

Visigothic Spain and Armenia: Masonry Considerations

Anahit Ter-Stepanian

Introduction

Visigothic monuments display architectural and sculptural features which are hard to explain in 7th c. Western Europe. These features include high level of stone craftsmanship, cruciform plans, tall and narrow sprayed windows, horseshoe shaped arches, vaulted spaces, monumentality combined with small size, figural, geometric, and floral ornamental motifs applied to unusual areas for Western Christian architecture. Since many individual Visigothic features can be traced to Roman, Syrian, or Byzantine monuments, these traditions are considered instrumental in creation of Visigothic architectural vocabulary. More recently, a growing number of studies point to Islamic art as a possible source of influence and thus support later, post-Islamic dating of this group of monuments. However, none of these interpretative schemes fully explains the presence of all features of Visigothic art. I argue that 7th c. Armenian architecture is a stronger candidate for a prototype for Visigothic stone architecture and will show that characteristically Visigothic stylistic features were present in 7th c. Armenian architecture. I suggest that they were imported to the Iberian Peninsula by guilds of Armenian masons who fled their homeland after it fell to Arabs in the middle of the 7th c. I challenge the post-Islamic dating of Visigothic monuments and support their 7th c. dating.

The evidence presented in this article, as well as analysis and conclusions, are based on the close examination of physical remains of four commonly discussed Visigothic churches in Spain: Santa María de Melque near Toledo, San Juan de Baños in Palencia, San Pedro de la Nave in Zamora, and Santa María de Quintanilla de las Viñas in Burgos. In the absence of written documents, special attention is given to material evidence and building technologies, including masonry techniques, fenestration principles, and tectonic elements.

For simplicity, the terms Spain and Iberian Peninsula are used interchangeably. Also for simplicity and to avoid the repetitive use of the expression “traditionally attributed to the Visigothic period,” I use the term “Visigothic” even if there are debates about chronological dating of these monuments.

Masonry in post-Roman Europe

The continuous debate about the origins of Visigothic architecture results from the absence of clear continuity with building traditions of the preceding period. Large stone masonry construction in the Iberian Peninsula came to halt after the decline of the Roman Empire, and during the following three centuries (4th – 6th c.) structures were made using masonry of generally poor quality, mainly rubble and roughly hewn stone. This decline in building

technology did not impact building activity; a large number of churches was built during the 5th and 6th c. to accommodate growing needs of converts to Christianity¹.

The definite change in building technology occurs in the second half of the 7th c. with the construction of numerous churches using finely dressed and properly coursed large stone masonry. This unprecedented flourishing of stone architecture was sudden and unrelated to building practices of the preceding period.² In many cases, buildings are adorned with sculptural decorations which are placed in areas unusual for Western architecture, for example on capitals and steles.

This new style cannot be traced to Visigothic sources since Visigoths didn't develop any style of their own before settling in the Iberian Peninsula. Structures of the Visigothic period display characteristics not found elsewhere in 7th c. Europe. In search for possible sources of Visigothic art studies consider Roman, Byzantine, Eastern, and, more recently, Islamic art. The question of outside influences has turned into a long debate. Establishing the source of Visigothic architecture is of great importance not only because it can explain the presence of unusual architectural features, but also because it may serve as a key for dating this group of monuments. Originally these monuments were dated based on stylistic similarities with the church of San Juan de Baños near Palencia, the only building with a foundation inscription stating that the church was commissioned by king Reccesuinth and was built in A.D. 652 and consecrated in A.D. 661. This seemingly reliable dating of the church was used as a chronological key for dating other structures which displayed stylistic similarities with San Juan de Baños. Thus, San Pedro de la Nave and Santa María de Quintanilla de las Viñas were dated to the second half of the 7th c.³ The fourth church discussed in this paper, Santa María de Melque, was originally assigned a Mozarabic date, and then attributed to the Visigothic period.⁴ In 1992 Garen suggested to revise the date of construction to the 8th c. and argued the presence of Islamic influences based on several structural and decorative features.⁵ Garen's publication triggered a number of studies supporting the later, post-Islamic dating not only of Santa María de Melque, but also of other churches that were previously considered Visigothic. Thus, in addition to the source of Visigothic architecture, now the debates also include chronological considerations.

A brief summary of interpretative schemes

The argument on behalf of Roman influences is based on the assumption that similarities in architectural features between the two traditions result from appropriation of Roman building

¹ Kingsley 1979, 17

² Ibid. 107

³ Collins 2006, 191

⁴ Collins 2006, 192; Garen 1992

⁵ Garen 1992

practices by Visigoths. Supporters of this hypothesis suggest that since the Iberian Peninsula was part of the Roman Empire, the transition from the Roman artistic principles to the art of the Visigothic period was based on continuity of traditions. Founding their reasoning on the examples created between the decline of the Roman period and the emergence of Visigothic art, studies employ political and social evidence to affirm parallels in courtly behavior, such as adoption of symbols of power of Roman rulers by king Leovigild.⁶

While large block stone masonry is a strong common feature, windows, horseshoe arches, and decorative motifs are not of Roman origin. The shape and decorations of pilaster capitals are non-classical. However, the main weakness of the Roman argument is the assumption that the skill of finely dressed stone masonry was restored in Spain after a long period of decline without any outside interferences. In the 5th and 6th c. churches (mainly basilican), were made of rough stone masonry with timber roofs and reused materials from the Roman period. The Roman model doesn't explain the presence of highly skilled masons in Spain in the middle of the 7th c.

The argument on behalf of Byzantine influences is supported by strong economic and intellectual interchange between Visigothic Spain and Constantinople. Visigothic rulers were preoccupied with Byzantine culture and adopted features of Byzantine court ceremonials. The clergy vestments were made of Byzantine silk, liturgical vessels were imported from Constantinople.⁷ Many Visigothic symbols of power, such as minted coins, relied on Byzantine models.⁸ Indeed, the Byzantine occupation of southeast of the Iberian Peninsula in the second half of the 6th and the first quarter of the 7th c. may explain the existence of "eastern influences" in art, however, the gap of several decades between the decline of Byzantine political presence and the emergence of Visigothic architecture weakens the validity of the claim.⁹ To validate Byzantine-Visigothic artistic impact, Harris suggests to date some Iberian churches to the 6th c.¹⁰

The most frequently mentioned stylistic similarities between the two traditions include compositional features of churches, presence of vaulted spaces and pendentives. The shift from pre-Visigothic single-naved and three-aisled basilicas¹¹ to more centrally-planned compositions occurs in the 7th c. This new preferred type of spatial arrangement involves boxed-in cells arranged around the central core, in most cases without free-standing columnar supports.¹² Even though there are no similar Byzantine examples, Byzantine architecture is being viewed as a prototype for this type of churches since the centrally-planned composition is associated with Byzantium. However, compositional similarities between Visigothic and Byzantine churches

⁶ Palol 1968, 52-6

⁷ Harris 2003, 128

⁸ Hillgarth 1966, 506-7

⁹ Utrero 2010, 193

¹⁰ Harris 2003, 128

¹¹ Dodds 1990, 14

¹² Williams 1993, 15

may be exaggerated. Williams makes an important comment that similar compositions do appear in Byzantine architecture, although later than in Spain.¹³

Supporting the Byzantine model are also similarities between Visigothic and Byzantine ornamental motifs, such as the vine scroll and some of the decorations of San Pedro de la Nave.

The Byzantine model has weaknesses, particularly because of the building technology and the masonry technique. Visigothic buildings display high quality stone masonry unknown to Byzantine builders. Byzantine architecture is based on brick construction, which is sometimes combined with small stone ashlar in an *opus mixtum*,¹⁴ a technique not used in Visigothic monuments. Stone blocks quarried for Byzantine buildings were much smaller in size than those used in the Late Antique period¹⁵ and in Visigothic buildings. Statements that in Visigothic churches the stone blocks are laid after the manner of the bricks of the San Vitale by simply replacing brick with ashlar stone blocks¹⁶ should be dismissed.

Timing is also a concern. The flourishing of Visigothic architecture peaks a century after the sharp decline of Byzantine architecture, further weakening the probability of direct connections between the two architectural traditions. Byzantine building activity of the Transitional period¹⁷, between the end of the 6th c. and A.D. 850, was minimal. Only a few churches are known from that period¹⁸ and even they lack any stylistic unity.¹⁹ These two circumstances make it almost impossible to draw parallels with Byzantine churches of the 7th c.

The scale of buildings is also a consideration against the Byzantine claim, since Visigothic churches are much smaller than early Byzantine churches. We are warned that this evidence has to be taken perilously due to lack of surviving monuments from the capital, Toledo, and the fact that our knowledge is based on provincial examples.²⁰ How justified is the assumption that had there been survived churches in Toledo, they would have been larger in size? All our knowledge is based on small churches and we can't assume that larger ones existed. As a counterargument, the church of San Juan de Baños was a royal commission, and it is still of very modest size, which shows a definite disjoint with 6th c. Byzantine monuments.

There are other considerations against the Byzantine model. Geometric clarity of Visigothic churches doesn't have any parallels in Byzantine architecture. Architectural elements persistently used in Visigothic churches, such as horseshoe arches and apses, are found only in structures built in central Anatolia or "High Plateau of Asia Minor,"²¹ but not in

¹³ Williams 1993, 15

¹⁴ Ousterhout 1999, 128

¹⁵ Ibid. 138

¹⁶ Jardine 2003, 3

¹⁷ Ousterhout 1999, 3

¹⁸ Krautheimer 1975, 201

¹⁹ Kitzinger 1976, 158

²⁰ Williams 1993, 15

²¹ Krautheimer 1975, 121

Constantinople.²² Fenestration of Visigothic churches also doesn't have any analogues in Byzantine architecture. Even though ornamental motifs are often interpreted as a similarity, Byzantine interiors are decorated with colorful mosaics or murals, relying on the synthesis of architecture and painting, whereas Visigothic interiors display severe character with decorative elements of "plastic" character. They are not superimposed, but rather they belong to the architecture with intricate ornaments carved in coursed wall blocks. Byzantine interiors remind us of Gianlorenzo Bernini's pompous gilt and painted interiors, whereas Visigothic churches are closer to the logic of Francesco Borromini's organic, purely architectural plastic decorative elements.

In addition to distinctly Roman or Byzantine models, the Roman-Byzantine model suggests that the Roman traditions survived in the Byzantine culture, albeit in changed form, and impacted artistic tastes in the West through active trade and diplomacy, turning the area from Britain to the Mediterranean into a 'Late Antique Commonwealth'.²³

Other interpretative schemes also exist. They suggest "Eastern" influences, pointing to Syrian, North African, or Coptic sources.

Hillgarth discusses the possibility of Eastern, and more specifically, Coptic influences reaching Ireland through Visigothic Spain and points to similarities in the treatment of human figures in Spanish and Coptic art.²⁴ Williams points to North African connections, although agrees that the lack of well-preserved examples makes it hard to be certain.²⁵

Syria is also discussed as a source for Visigothic architecture. Indeed, many similarities with Early Christian Syrian architecture may be observed. Ashlar stone masonry appears in both Syrian and Visigothic churches. Peña argues that Visigothic architecture was heavily influenced by Syrian architecture, mainly due to ashlar stone masonry technique.²⁶ Elements such as horseshoe arches and horseshoe apses appear in both regions. Thus, speaking of the horseshoe arch in Spain and in European art in general, Dewalt as early as in 1922 points to its Syrian origin and explains its introduction to Europe by the presence of "Eastern" travelers.²⁷ Supporting the Syrian model is the fact that Syrians were present in large groups in the Iberian Peninsula.²⁸ However, as Harris suggests, at the time all groups were referred to as "Syrians," and little distinction was made about the ethnic origin of migrants from Asia Minor and the Byzantine Empire.²⁹

²² Ousterhout 1999, 210

²³ Harris 2003

²⁴ Hillgarth 1961, 442-43

²⁵ Williams 1993, 15

²⁶ Peña 1997, 236

²⁷ Dewalt 1922, 319

²⁸ Harris 2003, 127

²⁹ Harris 2003, 61-62

Some Visigothic ornamental motifs are similar to Syrian decorative themes, particularly the Greek cross enclosed in a circle. The same elements persistently appear in Early Christian Armenian and Coptic art.

The Syrian model has significant weaknesses, one being the volumetric and spatial composition of structures. Syrian churches are predominantly of the basilican type and they tend to be more “boxed-in” compared to Visigothic churches. The compartmented composition, often around the central core, doesn’t have any parallels in Syrian architecture. Windows of Syrian basilicas are wider and, most importantly, they are not sprayed. Interiors are lighter due to a larger number of windows and their bigger size.³⁰ Chronological considerations also speak against possible involvement of Syrian masons. The peak of church construction in Syria falls between 4th and the end of the 6th c., whereas in the 7th c. masonry architecture was in sharp decline,³¹ which means that by A.D. 661, two generations later, those masons who worked in Syria would not have been able to transfer their masonry skills to Spanish builders.

The Islamic interpretative model emerged in 1992, when Sally Garen suggested to revise the dating of Santa María de Melque to the 8th c. based on some similarities with the palace bath of Khirbat al-Mafjar near Jericho, an Umayyad building dating from the second quarter of the 8th c.³² This was the first attempt to claim that Christian churches were possible to build during the Umayyad control of the southern part of the Iberian peninsula challenging the widely accepted Muslim injunction against church construction.

Garen's proposal of an 8th c. date for Santa María de Melque and of possible Islamic influences is based on several features. The main evidence is based on rounding of exterior corners of the church combined with vertical incisions to indicate engaged columns. Garen finds similarities with the interior walls of the Khirbat al-Mafjar palace. Based on the images provided in the article, the interior corners of the bath are decorated with engaged columns, however, they are much better defined than rounded corners of the Melque.

A close study of the exterior walls of the structure *in situ* suggests that the rounded corners as well as vertical grooves were most likely added at a later date. They are inconsistent with the wall masonry. The wall masonry doesn't show any consideration for the grooves, and nothing in the stone blocks indicates an “awareness” of their existence (fig. 1). Grooves are not strictly vertical and they are not consistent in depth, appearing deeper in some areas, shallower in others. Most importantly, the grooves are not incised throughout the entire height of walls, in some places they start with the second or even the third course (fig. 2) and stop before reaching the top course. The same is true of the rounding of corners; in some places rounding is absent on the first and even the second course (fig. 3). Similarly, the top course is not rounded in all corners.

³⁰ Peña 1997, 68

³¹ Krautheimer 1975, 140

³² Garen 1992

Another feature that supports the likelihood of the vertical incisions dating to post-Islamic period is the fact that the rounding of the corners is made within the line of the wall, without any bulging or extending beyond the outline of the walls. If the incisions were made with the purpose of creating an impression of an attached column, it would be logical to extend the corners, go beyond the surface of the wall. In Melque, no such attempt was made, all rounding is “inscribed” within the boundaries of the walls.



Fig 1. Santa María de Melque, groove Fig 2. Santa María de Melque, groove Fig 3. Santa María de Melque, rounding

Garen’s second evidence is associated with interior columns. She points to a “similar treatment [with the exterior] but with the columnar form bulging from the wall”³³ and states that there is no precursor to this in Spanish architecture of the preceding as well as of the later periods, mainly because the bulging engaged columns are coursed with the wall unlike traditional engaged columns made of monolithic shafts (fig. 4).

What Garen calls a “bulging form” appears frequently in early medieval Armenian architecture. The piers of early medieval Armenian churches frequently have “bunched” outline. Not monolithic, but coursed, engaged columns are known from numerous churches. The 7th c. Zvartnots Cathedral had four engaged coursed columns on the four piers that supported the dome (fig. 5). The site of the church of Saint Sion in Garni, dating from A.D. 659 has this element too. In this example the similarity from Santa María de Melque is even stronger, there are two “bulging forms” on each of the four piers that support the dome. The same element appears also in 7th c. multi-apse churches, Astvatsatsin in Irind and Zoravor in Yeghvard, where attached columns are coursed consistent with the wall and face the center of the structure. In the 7th c. Targmanchats Church in Parbi attached columns appears both in the interior and on the exterior walls.

³³ Garen 1992, 296



Fig. 4. Santa María de Melque, interior



Fig. 5. Zvartnots Cathedral, 7th c., Armenia

It is worth noting that monolithic columns were also used in Armenian architecture, however, monolithic columns are less likely to withstand horizontal shocks resulting from earthquakes, and their use was abandoned because of their poor earthquake resistance.

That the Khirbat al-Mafjar bath is a weak prototype for Santa María de Melque is also attested by the fact the structural logic of the engaged columns of the bath and the “bulging forms” of the church is different. In the bath, the engaged columns are of decorative purpose, in the interior of Melque the engaged columns are load-bearing elements and are part of the supporting pier.

Garen also addresses the trabeated portal with a relieving arch, which she interprets as a foreign introduction pointing to its Syrian roots in both pre-Muslim and Muslim periods. It is true that this element appears in Early Christian Syrian architecture, however, as we will show below, it was also a common feature in early medieval Armenian architecture.

Garen considers interior stucco decorations a strong evidence of Muslim influences and thus, of the 8th c. dating of Santa María de Melque. However, the stucco decoration can easily be a later addition. Application of stucco was a popular decorative medium in the Umayyad period. Most likely, the stucco was added in the end of the 8th c. and thus displays the aesthetic preferences of that period.

The post-Islamic dating of Santa María de Melque was embraced by architectural historians and historians alike. Thus, Collins calls similarities with Khirbat al-Mafjar “striking” and agrees that the evidence places the monument into a “firmly” post-Visigothic context.³⁴

During the years following the publication of Garen’s paper, the trend of redating Visigothic churches spread to other monuments, including San Juan de Baños. Even the authenticity of the foundation inscription of San Juan has been re-evaluated. Since San Juan contains reused pieces from an earlier buildings, Utrero suggests that the inscription block too

³⁴ Collins 2004, 192

may have belonged to an earlier structure and thus is unreliable for dating the church.³⁵ The same inscription is also being interpreted as a 9th or 10th c. copy of a 7th c. text based on curved letterforms, which are in sharp departure from Roman inscriptions, an evidence of a possible influence by Mozarabic manuscripts.³⁶ One can only wonder why just a few arguable similarities have led to a complete re-evaluation of an entire era in architecture and to erasing the very notion of Visigothic art from Spain's cultural past.

A proposal on behalf of Armenian influences

It is not clear why Armenian architecture wasn't viewed as a possible source of inspiration for Visigothic buildings. Armenia was the only country where stone architecture flourished in the 7th c. According to Marc Jarzombek, in the 7th c. it was only Armenia that kept the Hellenistic tradition of fine masonry and developed the most expressive forms in architecture.³⁷ In search for a possible source of influences in the 7th c. it would be logical to consider the country where stone architecture had the strongest presence at the time and where the most dramatic developments in architecture unfolded.

Even though Armenian architecture is underrepresented in architectural historical discourse, the brilliance of 7th c. Armenian architecture is widely acknowledged. Krautheimer evaluates this period as "great centuries of church building in Armenia" and "immensely productive in sheer number of structures, incredibly rich in the variety of central church plans."³⁸ Cyril Mango states that in the 7th c. Armenian architecture was leading the entire Christian East and Armenian builders had the highest level of skill in stone architecture.³⁹

It is remarkable how the Armenian language reflects the importance of masonry skills. The Armenian word for finely dressed masonry *srbatash* is derived from *surb* (holy, sacred) and *tashel* (to carve). This attribution of sacredness to craftsmanship is rare, if not unique, in any culture, and clearly illustrates the significance of masons' role in the Armenian culture. Not only masonry skill was highly respected, but highly skilled masons were most likely in high demand. Indeed, by the beginning decades of the 7th c. Armenian builders had developed a unique formal language and produced stylistically rich vocabulary, as well as a wide variety of church types, both basilican and cruciform. In addition to typological diversity, Armenian churches display an organic unity of the interior and the exterior. These features are equally present both in commissions of high visibility (Saint Hripsime and Saint Gayane churches, Cathedrals of Zvartnots, Aruch, and Talin), as well as in numerous smaller religious structures. Judging from the large number of survived structures on the territory of the Republic of Armenia, the opening

³⁵ Utrero 2010, 9

³⁶ Hoyo 2006

³⁷ Ching, Jarzombek, and Prakash 2011, 276

³⁸ Krautheimer 1975, 230

³⁹ Mango 1976, 180-81

decades of the 7th century became a period of major building activity. It is hard to evaluate the total number of churches built in the 7th c. since the artistic legacy in the considerable portion of historic Armenia has been cruelly vandalized. But even the known data allow to safely conclude that a large number of workers mastered masonry skills and there was no shortage of masons' guilds.

The idea of possible influences from Armenia in medieval Spain was suggested by Bonnet Correa in the discussion of the art of the Asturian period.⁴⁰ It is quite remarkable that Bonnet Correa sees similarities between Armenian and Asturian architectural monuments even though they are much subtler than parallels with Visigothic art.

The closest indication of Armenian sources is found in Collins's discussion of Visigothic architecture. In his evaluation of the possibility of Umayyad features in María de Melque, Collins argues against direct connections between Umayyad Islamic and Visigothic architecture. Instead, he suggests to look for a common source from which both spring and considers "eastern provinces" of the Byzantine Empire that source.⁴¹ Is it possible that Collins refers to Armenian architecture since Armenia was the eastern province of the Byzantine Empire?

Political events in Armenia can clarify the reasons for migration of guilds of masons to Europe. Massive exodus of highly skilled masons in the 7th c. may be explained by decline, and eventually a complete halt of all construction in Armenia in the result of the Arab invasion. Military actions between A.D. 643 and A.D. 662 resulted in calamities and eventually paralyzed the economic and cultural life of the country. In A.D. 652 Armenia became an arena of Byzantine-Arab military confrontation. Maybe it is no coincidence that San Juan de Baños was founded at the same time. It is justified to think that guilds of stonemasons could have left Armenia seeking to utilize their skills somewhere else, especially since migration of artists was a common practice in the 7th c.⁴²

Iberian Peninsula, compared to the rest of Europe, had an added appeal for Armenians. It was closely associated with the Byzantine Empire historically and economically. Western Armenia itself was part of the Byzantine Empire and thus was in the Byzantine cultural and political orbit. In addition, historic evidence suggests the existence of Armenian ties with Visigothic ruling families. Based on the text of the Asturian *Chronicle of Alfonso III*, Collins mentions the name of king Ervig's (ruled A.D. 680-7) father, Artabast of Constantinople, who married the niece of Visigothic king Chindasuinth (ruled A.D. 642-53).⁴³ Of Parthian origin, the name Artavazd was used among Armenians since the 4th c. B.C. That Artabast was likely of Armenian origin is supported by the fact that a large number of Armenians lived in

⁴⁰ Bonnet Correa 1968, 54

⁴¹ Collins 2004, 194

⁴² Kitzinger 1976, 190-191

⁴³ Collins 2004, 102

Constantinople and in the 7th c. the Armenian element acquired an extraordinary prominence in Byzantine society.⁴⁴

International and intercultural exchange of ideas was encouraged at the Visigothic court. Books were being imported from major cultural centers of the time, scholars travelled to foreign countries to study. Constantinople was the main cultural center that attracted young intellectuals eager to get access to libraries and collections of books. Despite the political tensions and war between the Visigothic kings and the Byzantine forces in Spain, cultural connections were strong as attested by the fact that people of Gothic origin could travel to Constantinople and dedicate years to Latin literary studies.⁴⁵

Comparative analysis of architectural features

Masonry

The fundamental problem, thus, seems to rest in the following: where did Visigothic masons learn to suddenly produce high quality masonry? We should exclude the possibility of Visigothic masons learning the craft of finely dressed stone masonry on their own without any foreign intervention. Existing scholarship indirectly supports the fact that the knowledge came from somewhere else by looking into possible foreign influences. Most likely, this foreign intervention happened in the form of direct contacts with migrating masons. To reveal the origin of foreign influences we have to ask where, in which culture, do we see in the 7th c. features similar to the ones that appear in Visigothic art? Since there are no written records of foreign builders' presence in Spain, we have to rely on comparisons and parallels with contemporaneous building practices. This analysis relies mainly on building technologies, and, to a lesser degree, on formal and stylistic features. Thus, in addition to “what” was built, we will discuss “how” it was built.

Masonry considerations are particularly important when discussing Visigothic architecture. Masonry skills are hard to gain, and they may be used as an instrument in reconstructing paths of continuity in the transfer of engineering knowledge and dissemination of architectural ideas in the intercultural exchange. Even though Armenian masons have been traditionally recognized for their contribution in development of later European medieval architecture, more recent research highlights the role of Armenian masons in spreading the principles of stone architecture also to the Islamic world and even to India.⁴⁶ And yet, Visigothic architecture has never been viewed in the light of potential connections with Armenian masons, and the possibility of 7th c. Armenian influences on Western European architectural has not addressed in architectural historiography.

⁴⁴ Mango 1976, 181

⁴⁵ Collins 2004, 147-48

⁴⁶ Ching, Jarzombek, and Prakash 2011, 276, 324, 365, 368; Ter-Stepanian 2014, 36

The following section provides a detailed comparison of individual architectural features and points to parallels between Visigothic and Armenian masonry techniques.

The strongest distinguishing feature of Visigothic churches is the large finely dressed stone masonry. Kingsley argues that the dressed stone building technique is not derived from the Roman tradition due to the three centuries (from 4th to 6th) of building activity using poor material – rubble and small stones.⁴⁷ Indeed, 7th c. monuments, built from finely dressed large block stone, show a strong departure from the earlier building practices. The same high level of craftsmanship is also present in Visigothic churches. Speaking of San Pedro de la Nave, Kingsley emphasizes that the church was constructed by an extraordinarily skilled workshop of masons as well as sculptors. Both the preparation and the laying out of the stones are accomplished with flawless structural and aesthetic care. Masonry and sculpture together produce a beautifully conceived and homogenous monument.⁴⁸

Structural features in both regions display similarities. Walls of churches are of considerable thickness. Early Christian churches in Armenia have thick walls, ranging from 0.9 m to 1.05 m.⁴⁹ Even small churches have massive walls, for example, the 7th c. Karmavor church, measuring only 5 m x 7 m, has walls that are 1 m thick. The analysis of the walls of María de Melque, San Pedro de la Nave, San Juan de Baños, and Quintanilla de las Viñas shows that these monuments too are built using walls of considerable thickness, even though the structures themselves are of modest size. The thickness of walls is not consistent throughout each structure, some differences in thickness are present, but most of the walls are comparable to the examples of Armenian buildings of this period, measuring around 1 meter, plus or minus 10 cm. One of the walls of Santa María de Melque reaches 1.15 m. Armenian churches of the later period, 14th-15th centuries, have much thinner walls, around 0.55 m, although the height of structures increases. The building technology and the masonry type are unchanged, attesting that thicker walls are not necessary for structural stability but rather reflect the aesthetic preferences and common practices of the time. The presence of the same structurally unnecessary feature in both regions suggests a possible connection.

Visigothic churches utilize dry-laid ashlar masonry. Occasionally stone blocks are set with their longitudinal axis into the depth of the wall to assure greater structural stability. Kingsley mentions that masons understood and practiced classical methods of construction even though their achievement of *opus quadratum* was not fully successful,⁵⁰ which supports the claim that Visigothic masonry was not derived from Classical Rome. In contrast, Armenian masons utilized the rubble and mortar core masonry technique. Structures built using this technique display high seismic resistance. Armenia is an area with high seismic activity and masons developed and used building techniques that are earthquake-resistant, in terms of spatial and

⁴⁷ Kingsley 1979, 112

⁴⁸ Ibid. 137

⁴⁹ Toramanyan 1942, 142

⁵⁰ Kingsley 1979, 128

volumetric forms, as well as masonry type. Remarkably, although ashlar is the dominating masonry type in Visigothic churches, rubble and mortar is also used, mainly for structurally critical areas. In Santa María de Melque, there is a filling of mortar and rubble at the corners of the horseshoe shaped apse. Garen mentions that dry ashlar masonry, combined with some cement fill, is also present in San Pedro de la Mata church, not far from Santa María de Melque.⁵¹ Since rubble and cement core masonry is more labor intensive and not structurally necessary for seismically inactive Spain, it is logical that it appears only in areas requiring most attention.

Uneven coursing, when the height varies from one course to the next, is typical of masonry of both regions. In San Juan de Baños course heights range from 19 cm to 28 cm,⁵² in Santa María de Melque the courses vary from 25 cm to 61 cm.⁵³ Variation is also present in San Pedro de la Nave and Santa María de Quintanilla de las Viñas, where the height of courses is between 44 cm and 60 cm, and the friezes average 45 cm in height. Similarly, in Armenian churches the courses vary considerably in height. More visible structures display higher consistency, although even in Saint Hripsime and Gayane, deviation in course height is present. In Spain courses are higher at the base of the building, which is consistent with Armenian buildings, where the height of courses is greater in the lower parts of walls.

The height of each course shows amazing consistency in Armenian churches, whereas in Visigothic churches some deviation is present. In more visible commissions, such as San Pedro de la Nave, coursing is also perfectly maintained. Deviation in courses doesn't occur where structural stability is paramount, such as load-bearing walls, vaults, and crossing piers. Another example of perfect coursing appears in Santa María de Quintanilla de las Viñas, where a highly skilled mason completed the three exterior ornamental frieze bands. Kingsley evaluates coursing of these bands more equal in height than in any other Visigothic church.⁵⁴

Stone blocks of Visigothic churches are of varying size, but much larger than those used for buildings of the preceding two centuries. Kingsley indisputably declares that large stone construction is characteristic of the 7th c.⁵⁵ In San Juan de Baños the length of individual stone blocks ranges from 34 cm to 108 cm,⁵⁶ in Santa María de Melque the blocks vary from 39 cm to 119 cm.⁵⁷ The same variation is also present in San Pedro de la Nave, where the largest stone measures 58 cm to 122 cm, Santa María de Quintanilla de las Viñas is comparable to San Pedro Nave, stone blocks measure 59 cm to 135 cm. Kingsley emphasizes that these block sizes are typical for 7th c. Visigothic structures. Measurements are comparable with stone blocks used for

⁵¹ Garen 1992, 291

⁵² Kingsley 1979, 124

⁵³ Kingsley suggests that there might have been some 7th c. construction on the site, because stone measurements are typical for the 7th c. For a detailed description of masonry, see *ibid.* 168-69.

⁵⁴ Kingsley 1979, 136

⁵⁵ *Ibid.* 128

⁵⁶ *Ibid.* 120

⁵⁷ *Ibid.* 168-69

Armenian churches, where block lengths can vary considerably, smaller stone blocks can measure as little as 10 cm, wider blocks can reach 2 m.⁵⁸

One of the features of Armenian buildings is the seamless look of the wall fabric, when seams between individual stone blocks are almost invisible (fig. 7). In Armenian architecture individual stone blocks can be distinguished only due to color differences of adjacent blocks. It was a common practice to use tufa blocks of different tones in the same building, as a result Armenian churches have a lively polychrome wall fabric. Toramanian emphasizes that the masonry with thin and invisible seams is a characteristically Armenian feature.⁵⁹ The observation of Visigothic structures shows that adjacent stone blocks are maximally adjusted to make the seam as thin as possible (fig. 6), providing another evidence for possible Armenian involvement in construction.



Fig. 6. San Pedro de la Nave, Spain



Fig. 7. Gayane Church, A. D. 630, Armenia

One other similarity is the manner in which arched openings are built. In 7th c. Visigothic structures voussoirs of arched openings are of irregular sizes and don't radiate correctly from the center.⁶⁰ In contrast, in Roman, as well as in Syrian architecture voussoirs display persistent regularity. Similar to Visigothic arches, in Armenian architecture voussoirs are of irregular sizes and in most cases don't radiate from the center. In smaller openings, the seam sometimes coincides with the central axis, almost completely rejecting the notion of the keystone (fig. 8). Examples can be seen in the windows of the Ptghni church, Talin Cathedral and the interior arches of the small church in Talin, all dating from the 7th c.

⁵⁸ Hasratian 2000, 8

⁵⁹ Toramanian 1942, 138

⁶⁰ Kingsley 1979, 122



Fig. 8. Ptghni Church, 7th c., Armenia



Fig. 9. A possible mason's mark, San Pedro de la Nave, Spain

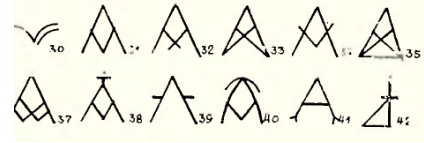


Fig. 10. 6th and 7th c. masons' marks (S. Mnatsakanyan)

Medieval masons formed guilds and participated in construction together with other guilds. For practical reasons and for ease of compensation calculation, masons used marks that were applied directly to stone blocks. More than 110 masons' marks are known from 7th c. churches in Armenia. For example, the walls of the Ptghni church bear 32 different masons' marks. When studying Visigothic monuments, I was looking for masons' marks. I found only one mark, on the southern wall of San Pedro de la Nave (fig. 9), which is identical to one of the Armenian masons' marks (fig. 10, marks 33 and 35).⁶¹ This fact alone couldn't have served as a proof of Armenian presence in Spain, however, combined with other evidence provided in the article, it can support the main claim of this research. The absence of masons' marks indicates that only one group of masons worked on the monument. Smaller churches in Armenia often don't have any marks indicating that masons worked for the same overseer (*gortsakal, vostikan*).⁶²

Compositional considerations and architectural elements

In both regions churches are generally small in size. Measurements of Visigothic churches are consistent with measurements of Armenian churches. San Pedro de la Nave measures 10 m x 20 m, Santa María de Quintanilla de las Viñas is a little over 10 m. Majority of 7th c. Armenian churches are of modest size, comparable with Visigothic examples, measuring between 5 and 10 m in width and 10 and 20 m in length for basilicas and between 5 to 15 m for centrally planned churches. Only a very small number of churches, mainly princely commissions, are larger, for example the Aruch Cathedral, built for the Mamikonian family, measures 16 m x 34 m.

⁶¹ For a detailed list of 6th-7th c. masons' marks, see Mnatsakanyan 1958, 102-3

⁶² Ibid. 96

Despite their small size, Armenian churches are monumental and imposing by their solid mass. Monumentality is achieved by using large stone blocks combined with pure geometric forms, conical or pyramidal domes, polygonal or cylindrical drums. The same monumentality is also present in Visigothic churches.⁶³ In both regions the walls have uniform surfaces, broken by entrance openings and narrow and tall windows. Windows are minimal in number and size. Geometric clarity is present in both Armenian and Visigothic churches.

Majority of Armenian churches have a rectangular exterior, four gabled roofs on four cardinal directions, and entrance openings aligned with gables. In most cases, on southern and northern facades, a second, lower, slope is present (fig. 12). This type of volumetric arrangement creates an impression of a cruciform roofing. A very similar type of spatial arrangement is present in Visigothic churches, particularly in San Pedro de la Nave (fig. 11).



Fig. 11. San Pedro de la Nave, Spain



Fig. 12. Odzun Cathedral, Armenia



Fig. 13. Kasakh basilica, Armenia

Similarities are present in structural components. Many individual architectural elements appear in both Visigothic and Armenian buildings, including relieving arches, horseshoe shaped arches and apses, sprayed windows, “sinking” sills, single-stone crowning of windows, and bands of ornaments.

Horseshoe arches are used for load bearing elements as well as for crowing windows and entrances to churches. The wide use of this element in Islamic architecture in Spain is linked to the region’s Visigothic past. The presence of horseshoe arches in Visigothic architecture has been discussed in the context of possible influences from Syrian architecture. This element was widely used also in Armenian early medieval architecture (fig. 13). In addition to horseshoe arches, horseshoe apses appear in both Visigothic and Armenian architecture. It should be mentioned that horseshoe-shaped apses were used in Early Christian (pre-Visigothic) Spain.⁶⁴

As stated above, Garen points to relieving arches above trabeated portals of Santa María de Melque (Fig. 14) as a foreign, “Syro-Muslim” element, to support the 8th c. dating of the church.⁶⁵ Relieving arches were common in early medieval Armenian architecture. There are numerous survived 5th and 6th c. Armenian churches with arches placed above trabeated portals

⁶³ Chiavarria Arnau 2010, 160

⁶⁴ Dodds 1992, 14

⁶⁵ Garen 1992, 296

as load-bearing elements to relieve the weight of the wall pressing on the entrance lintel. Relieving arches are used in the 5th c. Saint Mariam in Artik, and a number of 6th c. buildings, such as Saint Astvatsatsin of Avan (fig. 15), Saint Gevorg in Archovit, Saint Astvatsatsin of Dorbandivank, Saint Mariam in Nor-Kyank, and Saint Gevorg in Pemzashen. The relieving arch was replaced with a semicircular tympanum in the 7th c. Armenian architecture. The relieving arch is also present in Syrian architecture of pre-Muslim period, where it is often combined with a window centrally juxtaposed above the entrance lintel.



Fig. 14. Relieving arch, Santa Maria de Melque, Spain



Fig. 15. Relieving arch, Avan Cathedral, A.D. 691, Armenia

Fenestration

Visigothic architecture displays new features for Western architecture not only in masonry techniques and structural elements, but also in architectural detailing. It would be safe to state that the feature that most clearly shows Armenian connections is the fenestration of Visigothic churches. The unusual form of Visigothic windows has not been addressed in the studies, even though Visigothic fenestration displays a clear departure from Roman architectural and building traditions and doesn't have any prototypes in Western architecture. Tall and narrow sprayed windows of Visigothic churches have no precedents in Syrian or Byzantine architecture either.

The analysis of the shapes and proportions of windows of Visigothic and Armenian monuments reveals close parallels. In both regions window openings are tall and narrow. Windows have a sprayed form, are often crowned with a single stone, have voussoirs of irregular shape, and their lower edges are not aligned with wall masonry. These features are particularly important when discussing possible involvement of Armenian masons in construction of Visigothic churches, because they show not only stylistic and formal borrowings (which are possible even without direct involvement of masons), but display masons' practical skills, the

existing modes of construction.⁶⁶ The existence of very similar practices in two remote regions provides a strong evidence of possible direct connections.



Fig. 16. San Pedro de la Nave, Spain



Fig. 17. Bayburd Church, Armenia



Fig. 18. Ptghni Church, Armenia

Window openings in both Spain and Armenia are not uniform in the same monument in terms of shape, size and proportions. Although semicircular window crowning is common, rectangular shape of windows appears in both regions. It is not uncommon to have both types of window openings in the same monument. In San Pedro de la Nave both forms are present, numerous Armenian churches have both types of windows.

Measurements of windows can vary considerably in the same monument. Windows placed on southern walls can be narrower than those placed on northern walls, even two adjacent windows often have different measurements. The placement of the windows also doesn't follow strict prescriptions. This is a departure from Syrian fenestration, where window shapes and sizes are very consistent throughout the building. Unlike Armenia and Spain, in Syrian churches window placement is well-planned. Intervals between windows are consistent, creating a regular rhythm on the wall surface. In my discussion of Syrian architectural features I have to rely on published images.

Windows of Visigothic churches are of small size, and not as numerous as in Syrian churches; as a result, interiors are much darker. The same feature is present also in Armenian architecture. This can be explained by political conditions. Armenian churches were often used for protection. It was not uncommon to build additional walls around churches to fortify them. It is hard to tell if the modest size of Visigothic window openings has any political explanation, but it is clear that in both Armenian and Visigothic churches this feature is present. In contrast, Syrian churches, especially those built after the end of the 5th c. have numerous windows of larger size, as a result interiors of Syrian churches were well lit. For example, the rural basilica of

⁶⁶ The potential of this approach was demonstrated in the study of dissemination of principles of stone architecture across cultures, see Ching, Jarzombek, and Prakash 2011

Msshabak features 10 windows on the western façade and 14 windows on northern and southern façades.⁶⁷

Proportions of Armenian and Visigothic window openings are similar. Window openings in Visigothic churches are tall and narrow with the ratio of width to height between 1:2.5 and 1:3.5. This range reflects the most commonly appearing proportions in the discussed four churches, in some cases the width is even smaller. In Armenian architecture of the 6th and 7th c. windows display persistent proportions, identical to Visigothic examples. Proportions of windows vary from 1:2.5 to 1:3.5, as in Visigothic churches. Compared to Armenian and Visigothic examples, Syrian windows tend to be wider, the height is twice the width, in some cases even less.

In addition, there was a practice of building tall windows that can be called “slit” because of their insignificant width compared to their height, as in Quintanilla de las Viñas and San Pedro de la Nave. We can use the term “slit” for these windows because they are perceived almost as a split in the masonry fabric. Proportions of slit windows in the discussed four Spanish examples vary, the ratio of the width to the height ranges from 1:6.5 to 1:14. In San Pedro de la Nave slit windows have the ratio of 1:7 (fig. 20), in Quintanilla 1:14 (fig. 19). Slit windows in Quintanilla have semicircular crowning, whereas in San Pedro de la Nave the openings are of rectangular shape. The four slit windows of Quintanilla are built around the main apse, where excessive light is not necessary, whereas in San Pedro they are juxtaposed on northern and southern walls. In Armenian churches slit windows appear as well, the ratio of 1:5, and even 1:7 is possible, such as in the Saint Gevorg church in Garnahovit, thus providing prototypes for Visigothic slit window openings. In Syrian churches, to our knowledge, slit windows are not present.



Fig. 19 Santa María de Quintanilla de las Viñas



Fig. 20. San Pedro de la Nave

⁶⁷ Peña 1997, 68

Voussoirs in Visigothic churches are irregular in height and width. This applies to arches, as mentioned above, as well as to window openings. Kingsley mentions that in San Juan de Baños voussoirs of all arches of doors and windows are of irregular size and do not radiate from the center.⁶⁸ This feature is present in Armenian architecture too, voussoirs are interpreted freely, without following strict prescriptions. Again there is departure from Syrian architecture, where voussoirs are built in the classical manner, are radiating from the center, are more uniform in size, and have well-defined keystones.

Visigothic windows are often crowned with a single stone. In the churches analyzed in this study, there are many examples of windows with the head cut directly into a single stone, such as windows of the southern wall of San Pedro de la Nave (fig. 16). This type of crowning is present when the head is semicircular. Single-stone crowning was widely used in Armenian architecture, particularly in smaller churches. Some examples are the 5th c. Bayburd church (fig. 17) and the 7th c. Astvatsatsin church in Talin. This feature is present in Syria as well, where smaller windows are crowned with a single stone block.

Another similarity is the practice of “sinking” the sill into a stone block. In Visigothic churches the sill is not aligned horizontally with the wall coursing, creating a necessity to curve out the sill from the bottom block of the window. As a result, the sill block gets a U-shape (fig. 16). The same technique is used in a number of early medieval Armenian churches, for example in the 5th c. church of Bayburd (fig. 17) or 7th c. Saint Sarqis church in Shenik. In more visible commissions, probably due to proper planning, this doesn’t happen. I am not familiar with any examples of sinking window sills in Syrian architecture, where windows seem to be perfectly aligned with masonry courses.

Even though the above listed features show strong similarities and point to presence of direct influences, the most striking similarity is the sprayed form of window openings. In plan and in section sprayed windows have the form of a trapezoid, with the wide opening facing the interior. This type of window openings is the most economic. Maximum light is provided into interior for the area of window opening due to the fact that the shape of the opening follows the natural distribution of light beams. Sprayed windows appeared in Armenian architecture in the 5th c. and since then became a persistent feature in church architecture. The sprayed form is particularly emphasized in the lower part of the window; the angle formed by the interior wall and the sill can reach 150 degrees. Since the windows usually are placed high, the head of the window is less sprayed, the angle of the interior wall and the crowning reaches only 120 degrees. The spraying of vertical edges of windows is also prominent. Typically, the angle formed by the interior wall and the vertical edge of the window varies from 105 to 120 degrees (fig. 21). Sprayed windows are present in discussed four Visigothic churches. The apse window of San Pedro de la Nave, as well as the windows of San Juan de Baños (fig. 22) follow the Armenian prescription and are similar in size, shape, and proportions to Armenian examples. It is strange

⁶⁸ Kingsley 1979, 69

that this feature of Visigothic fenestration has not been analyzed in research studies. That the sprayed form is a very strong evidence of Armenian-Spanish connections is attested by the fact that sprayed windows, to our knowledge, are unique to Armenian medieval architecture.



Fig. 21. Sprayed window, Mastara church, Armenia



Fig. 22. Sprayed windows, San Juan de Banos, Spain

Sprayed windows of Santa María de Melque are combined with prominent horseshoe-shaped window crowning. Horseshoe window crowning is present in the 4th c. Kasakh church in Armenia, although not as prominent as in Melque. In 6th-7th c. Armenian churches, the horseshoe shaped window crowning is replaced with semicircular crowning.

Similarities are present also in decorative approaches. Interiors of early medieval Armenian churches lack frescoes or mosaics, all means of artistic expression are stone-based and include carved capitals, small sculptural elements, blind arcades, carved crosses in roundels, bands of ornaments. Similarly, Visigothic churches are rich in decorative elements, which appear in the form of ornamental bands, complicated compositions, and narrative scenes. In both regions geometric forms, crosses, plant forms, human forms are present. In contrast, interiors of Syrian churches are decorated with murals which were used for conveying messages. Peña states that a Syrian church was not complete without plastering and painted mural decoration.⁶⁹

Decorative motifs and narrative themes are strikingly similar in both regions. Examples are the vine scroll, the inhabited scroll, the encircled Greek cross, the Tree of Life. This issue is outside the scope of current study and will be addressed in a separate paper.

The presented evidence points to strong interchange of ideas and artistic connections between masons in Armenia and Spain in the 7th c. Although existing scholarship on Visigothic art doesn't include Armenia as a possible source of artistic influence, there is a solid body of

⁶⁹ Peña 1997, 82

evidence to consider Armenian architecture together with Roman, Byzantine, Syrian, and Islamic interpretative schemes. Similarities between the two regions are visible not only in stylistic features, but mainly in building techniques, suggesting direct involvement of Armenian masons in the construction of Visigothic churches. The importance of these observations for Visigothic architecture is significant, since it may reinstate the 7th c. as a construction date for a number of recently redated monuments. For Armenian architecture these observations might indicate the possibility of early medieval contacts with Europe.

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