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Typological Classification of Churches Constructed During Post-Byzantine Period in Albania

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ABSTRACT

Monumental historical structures are symbols of the cultural identity and continuity and they are the main part of the heritage and the human history. They should be preserved in their own settings with their original characteristics or with as minimum changes as possible. On the other hand, natural or man-made hazards cause a serious risk for the survival of them. They are the major points for the continuity of history. In order to conserve these buildings in their original situation and develop suitable restoration projects without neglecting any of the cultural values, it is vital to determine the current conditions of these structures. The knowledge of existing buildings is approached by considering different levels of analyses; historical, materials, typological classification and documentation, observed damage levels, effectiveness of retrofitting techniques, ..etc. In order to learn the values that we hold and the existing conditions of these buildings, the inventory of the whole masonry churches constructed during Post-Byzantine period in Albania should be documented. Preserving and strengthening programs could be done on the basis of this documentation and conservation strategies could be developed according to them. From this point of view, this paper aims to make the classification of the churches in Albania built in post-Byzantine period based on the plan and spatial composition of these structures and outline the features in terms of architectural, structural, functional and components' features.

Keywords: Architectural heritage, conservation, historic churches, structural intervention, typology analysis, spatial composition

1. INTRODUCTION

Historical monumental structures are one of the most important parts of our cultural heritage that reflect the history of humankind. Without them, it is impossible to understand, infer and retrace the period of culture. They symbolize the details related with the use of technology in design, material characteristics, workmanship, architectural features and spiritual value of their periods.

Preservation and restoration of historical monumental structures require careful systematic studies in order to accomplish accurate results [Roca, 2007]. Documentation, protection and conservation of historical structures and monuments are the most important parts of the cultural heritage preservation. For proper intervention, understanding of the structural behavior and good engineering judgment with sufficient experience of the old construction techniques concepts and correct interpretation of the analysis results of comprehensive structural analyses are needed [Unay, 2001; Binda et al., 2003; Sener, 2004; Bilgin, 2006; Bayraktar et al, 2007]. In this sense, large inventory of these cultural heritages should be well documented before starting to detailed analyses and restoration projects.

Historical monumental structures constructed in many parts of the world are main patterns of masonry structures like churches, castles, bridges, mosques, city walls, clock towers, etc [Demaj, 2011]. Albania is one of the countries

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that have many historical buildings from various civilizations including churches and mosques. The large number of items, the long time span occupied and the features that characterized Post-Byzantine architecture during this period in different regions of the Albania addressed have made this a fascinating and very special field of study. Hundreds of masonry churches have been constructed in Albania during hundreds of years. The majority of them exist at their original location; a significant part of them are not still in use. However, natural or man-made hazards cause a serious risk for their survival.

Considering the huge amount of church stock in Southern Albania, this paper aims to classify the churches built in post-Byzantine period, which stretches between 16-19th century, based on the plan and spatial composition of these structures and outline the features in terms of architectural, structural, functional and components' features. 90 monuments have been selected representing all the types and forms that existed in this region during this period. Firstly, these churches are classified focusing on most important centers of regions then compiling all of them; typological analysis has been made based upon plan and spatial composition of these structures. By means of this, vulnerability assessment of these buildings can be accomplished. Preserving and strengthening programs and more detailed analyses could be done on the basis of this documentation and conservation strategies could be developed according to them.

2. TYPOLOGICAL CLASSIFICATION

2.1. Description of the Studied Territory

A preliminary in-situ survey is useful in order to gain detailed information on the geometry of the structure. The detection of the building typology is an important step to be carried out in the vulnerability assessment of historical buildings and can be detected by an accurate geometrical survey. As one of the main objectives of this study, churches built during Post-Byzantine period in southern Albania are grouped by large areas and each area is subdivided into smaller districts focusing on most important centers of regions (Figure 1).

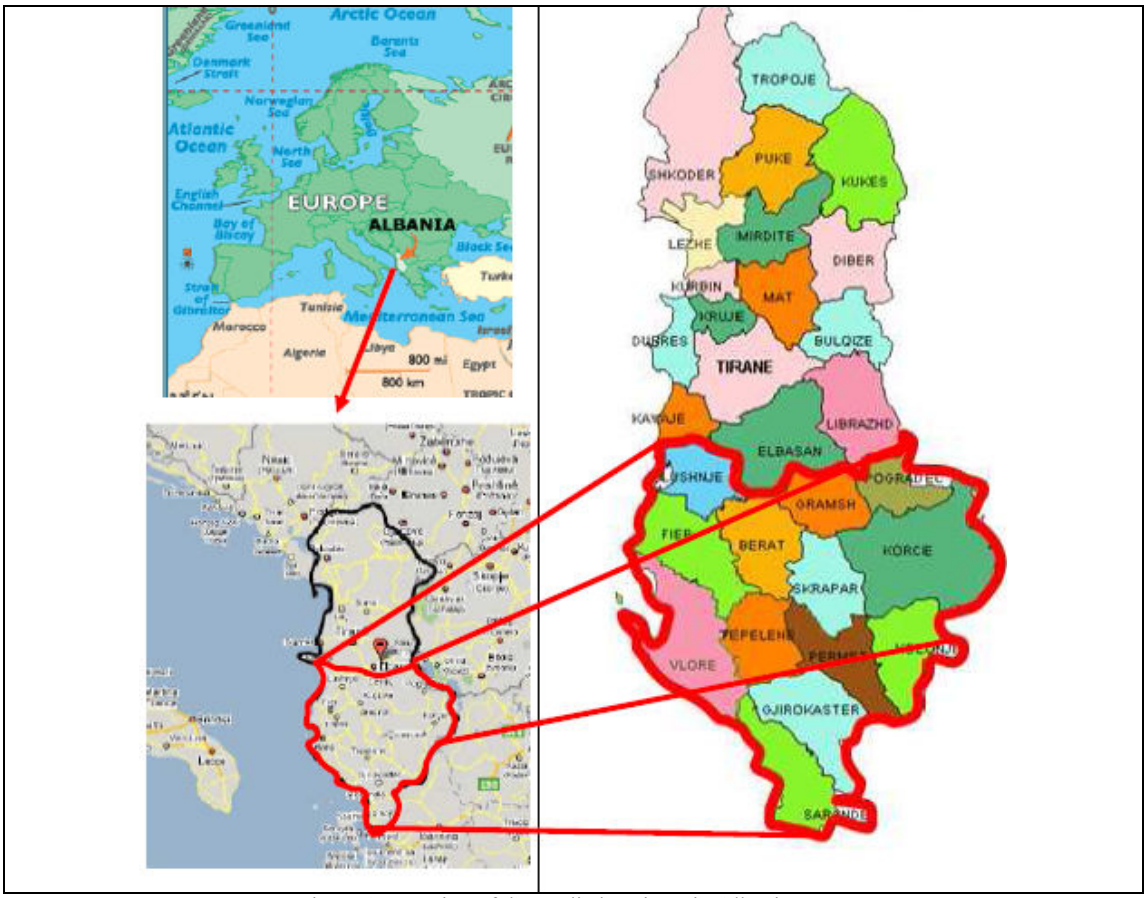


Figure 1. Location of the studied territory in Albanian map

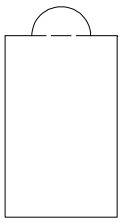
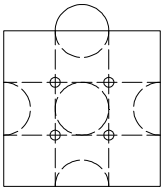
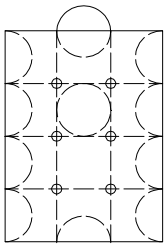
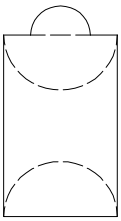
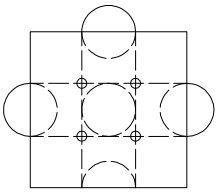
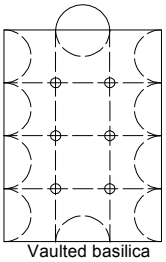
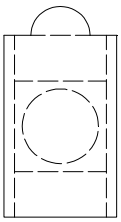
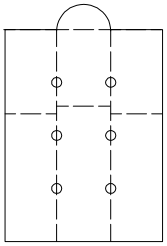
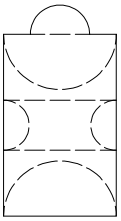
Korça region is one of the biggest and most important center including Pogradec, Kolonja, Vithkuq and Përmet. Due to its geographical and favorable climatic conditions, this area has been an intensive and regular settlement during this period and several numbers of churches were constructed in this area. The oldest church in this region is that of St Mary in Dushar which is a simple single-aisled wooden church. *Gjirokastër* is another important region which is famous with the districts of Pogoni, Rreza, Lunxheria, Zagoria and Droupoli. The most important Byzantine church in this area is the church of St Mary in Upper Peshkopia and St Mary in Labova a Kryqit. *Sarandë* is another one including the regions of Delvina, Theollogos, Bregu, Chimarrain the 18th century. The most important monument in this area is St Nicholas in Mesopotam. Berat can also be counted as an important region in this area. The city of Berat has prosperity of monuments of all types from every period. This has been identified as an ancient city with its city walls and a number of churches.

2.2. Typological classification of the churches in South Albania

Like in many countries of the old world, the sheer number of historic structures that need to be identified, classified and then assessed is very high in Albania. For an initial assessment, the amount of the effort must focus on the general features of these buildings [Gulkan and Wasti, 2010] The typological classification helps to understand the development of Post-Byzantine architecture in time and space, the particularities that characterized this architecture in different periods and regions, the preference for certain types and forms in these periods and regions, their inter-relation, etc [Demaj, 2011]. The classification generally follows the criteria used in the study of byzantine architecture, which are mainly based on plan and spatial composition [Thomo, 1998].

The type is defined first of all on the basis of plan composition; single nave, domed cross-in-square churches and basilicas (Table 1). Spatial composition, especially of the interior space, which is such an important component of the psychological and aesthetic conception of religious buildings, helps define the different categories within each type.

Table 1. Typological classification of the churches

Type / Version	Single Nave (T1)	Cross-in Square (T2)	Basilicas (T3)
V1	 Single nave	 Cross-in-square single-apse	 Domed basilica
V2	 Single nave barrel vaulted	 Cross-in-square tri-conch	 Vaulted basilica
V3	 Domed single-nave		 Flat interior ceiling basilica
V4	 Cruciform roof		

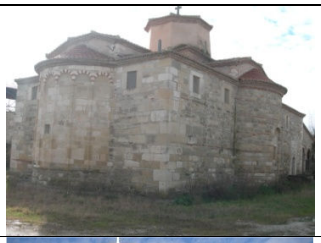
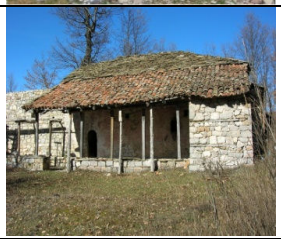
Thus, the first category (*Single-nave*) of the first type comprises churches with no interior ceiling (the internal roof structure is visible); second category (Single-nave barrel vaulted) comprises those churches whose interior space is covered by barrel-vault; third category (Domed single-nave) comprises those churches whose interior space changes vertically through a central dome over a drum or not; fourth category (Cruciform roof) comprises those churches whose interior covering system is also visible from outside as a cruciform roof.

The second type of church, cross-in-square with dome is a much unified type as far as interior spatial composition is concerned. There are two categories within this type,

where differences in plan have influenced the composition of the interior space: single-apse churches and three-apse churches.

The basilicas may be categorized in three categories. The first category comprises the domed basilicas (with dome on high drum). The second category (Vaulted basilica) comprises those basilicas whose interior spaces are covered by a system of vaults or curved structures. The third category comprises those basilicas whose interior space is covered by flat ceiling. Some snapshots from the field survey of studied churches according to the typological classification are given in Table 2.

Table 2. Photos of the churches taken during field survey according to typological classification

Type / **Version**	**Single Nave (T1)**	**Cross-in Square (T2)**	**Basilicas (T3)**
V1			
V2			
V3			

Distribution of the number of studied churches in the respective areas is tabulated in Table 3.

Table 3. Typological structure of the Post-Byzantine churches in southern Albania

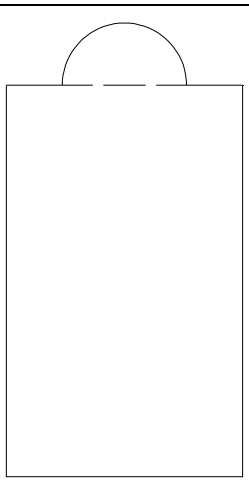
Territory / Typology	Korçë	Gjirokastër	Sarandë	Berat	Total
	# of churches				
T1-V1	4	3	7	2	16
T1-V2	2	2	2	-	6
T1-V3	3	1	2	-	6
T1-V4	-	1	1	-	2
T2-V1	-	5	4	-	9
T2-V2	1	6	1	-	8
T3-V1	3	4	3	2	12
T3-V2	8	7	2	-	17
T3-V3	4	-	1	8	13

3. TYPOLOGICAL ANALYSIS OF CHURCHES CONSTRUCTED DURING POST-BYZANTINE PERIOD IN ALBANIA

The single-nave church with timber roof represents the simplest and most frequently encountered form, used in all periods and areas (Figure 2). Its main characteristics are its small dimensions, simple interior space and insufficient architectural and decorative composition. Studied churches fall in this category are listed in Table 4.;

Table 4. Name of the churches and their location for T1-V1 typology

# of	**Name**	**Location (Village/ City)**
1	Shën Gjergji	Leshnice / Sarandë
2	Shën Thanasi	Pece / Sarandë
3	Shën Mitri	Poliçan / Gjirokastër
4	Shën Todri	Berat / Berat
5	Ungjillezimi	Berat / Berat
6	Shën Sotiri	Tremisht / Përmet
7	Shën Mëria	Dushar / Korçë
8	Shën Minai	Vithkuq / Korçë
9	Ungjillezimi	Vithkuq / Korçë
10	Shën e Premtja	Vodhine / Gjirokastër
11	Shën Gjergji	Vanishte / Gjirokastër
12	Shën Thanasi	Muzine / Sarandë
13	Shën Mehilli	Vuno / Vlorë
14	Shën Mëria Mesodhi	Vuno / Vlorë
15	Ipapandia	Dhërmi / Vlorë
16	Shën Kozmai	Dhërmi / Vlorë



a) Typology T1-V1

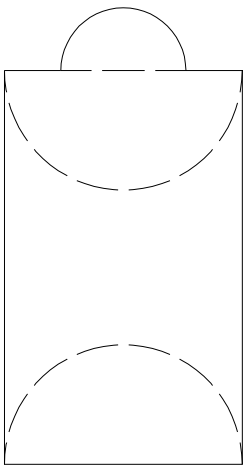
b) Shën Mehilli (Vuno / Vlorë)

Figure 2. Single Nave

Single-nave barrel-vaulted churches present the first variations on this simple conception of interior spatial composition (Figure 3). The simplest sort has the interior covered by an uninterrupted barrel vault. A more advanced solution is seen when the longitudinal walls have columns connected with arches in both directions. The transverse arches interrupt the main vault acting as rigidity ribs, while the longitudinal ones act as the side support of the vault. Studied churches in this category are listed in Table 5;

Table 5. Name of the churches and their location for T1-V2 typology

# of	**Name**	**Location (Village/ City)**
1	Kisha e Manastirit të Profet Ilise	Jorgucat / Gjirokastër
2	Shën Ana	Derviçan / Gjirokastër
3	Shën Kolli	Dhrovjan / Sarandë
4	Shën Mëria	Seranjperat / Përmet
5	Shën Kozmai dhe Damianoi	Vithkuq / Korçë
6	Shën Mëria	Pece / Sarandë



a) Typology T1-V2

b) Shën Ana (Derviçan / Gjirokastër)

Figure 3. Single-nave barrel-vaulted

The main principle in the interior spatial composition of the domed single-nave churches is the creation of an independent compartment, which is given a separate covering of different types (Figure 4). The next stage in this development sees the differentiation of the central area, which is covered by a dome without a drum, or when it appears in the external spatial composition through a dome over a drum. Studied churches in this category are listed in Table 6;

Table 6. Name of the churches and their location for T1-V3 typology

# of	**Name**	**Location (Village/ City)**
1	Shën Mëria	Barmash / Kolonjë
2	Narteksi i kishës së Shpërfytyrimit	Çatishte / Gjirokastër
3	Shën Mëhilli	Shalës / Kolonjë
4	Shën Mëria	Vithkuq / Kolonjë
5	Manastiri Shën Gjergjit	Demë / Sarandë
6	Kisha e Manastirit të Shën Kollit	Dhivër / Sarandë

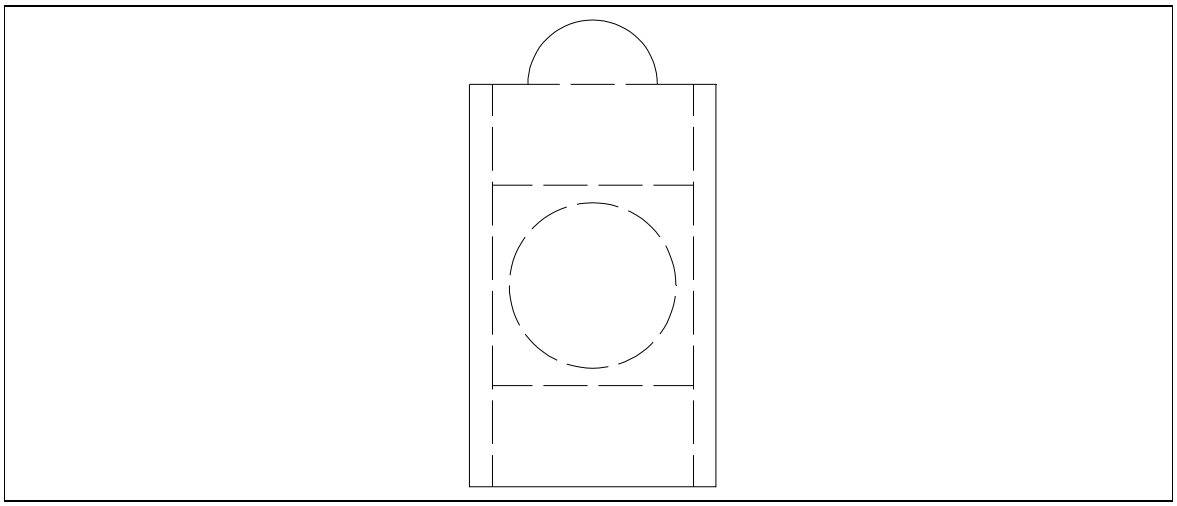


Figure 4. Domed single-nave

The main characteristic of the churches with a cruciform roof is the intersection of the longitudinal vault with a transverse vault higher than the first, and the reflection of this structure in the exterior view as well (Figure 5). Studied churches fall in this category are listed in Table 7;

Table 7. Name of the churches and their location for T1-V4 typology

# of	**Name**	**Location (Village/ City)**
1	Kisha e Manastirit të Shpërfytyrimit	Çatishte / Gjirokastër
2	Kisha e Manastirit të Shën Triadhës	Kardhikaq / Sarandë

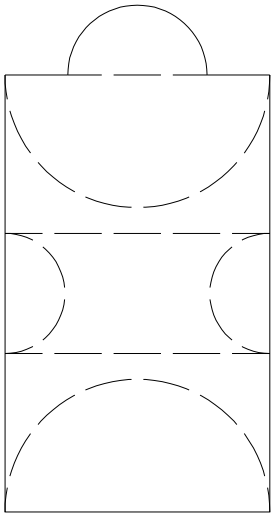
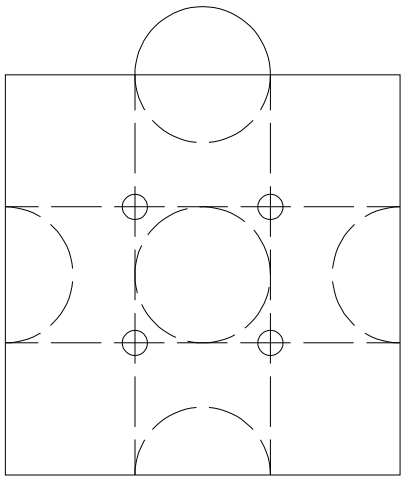


Figure 5. Cruciform roof (T1-V4)

The compositional criteria for the interior space of the cross-in-square churches are the same as those applied to Byzantine churches of the same type [5]. Four interior pillars create a central space covered by a dome over a drum, which is fitted on the barrel-vaulted arms of the cross (Figure 6). The pillars are connected with the side walls by arches, forming four corner chambers covered by spherical caps with cross vaulting or barrel-vaulting. But although the basic compositional criteria are the same, many variations do appear. Its two main variations are: the cross-in-square with one apse and the Athonite type with side apses. The differences between them are seen in every feature of their ground plan, interior space and in their exterior volume. Studied churches fall in this category are listed in Table 8;

Table 8. Name of the churches and their location for T2-V1 typology

# of	**Name**	**Location (Village/ City)**
1	Kisha e Shën Mërisë	Zervat / Gjirokastër
2	Kisha e Manastirit të Shën Mërisë	Kameno / Sarandë
3	Manastiri i Shën Qirjakut dhe Julitës	Dhuvjan / Gjirokastër
4	Kisha e Shën Thanasit	Poliçan / Gjirokastër
5	Kisha e Shën Mërisë	Maliçan / Sarandë
6	Kisha e Shën Kollit	Saraqinisht / Gjirokastër
7	Kisha e Manastirit të Shën Mërise të Spilese	Saraqinisht / Gjirokastër
8	Manastiri Shën Mërisë	Krorez / Sarandë
9	Kisha e Manastirit të Shën Mitrit	Qeparo / Vlorë



a) Typology T2-V1

b) Shën Mërise (Krorez / Sarandë)

Figure 6. Cross-in-square single-apse

In general, the churches of this type are of the simplest variation, with four piers (Figure 7). But there are examples (in Voskopojë) where the plan is compound, with the sanctuary separated from the nave in forming the cruciform shape. The post-byzantine cross-in-square churches are characterized by their linear extension, emphasizing the longitudinal axis and correspondingly shortening the arms of the cross. The presence of side apses breaks this linear extension, and re-establishes the cruciform plan. The side apses also create a free space, with an easy transition to the central dome. The interior structure of post-byzantine churches is not fully displayed in their exterior spatial composition. At best, it is wholly or partially seen in the volume of the transept, while the corner chambers are covered by the pitched roof of the nave. In other cases, the interior structure is completely hidden by a pitched roof, which is interrupted in the central part only by the drum which bears the dome (in Voskopojë). Studied churches fall in this category are listed in Table 9;

Table 9. Name of the churches and their location for T2-V2 typology

# of	**Name**	**Location (Village/ City)**
1	Manastiri i Ungjillizimit	Vanishte / Gjirokastër
2	Manastiri i Shën Mërisë	Goranxi / Gjirokastër
3	Kisha e Profet Ilias	Stegopull / Gjirokastër
4	Manastiri i Shën Prodhromit	Voskopojë / Korçë
5	Kisha e Manastirit të Shën Merisë	Koshovice / Gjirokastër
6	Manastiri Shën Mërisë	Kakomë / Sarandë
7	Burimi Jetëdhënës	Derviçan / Gjirokastër
8	Kisha e Manastirit të Kryeengjejve	Derviçan / Gjirokastër

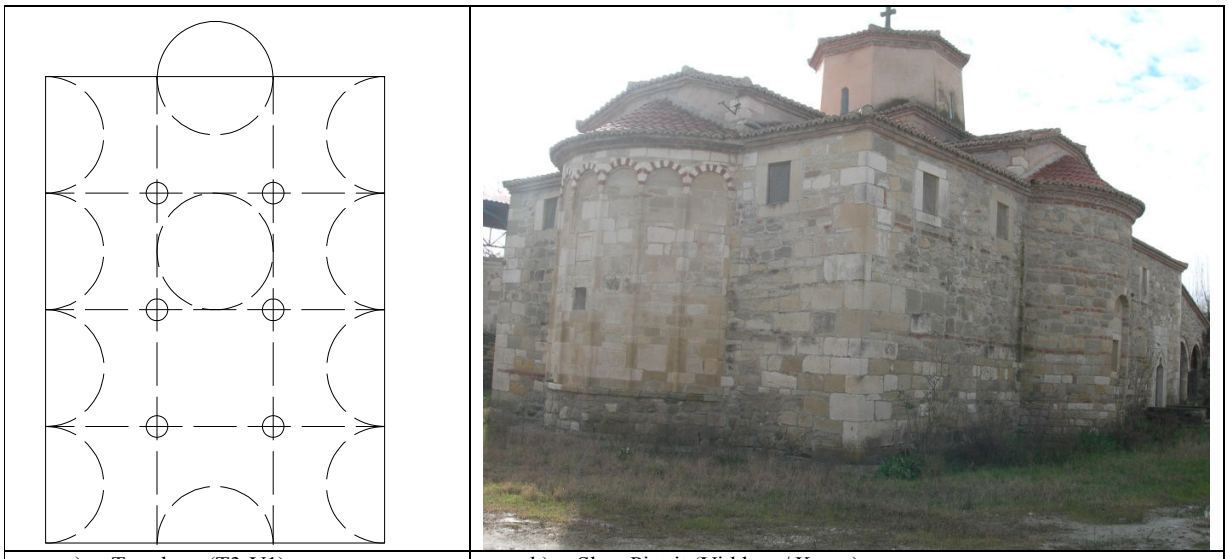
a) Typology T2-V2 b) Shën Mërise (Goranxi / Gjirokastër)

Figure 7. Cross-in-square three-apse

The domed basilicas are distinguished from the domed cross-in-square churches by the number of columns (more than four), as well as by the clear division of the aisles and often by the lack of a transept (Figure 8). The aisles may be intersected by a transept which in some cases is apparent from the outside (in Vithkuq,) and in other cases is not (in Lukove). Studied churches fall in this category are listed in Table 10;

Table 10. Name of the churches and their location for T3-V1 typology

# of	**Name**	**Location (Village/ City)**
1	Shën Thanasi i Mazharit	Poliçan / Gjirokastër
2	Shën Mëria	Vllahogoranxi / Gjirokastër
3	Kisha e Manastirit të Shën Mërise	Piqeras / Sarandë
4	Shën e Premtja	Lukove / Sarandë
5	Shën Mëria	Postenan / Kolonjë
6	Kisha e Manastirit të Shën Mërise	Nivan / Gjirokastër
7	Shën Mehilli	Mingul / Gjirokastër
8	Kisha e Manastirit të Shën Pjetrit	Vithkuq / Korçë
9	Shën Thanasi	Leshnice P. / Sarandë
10	Shën Mëria	Berat / Berat
11	Shën Mëria	Leuse / Përmet
12	Kisha e Shën Kozmait dhe Shën Mërisë	Kolkondas / Fier



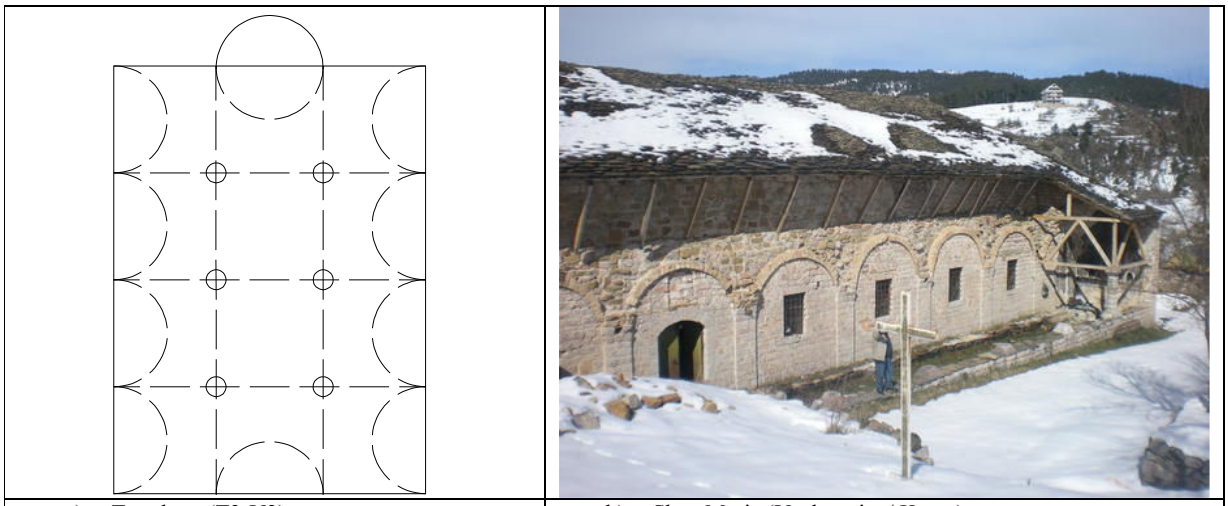
a) Typology (T3-V1) b) Shën Pjetrit (Vithkuq / Korçë)

Figure 8. Domed cross-in-square basilica

In the vaulted basilicas we find a number of different solutions to the problem of covering the interior space (Figure 9). In the simplest solution, each aisle is covered by a single uninterrupted vault. But generally the columns are connected with one another and with the side walls by means of arches in both directions. This creates a number of compartments covered in different ways: with vaults (in Chimarra) or partially or completely with domes (in Gjirokastër and Përmet). Then, there is a composite composition in Vithkuq, where a transept intersects the aisles, and in Sopik, where each compartment covered by a dome in the nave is balanced by two compartments covered by spherical caps, while in the basilicas of Voskopojë the columns are grouped in fours, creating the impression of two intersecting inscribed cruciform spaces.

Table 11. Name of the churches and their location for T3-V2 typology

# of	**Name**	**Location (Village/ City)**
1	Kisha e Manastirit të Shën Mërisë Mavrodhivrit	Dhivër / Sarandë
2	Kisha e Shën Mëhillit	Vithkuq / Korçë
3	Kisha e Shën Marisë	Voskopojë / Korçë
4	Kisha e Shën Shën Kollit	Voskopojë / Korçë
5	Kisha e Shën Mëhillit	Voskopojë / Korçë
6	Kisha e Shën Thanasit	Voskopojë / Korçë
7	Kisha e Shën Gjergjit	Shipckë / Korçë
8	Kisha e Manastirit të Shën Triadhës	Pepel / Gjirokastër
9	Kisha e Shën Mërisë	Skore / Gjirokastër
10	Kisha e Shën Premtes	Përmet / Përmet
11	Kisha e Shën Mëhillit	Gjirokastër / Gjirokastër
12	Kisha Fjetja e Shën Mërisë	Sopik / Gjirokastër
13	Kisha e Shën Sotirit	Gjirokastër / Gjirokastër
14	Shën Kolli	Topovë / Gjirokastër
15	Shën Mëria	Konckë / Gjirokastër
16	Kisha e Shën Mërisë së Athalit	Himarë / Vlorë
17	Shën Kolli	Lipë / Përmet



a) Typology (T3-V2) b) Shën Mëria (Voskopojë / Korçë)

Figure 9. Vaulted basilica

In the case of the basilicas with a flat interior ceiling, the interior space is both simpler and more uniform. The nave and aisles are generally covered by ceilings at the same height, but there are also cases where the ceiling over the nave is higher.

Table 12. Name of the churches and their location for T3-V3 typology

# of	**Name**	**Location (Village/ City)**
1	Manastiri i Shën Mërisë	Ardenice / Lushnjë
2	Shën Mëria	Nice / Pogradec
3	Profet Ilia	Voskopojë / Korçë
4	Shën Gjegji	Vithkuq / Korçë
5	Shën Mëria	Lashove / Kolonjë
6	Shën Spiridhoni	Vuno / Vlorë
7	Shën Gjegji	Libofshe / Fier
8	Shën Kolli	Vanaj / Fier
9	Shën Thanasi	Karavasta / Lushnjë
10	Shën Gjegji	Strume / Fier
11	Shën Todri	Kadipashaj / Lushnjë
12	Shën Kolli	Krutje S. / Lushnjë
13	Shën Kolli	Toshkëz / Lushnjë

a) Typology (T3-V3) b) Shën Todri (Kadipashaj / Lushnjë)

Figure 10. Flat interior ceiling basilica

4. CONCLUSIONS

Historical monumental structures are one of the most crucial parts of the cultural inheritance that reflect the history of mankind. They are the important links between our time and history. They reflect the social, cultural and economic endurance of the past. Unfortunately, most of them are generally abandoned in our times. They are damaged or have been destroyed because of the interior factors such as their ground features and location, and the exterior factors such as earthquakes, other natural disasters such as inconvenient weather conditions, floods, and vandalism [Bartoli and Blasi, 1997]. For these reasons, it is very important to protect them by taking measures from structural aspect without losing time.

Analyzing and strengthening historical monumental structures are difficult tasks. Conservation and restoration of these buildings require a careful systematic study in order to achieve proper results. The first step to accomplish this is to recognize them in their original status. Considering the huge amount of inventory of these churches constructed in Albania during Post-Byzantine period, original and damaged conditions of these churches should be analyzed by classifying them according to their typologies so that the applied intervention and strengthening could be implemented respecting the results to the integrity and authenticity of these historical churches.

The primary objective of this study, as stated before is to make the typological classification of churches in Albania. The typological classification of churches constructed in post-byzantine architecture has been done based upon the plan and spatial composition of these structures. In cultural heritage preservation, typological analysis of these historical structures is important for the reasons stated below;

- It helps to identify structural forms for performance evaluation,
- Disaster preparedness and prior knowledge of potential hazards,

The existing churches built during this period in Albania carry features, which are strongly related to the local socio-politico-cultural situation of the time that they are constructed. The main observations and findings are as follows:

- *Architectural features*: The most important feature of this period is the simplicity of architecture which is not the identical and unique everywhere. It varies within the different types, location and time. During this period, careful attention is concentrated on the treatment of the interior spaces where different solutions are found. Either because of a change in architectural flavor or time constraints, the treatment of the interior space is not clear from outside.
- *Composition of the components*: Structural forms can be classified by elementary structural components and elements in a geometrical sense [Unay, 2001]. The main parts of the church are narthex, gallery and bell-tower which are existent at the same time or some may be added at a later time. The ratio among the components depends on the type of church, location and its period.
- *Structural and constructional features*: Structural functions and principles are one of the fundamental components of the preservation of the architectural heritage. The main criterion to preserve the structures in this period is the relatively light loads in the buildings so that these buildings could withstand the stresses only under their self-weights. The principal construction material was stone used in every stages of the construction. Brickwork is seldom, being used mainly for decorative purposes. The structural configuration is monolithic type compromising of different type of curved covering surfaces from half- or quarter-rounded barrel-vaults to cross-vaulting, domes, cupolas, pendentives and different combinations of all these.
- *Functional solutions*: The structural form of the buildings can be defined as the geometrical configuration of the space involved by the structures. Two types of churches have been observed in this study. The first types are Monastery ones and most often of the cross-in-square-type although single-nave ones and domed basilicas exist. These types have side apses for choir purposes. The other types which are generally located in villages made use of wider variety of types and variations but tended to prefer basilica and single-aisled type.

With this study, we both learn the values that we possess and the existing conditions of these buildings are documented. Preserving and strengthening programs could be done on the basis of this documentation and conservation strategies could be developed according to them. These findings can lead to more informed assessment of the safety of churches in this region.

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