the southern entrance was the main entrance for both prayers.

Various studies on the substratum of the surroundings of the great mosque have revealed different examples of spatial transformations. For instance, Salibi (1997) examined an area located south-west of the mosque on Muawiya street which is very close to the walls of the assumed peribolos structure. He found a palace 2.5 meters below the ground level which was transformed from a Byzantine to Umayyad. This palace included remains of ancient walls and composed of large stone blocks dating back to the Roman period. He argued that this composition was similar to the ashlars of the mosque enclosure. He further mentioned that inside one of the halls a large mosaic with geometric patterns was located and found an inscription towards the centre of this mosaic written in Greek to be read "One is God who protects all those who enter this place and all those who dwell there". Salibi believed that this inscription dates back to the Byzantine period in the 5th or the beginning of the 6th century. Also, this passage is found relevant to the one exhibited in the southern door of the mosque transept. Another mosaic pavement included geometrical patterns belonged to the Umayyad era of the palace indicated the level of exchange of artistic culture in Damascus between the Byzantine crafts and the Islamic adaptation of and the location of an administrative quarter located nearby the early Umayyad Mosque (Salibi 1997: 191-194). Salibi suggested that the location of this palace was perhaps a part of an important imperial monuments grouped around old enclosures. (See figure 2).

In a study demonstrated by Sack et al. (2008) of dating an archaeological exploration made in the last decades of the last century at the Sough Al-Sagha area (gold smith market), in front of the southern wall of the mosque (see figure 2). The study concluded a phase plan of the ruined fragments and stressed over a structure of an octagonal polygon. The structure indicated the presence of a fountain belonged to the temple of Jupiter. The

reconstruction of the fountain is further illustrated by (Ahmad, 2018) who analysed the structure by using epigraphical sources to reconstruct its form. Furthermore, study conducted by Saad (2018) had identified fragments of remaining structure located at eastern side of Bab Jayroun gate, adjacent to the eastern arcades. The remains were found in an old house with a Greek inscription have revealed other parts of the Zeus-Theandrios temple. The study concluded that this discovery allowed to identify new findings of substructures laying within the surroundings of the mosque and encouraged for more studies to reveal other parts of the complex located around the temple (Saad, 2018, pp. 65-72). (See figure 2). These findings may interfere with the reconstruction plan of the peribolos by suggesting other phases of the elements surrounding the old inner enclosure.

Furthermore, Burns (2005, p.88) discussed that many parts of the peribolos enclosure were used for different purposes. He emphasized on the location of a Byzantine palace at the southern eastern corner of the peribolos enclosure. He added that the palace was built around A.D. 495 and was dedicated to the Byzantine's governor of the Phoenice Libanensis where Damascus was the capital of that province. The same palace was later used by Umayyads as the house of government "Dar al Hukum" number of sources mentioned the palace which was probably demolished in the fire of 1069 A.D. Arab historian Ibn-Asaker (1163/1959) stated that 'Umayyad caliph Abdulmalik (r. 685-705) built his palace Dar Al Amara by acquiring the former Byzantine governor's version'. It was also mentioned by 12th century Arab traveller Ibn Jubayr (1145-1217) reciting from previous scholars (2020, pp. 295-296) that "Dar Al Amara" also known as "Dar Al Khadra" was connected with a southern Maqsura built by the Umayyad early caliph Muawiya (r. 661-680). (See figure 2).

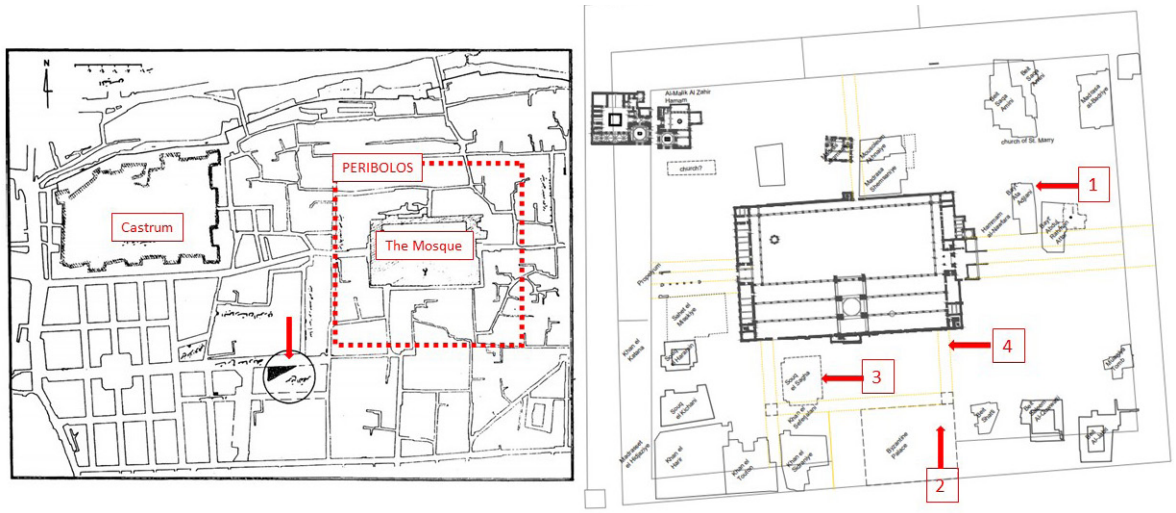


Fig 2. On the left: location of the palace found by (saliby, 1997). On the right: A reconstruction plan of the peribolos with the identified buildings and the archeological findings made by different authors, 1. Temple of Zeus found by Saad (2018): 2. The Byzantine-Umayyad Palace, mentioned by (Burns, 2005; Porter, 1855): 3. The fountain and other structures found by (sack et al, 2008): 4. The reconstruction drawing of the courtyard of the church and the palace made by (porter, 1855).

Analyse

The analyses we carried out in this research in attempt to reconstruct the formation process of the mosque are based on two hypotheses: (1) The inner enclosure of the temple (temenos) functioned as a fortified enclosure built during Tetrarchic period and developed later during the middle of Byzantine era. (2) The outer enclosure (peribolos) was a part of larger complex area stretching towards the straight street and included various building types formed from the end of the 3rd century. Thus, two parts will be demonstrated in this study: architectural typological and urban morphological analyses.

Typological Analysis

The first primary period we analysed was from the third to fourth centuries, where Malalas (Jeffreys, 2017, p. 118) referred to emperor Diocletian 'who built arms factories in Damascus in the year of AD 287 to stop the invasion of the Saracens' (Jeffreys, 2017, p. 168). Millar (1993) added that during this period onwards, strong military operation led by the eastern Roman soldiers against the Saracens were confronted at the southern outskirt of the empire. Several fortifications were built along the Strata Dioclitiana throughfare which Damascus was seen to be part of this road (Burns, 2003). Millar believed that the military structure of this periods is a mysterious and barely seen visible in historical sources. Further forts were constructed housing limes and legions across the steppe from Sura to Damascus is seen to be preserved in many places on the northern Jorden. These forts were further investigated by Arce (2010) and concluded that forts were enlarged during the 5th and 6th centuries for the Arabicus and Orientis Limes but were established as early as the Tetrarchic period (3rd c.). This period indicated a shift of strategies which might be reflected on major transformation on the old city of Damascus, particularly, the peribolos as it is located at the centre of the city.

The second major transitional period we examined was from the transformation of the temple of Jupiter to a church (c. AD 379) until the period in which the church was transformed into a mosque (c. AD 635). The textual evidence of the transformation of the temple to St. John church is seen in number of historical manuscripts written by Chronicons Malalas (Jeffreys, 2017) and Paschale (Whitby, 1989) including an Armenian source mentioned recently by George (2021). Despite the different interpretations of historical texts which led to confusion of its form and location. The only available definite information we have is that the church was formed inside the inner enclosure, it was built on the ruins of the Hellenes temple, and were ordered to be built by Theodosius I. Nevertheless, prior to this major

transformation seemed to not include any historical data until the major alteration of the enclosure during the early periods of Umayyads footsteps on the enclosure i.e., the division of the sanctuary and the total acquisition of the church which was mentioned in 7th century Frankish Bishop, Arculf, who toured the levant in around 670 A.D and visited Damascus city. He mentioned that there were two sanctuaries for each community in the city presumably on the location of the mosque and the former church of St. John (Adomnán, 1895).

During the 4th until 6th centuries, the region witnessed changes on different levels; religiously, economically, militarily, and probably culturally. The form of fort structures built in earlier phases witnessed several physical changes. This coincides with the later transitional phases in which the church and the enclosure had transformed from Jupiter temple. The major transitions of the fort structures were resulted from the changes in military strategies, especially during the 5th century (Arce, 2015). The area examined by Arce was the place included the Limes Arabicus based and spread between the Euphrates and the red sea at Aila city. This area had an intense number of forts located along the steppe route leading to Damascus and parts of the Strata Diocletian military route. He argued that the physical changes found in these forts took place in different phases. The implicated changes have consequently led to the change of perceiving the socio-cultural aspect of forts by increasing their dimensions and adding several elements to their structures which resulted in the emergence of the Quadriburgia type. This type was identified by expanding the original forts and adding towers on the corners or near the central gates. These changes occurred during the new strategies imposed by Emperor Justinian from A.D. 4th - 5th century and led to establish new typologies across the region prior to this era.

Therefore, when we compare the general layout structure and architectural plan of Umayyad Mosque with the fort structures mentioned in Arce's study, we realize that the formation process and the chronological order of the transitional periods may emphasize the notion of Umayyad inheritance of the Roman fort structures which later transformed either into garrison palaces or mosques. This is because, as observed from Arce's study, the fort structures were re-used by the early Umayyad dynasties as dessert palaces and monasteries and were ready to be occupied despite their specifications. This indicate to a certain extent that the inheritance of a Byzantine structure to Umayyad's was resulted from a series of transitional process mainly adapting similar process of formation with the fort structures across the region including the Mosque of Damascus.

Arce (2015) studied and analysed many examples of the preserved forts located in southern Syria (modern day north Jordan). Two major forts were highlighted in this study to compare their characteristics with the precinct of Umayyad Mosque: Qasr al-Hallabat and Deir al-Kahf. The original form of these structures was constructed in 3rd century and developed until the A.D 8th century. They belonged to Severian Castra typology built between AD 2nd - 3rd century, and later were modified during the 5th and 6th centuries. Arce believed that most of the structures built as an (opus quadratum / Square work) masonry structure. He added that the rough building techniques used among the new Roman structures in the late of the 3rd century was an indication of "the pressing need and the speed of construction." (Arce, 2015, p. 102)

The structure of Qasr al-Hallabat is located at Via Nova Traina that connected Damascus to Aila (Aqaba). The Umayyad structure was resulted from several expansions spanned from the 2nd to the 7th centuries. The current structure of the monastery belongs to Umayyad period but was originated from a Roman praetorium typology. The evolution process of the typology of Qasr is strongly displayed in this palace by observing the different parts of the enclosure. The western side includes the early phase of which included the fort for the Limes Arabicus. Further development of the plan was shown in Acre's study (2010) on which different rooms were added to form a corridor on both sides and entrance on one side. Later, during the 4th – 5th Century, the inner space was enlarged and included four towers at each corner with a larger entrance at the northern east side. This type was named as Acre defined by Quadriburgium (four towers). The structure is believed to have been in this state until the Ghassanids federates took control of the frontline of the region which dates to the 6th – 7th century. By that time, they took residence in this place and improved it to include different rooms and barracks for the soldiers. This type

Fig 3. Left: The result of the analysis done by the authors highlighting regular blocks and routes stretches from the northern urban tissues until the beginning of the Souq Medhat Pasha Street (straight street). On the right shows of the reconstruction plan of Lambeasis military headquarter as mentioned by (Flavro & Yegul, 2019).

reveals the transformation process of an early military enclosure to praetorium, Quadriburgium, Ghassanids monastery, then to an Umayyad castle. During Umayyad period, the structure was overseen with a refurbishment, it served as a palace, a mosque, and a bath during 7th – 8th centuries. The structure was destroyed by an earthquake of 748-9 AD and had caused severe damages to the original foundation (Arce, 2010).

The second example is at Deir al-Kahf. It is located on the "Strata Diocletiana" passing from Palmyra and Damascus to south of Arabia. The original form measures around 784 square meters of a square plan that measure 28 m from each side with a thickness of each wall is 0.9 m. During the tetrarchy period the fort was incorporated with a larger installation that extended north and west. Ghassanids occupied the enclosure during the 6th century. They enlarged the structure to include additional spaces (Arce, 2010). The structure displays similar typological process with the rest of Umayyad garrison castles which started from a Severian Praetorium. The formation process shares an overwhelming similarity with the general form of the Umayyad Mosque as several elements displayed inside the precinct and the arrangement of some structural elements looks almost identical. Soundings at the site of Deir el-Kahf have revealed the foundation of an early Byzantine church inside the forecourt of the fortified enclosure. The presence of a tower at the eastern section next to the main gate is relatively similar to the northern the medieval tower of the Mosque at Damascus. The architectural

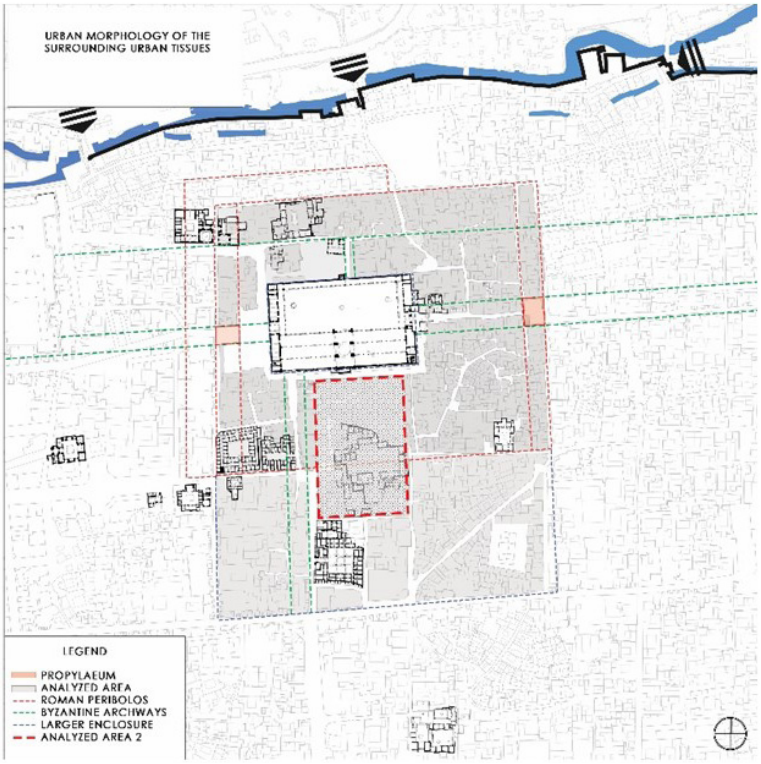


Fig 3a. Urban morphological analyses performed on the surrounding urban tissues.

composition of a tower next to a gate is in both plans revealed additional similarity of both structures which dates to a late-Byzantine era. See figure 7 on the matrix.

These examples were considered as important case study toward the understanding of the logical transformation process of the great mosque from a former Roman-origin structures as they share various architectural similarities and they display outstanding evidence on the nature of the conversion from Roman to Umayyads in spite of their dissimilar function. As seen, they were built as military installation but then were transformed as garrison structures during Umayyad phases. Similarity, we suspect the possibility of parallel transformations that happened on the temenos in Damascus during this era due to the urgent need of building in the city centre by reusing the inherited architectural elements of the former structure and continued the process, rather than complete destruction of the already built landscape. Certainly, the confirmation of this hypothesis needs further textual evidence, however, it is observed that the urban surroundings and the architectural elements to be relatively similar to each other in addition to the comparable proportions of the analysed forts located few kilometres from Damascus on the shared throughfare (See figure 7).

Urban Morphological Analysis

The other part of the study we carried out to examine the second hypothesis on the origins of a bigger complex, probably of an urban military enclosure, was found by performing readings on the surrounding urban tissues. The study found that building blocks located across the two narrow streets of Nur el-Din al-Shahid and al-Mutwalli streets, were oriented towards east-west direction. This area was formed by the boundary of the peribolos which had stood as part of the outer temple enclosure. In addition, the street networks of these two streets were found perpendicular to the straight street Via recta which indicates the

Fig 4. Shows the close similarity of the inner architectural order located in the western side of the mosque with the Architectural order of the archways located on the western opposite of the western gate.

late-antique origin of these streets. The bigger enclosure which measures around 432 x 366 m was never mentioned by early research, have been found similar to the early urban military establishments located in Lambaesis and Timgard (Yegul & Flavro, 2019) and at the western part of Palmyra (Isaac, 1990). Furthermore, we noticed that in the reconstruction plan of the Lambaesis' general layout, a placement of a praetorium structure with its form to be closely related to the Umayyad Mosque and the relationship between its surrounding urban context, measures, the building tissues, and the orientation of the surrounding blocks. (See figure 3 and 3.A).

Moreover, additional observations on the mosque and its surroundings validated the hypothesis which indicated that the enclosure of the mosque was included as part of a larger complex that were formed during imperial Roman era and kept developing during later stages, these observations are as follow:

The inner architectural order of the western hall of the mosque at (Bab el-Beraid) is remarkably similar to the remains of the western arcades running towards the Hamidiyye Street, still preserved outside the enclosure. The arrangement of these arcades found parallel to the western gate. They were probably constructed during late Roman era, followed by an embellishment during byzantine era, and were also seen during the late 19th century at the eastern gate of the mosque in the 19th century (Dickie,1897; Porter, 1855; Spiers, 1905). The similarity of the structural details of both areas are evident on the nature of the continuation as they both comprise a pulvin on top of a Corinthian capitals supporting the arches of a stone ashlars. These features are found strongly related to the early construction of churches across the region (Butler, 1929). This indicates the adaptation and the continuation of the process of the spot by reusing the parts of the remains to include it in the construction of the mosque (See figure 4).

Another indication of the continuation process of the former structure is the strong similarity of the mosque prayer hall with the arrangement of the Palace of Theodoric depicted

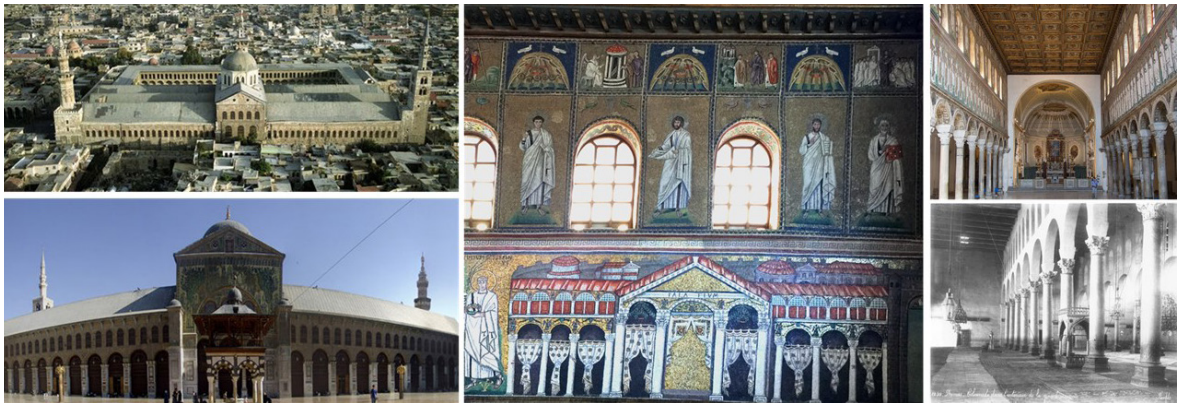


Fig 5. On the left: The similarity of the mosque's prayer hall with the arrangement of the Palace of Theodoric depicted in the church of St. Apollinare Nuovo in Ravenna (Camiz, 2008). On the far right: The similarity found between the inner architectural order of the two spaces of worship.

in the mosaic of S. Apollinare nuovo in Ravenna mentioned in Camiz study (2008). The pediment and the arched pillars architectural order depicted in the mosaic is remarkably similar to the arrangements of the mosque, see figure 5. Investigations made by Camiz (2008) indicated that the palace was part of a larger complex area located around the church built during the Byzantine era. Furthermore, the similarity is also observed on the form of St. Apollinare Nuovo -where the mosaic had been located of- (See figure 5). The structural elements composed of continuous double arches on top of large pillars and the flat roof structures in both places of worship indicated the similar chronology of both structures. Therefore, it can be considered that the place of the temenos probably was a part of a larger complex which contained imperial palace built in the Byzantine era and continued to serve Umayyad caliphs before its transformation.

The research carried out by the archaeologists Houman (2015) and Sack et al. (2008) in respect of the archaeological findings of the surrounding area outlining that the peribolos of the temple of Jupiter included several superstructures dating to different phases. For example, Al-Rihawi (as cited in Saad, 2015) found the location of the remaining structure of the Zeus-Theodoric's temple located at the eastern side of the mosque which was seen from an inscription. Also, Saad (2015) mentioned that it was hidden inside the house few metres from the eastern wall of the mosque. Likewise, a fountain structure, water canals and other structures found at the southern corner of the mosque (Sack et al., 2008) inside the peribolos area, made us believe that the availability of

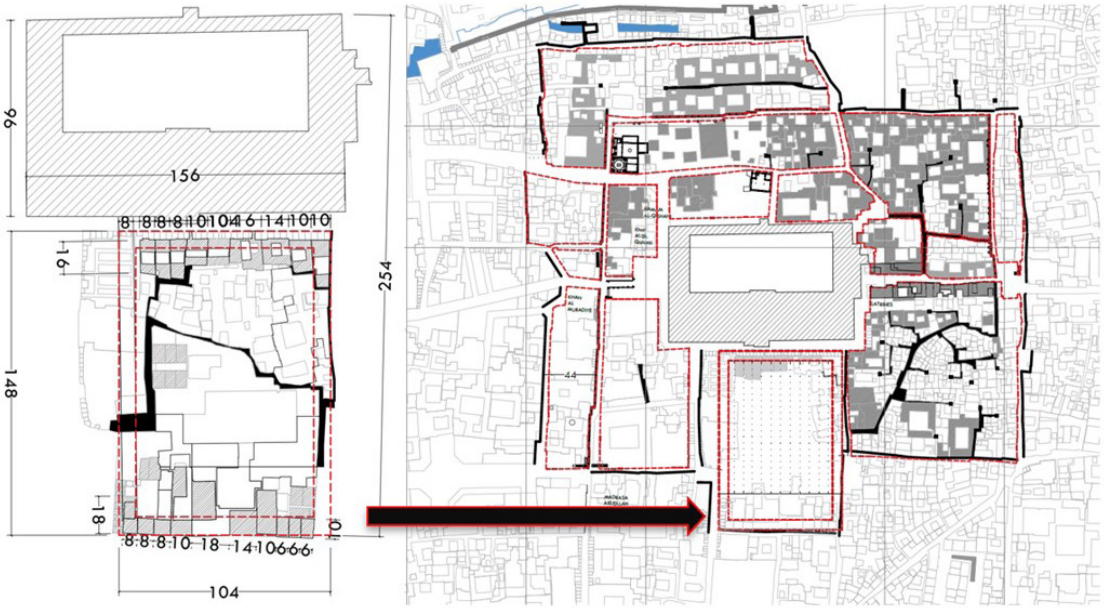
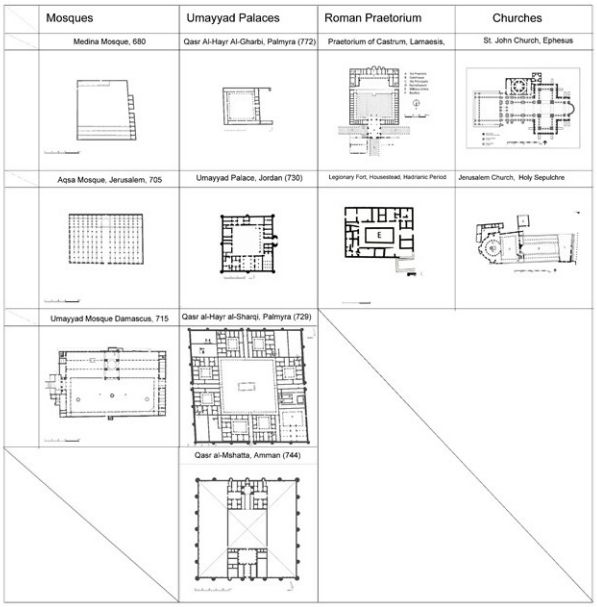
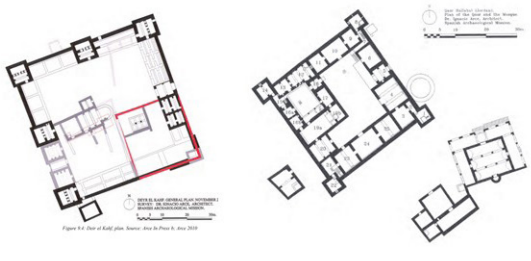


Fig 6. The measures of the urban tissues after analysis made on the southern part of the mosque to analyse the surrounding urban tissues.

such structures is significant since they indicate to the early building periods of these structures which transformed during the subsequent eras to building blocks, while the temple remained as a public space.

The urban tissue opposite to the southern front of the mosque includes many important features; it contains various monumental foundations dating back early phases as discovered by archaeological studies of the strata (Sack, 2008; Ahmad, 2020); The area included the Byzantine-Umayyad palace mentioned by various sources with its current space comprising parts of the 18th century palace of Qasr el-Azm (Ibn Jubayr, 1148/2020); The area included the embellishment part of the church built by Arcadius mentioned by both scholars (Dickie, 1897) and (Porter, 1855) and was suggested to include an atrium that belonged to the late-phase of the St. John church; And the availability of a diagonally-oriented building aggregates across the alleys between Suq al-Sawwaf and Suq el-Buzuriyye street, likewise, the total area of the urban tissue measures around (148 x 104 m) which is relative to the walled enclosure of the mosque that measures around (156 x 96 m). These observations are considerably substantial to the understanding of the bigger enclosure bearing in mind that both urban tissues included fragments of an earlier monuments and were found comparable to each other (See figure 6). In summary, the urban tissues surrounding the mosque deserve similar attention when studying the formation process of the mosque as they share mutual chronological aspects of early imperialism exposed to consequent transformations, besides the connecting routes revealing the dysconnectivity of the




Deir el-Kahf, by Arce, 2010

Qasr al Hallabat, by Arce, 2008

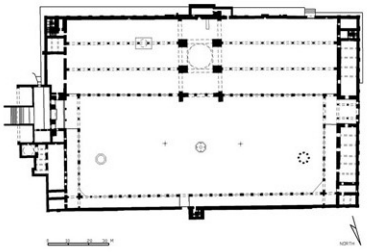

Great Mosque of Damascus, by al-Rabbat, 2003

Fig 7. Left: Matrix scheme to make comparisons between the Umayyad Mosque and the mosques built in earlier periods with churches, Umayyad palaces, and Roman Praetorium. On the right top: Arce's plans of the forts. On the right bottom: floor plan of the mosque, (Jami' al-Umawi al-Kabir, 2003) retrieved from https://archnet.org/sites/31/media_contents/44546

studied area from the rest of the city hippodamian structure.

Discussions & Conclusions

The study found that the preserved elements of the Umayyad Mosque and its surroundings indicates a degree of continuation process reflected in the similar features of their architectural form and order. Accordingly, the Umayyad Mosque consists of fragments inherited from various periods. The original structure was possibly built by the Aramean which was seen in the western part of the decorated pilasters. Then, it was transformed to a Greaco-Roman temple serving as a cult centre for Zeus-Jupiter. Then the enclosure was transformed to a military enclosure by adding the side towers and the halls serving as an administrative centre of the governors during Tetrarchic period. Later, the church was incorporated inside the precinct in the southern-west area of the enclosure (now is the western part of the prayer hall) and was ordered to be built by Theodosius I (The great). Then it was further developed under Arcadius during the 5th and 6th century to include the surrounding arcades running from the main entrances of the old enclosure. The surroundings were completed to set an imperial image on the urban settlement including palaces, public baths, markets, and houses. When the Umayyads took power in the city, they divided the space into two areas at the Qibla wall where the eastern part used as an early mosque. Then, the Umayyad caliph al-Walid ibn Abdul-Malik (r. 705- 715) felt the need to enlarge the space by offering the Christians other churches in the old city, he took the other half and continued the similar arcades towards the eastern part and following similar structural order of the church located at the opposite side of the mosque. Later, the mosque was developed and continued to flourish with further elements such as the dome and the mosaics in later phases, from the 8th century onwards.

Certainly, the absence of definite evidence from textual sources of the specified periods in regard to the transformation led to

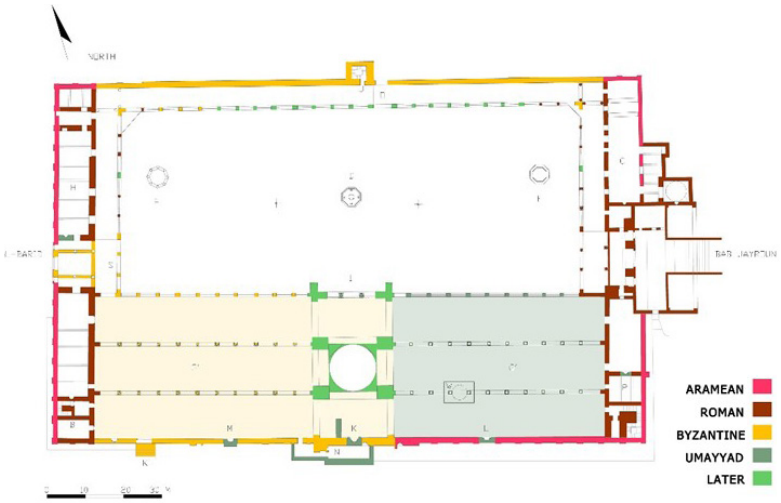


Fig 8. Phase diagram of the mosque elements showing the different construction phases.

hypothesize the reconstruction phases by analysing the form and architectural order of the mosque and its surroundings. It is foreseen that the region was at the peak of building forts and military installations in several major cities that crosses the main roads during these eras. The strong spatial similarity of some of the preserved castles and praetorium with parts of the mosque seen in the matrix scheme diagram revealed that the mosque shared similar characteristics of the built Umayyad castles which had originally belonged to the early phases of the Tetrarchic period. We also note that the larger extent of the urban tissue surrounding the mosque is comparable to the planning typology of the urban military settlement in cities that overwent similar transformations. Likewise, the architectural order of Umayyad Mosque and its similarity with the parts of the surrounding elements reinforced the theory of the continuation process of the whole urban tissues, including that both elements are part of a one living organism that continued to be developing in later eras in relation with the historical context and the impeded cultural values of each era (see figure 7).

The study concludes a hypothetical phase plan of the mosque by illustrating the elements of the Umayyad Mosque according to their chronological order resulted from the performed analyses and the review of the textual references. In addition, it

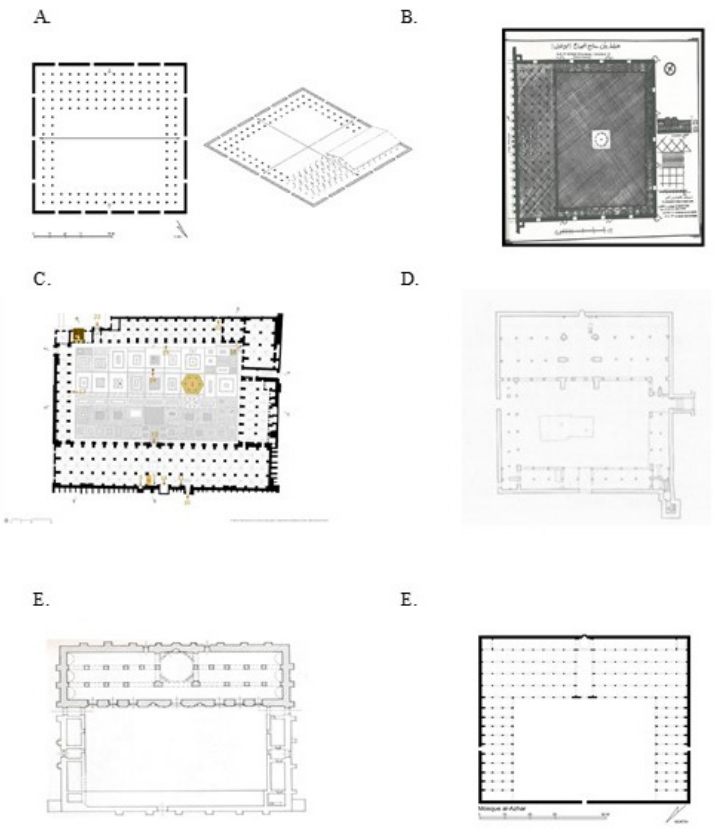


Fig 9. Diachronic variants of congregational mosques across the Islamic region.

can be assumed that the Umayyad Mosque enclosure was part of a larger building complex that was built during successive eras and included building blocks which were developed from the aggregates forming single blocks on the urban tissue (see figure 8). Similarly, the study of the formation process of congregational mosques built in later periods may have been considered to be formed adapting the Great Mosque, however, it should be analysed as separated case studies by studying their urban context. Diachronic variants of congregational mosques is seen in many mosques in the region such as: al-Kufa, Iraq (c. 670), al-Wasit, Iraq (c. 703), Aleppo, Syria (717 AD), Daraa, Syria (750 AD), Kiziltepe, Turkey (1204 A.D.), and Al-Azhar, Egypt (1269 A.D.). (See figure 9).

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