Dorina Papa

Visual perception of the historic city image.
An urban landscape approach to integrate the residual margins of the historical area. Gjirokastra case study

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An urban landscape approach to integrate the residual margins of the historical area.

Gjirokastra case study

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Abstract

This thesis investigates the integrity of the historic city image in relation to human's visual perception and the possibility to extend this quality to the fragile margins of the historical area in order to achieve a historical urban landscape as a whole and to guarantee visual sustainability as an important component of historical urban development.
In Albanian context, numerous historic cities or traditional settlements following the recent rapid urban growth and upgrade interventions have caused a degradation of the historical urban landscape reflecting a chaotic image made up of separate fragments which do not fit with each other visually and are not posed in harmony with the historical center. Thus, these inconsistent transformations not only harm the quality of the historical landscape as a whole, but they further disturb the visualizing of the historical center, putting at risk the preservation of the historic urban landscape as a whole. Hence, these new inconsistent transformations which provoke disorientation and distress at a psychological level, can cause a lack of interest for the visual frame of the traditional area and provoke a cognitive dissonance or rejection towards it, being foreign to the collective consciousness used to the idea of visual coherence and harmony of the historical center, which has the capacity to activate visual comprehension, and the desire to experience it.
While on one hand, the current interventions seem to fulfill almost the best functional requirements which are numerically quantified and objectively discussed, on the other hand, the principle of visual integrity started gradually lacking as they still seem to be vague and subjective.
Even the legal framework, when considering new interventions in the protected residual areas around the historical centers, although aims to conserve the historical city image by emphasizing the importance of interventions "in harmony" with the visual and morphological character of the historical center, do not provide objective parameters to assess this harmony.
Accordingly, the aim of this research is to determine a series of constants that characterize the historical city image which will constitute the parameters of evaluation of its visual sustainability and will be used as tools for new interventions in the residual margins. Taking as a case study the historic center of Gjirokastra, in Albania, the research will focus on understanding and represent at an urban scale the visual perceptual characteristics of the historical landscape.
The final outcome of the thesis is the representation of the synthesis of Gjirokastra image. These synthetic representations constitute the basis for the guidelines and recommendations for adjusting interventions in the residual area around the historical center. They can be further used as a design tool to transmit the visual quality in new design projects.
Moreover, the research intends to be relevant and original, as it presents a methodology to analyze and define the quality of the historical city image, which has not been an object of previous studies in Albania, and which can be used in other historical cities or settlements in Albania and in a wider context.

Keywords: *historic urban landscape, visual sustainability, residual margins, city image*

I. GENERAL RESEARCH FRAMEWORK

I. Introduction and problem statement

Historic cities are the living testimonies of the evolution of society and its cultural identity and as part of the historical heritage, they should be an object of conservation. On the other hand, they can be considered also, as living organisms, being an active part of contemporary life and as such are vulnerable to changes and adaptations that risk its image. In fact, the threats caused in the last century, by evolving urban conditions (such as rapid development, loss of control over the territory and informal interventions, demographic changes, migration and economic pressure) and in particular by uncontrolled pressure to intervene in the areas around the historic centers keeps on rising, risking the conservation of the historic urban landscape, it visual integrity and the visual sustainable development of the historical city in its totality. In fact, despite the access to contemporary materials and the use of technological advantages in building's construction, we are tackling with an increasing destruction of the historical city image, which risks its historical values on which is based the sustainable future of the historical city.

Upon these considerations, this research focuses on the visual perception of the historic city image, as an integral component of sustainability, which can enhance city's historical image and cultural identity, it's visual character and a sense of place, while not undermining its inhabitants' daily needs. Its main goal is to understand and enhance the visual quality of the historical city image, represent and analyze through the synthesis of form this quality transmitted through visual perception. In this regard, the historical urban landscape is considered in its total integrity as a coherent entity in which visual equilibrium and harmony are achieved by the fusion of parts. In this sense, the safeguard of the historic city image, includes also the dynamics of change and development, responding to the contemporary needs of the residual area around, as part of the historical setting, which influences the static or the dynamic perception of the historical center.

For this reason, we consider as crucial for the integrity of the historical city the visual character of the residual area around the historic center not only in terms of visual sustainability but also as a base for a sustainable development of historical cities. In view of a sustainable urban development, it is necessary, in fact, to address the issues of a compact urban growth and urban heritage protection by considering a compatible and balanced model that prevents sprawl, the consumption of greenfield, limits energy consumption, provides new forms of energy, and guarantee social sustainability including the sociocultural characteristics and the values and meanings society ascribes to that particular urban landscape.

Based on this, the main research question interrogates what could be a new possible sustainable approach for interventions in the residual area around protected historic cities considering the visual quality of the historic urban landscape as a whole and the possibility of its safeguard without being compromised by new building interventions. In this sense, the research aims to give an answer to the demands for urbanization and densification of the historic cities without compromising their historical visual character and identity, by defining a new methodological approach

regulating the possibility of safeguarding the historic urban landscapes and develop it properly so that they do not lose their visual integrative qualities and the historical significance of the place.
The threads caused by transformations and new interventions around heritage sites and the need to address them properly have been acknowledged in several international charters ending up by proposing approaches that stress the importance of the safeguard of the historic urban landscape.

The conservation of the historical landscape was first mentioned in the Restoration Charter of Athens[1], of 1931. Regarding historical sites, this Charter has raised the problem of preservation and protection of monuments and historical sites including their surrounding areas. This concern for the protection of the place around the monument or the historical site is seen as an aesthetic enhancement of the same monument or historical site, in terms of **unity with the surrounding** and landscape perception. In this sense, the charter recommends **respect** towards "t*he character and external aspect of the cities*" in which to intervene. In addition, spatial significance is attributed to the "*picturesque perspective*" treatment which link visually new interventions with existing ones.

The following International Charter for the Conservation and Restoration of Historical Monuments and Sites (The Venice Charter 1964), extended the definition of cultural heritage from the monument per se, by considering also the "site" as an area surrounding the monuments which contribute in accentuating the visual aesthetical qualities of the monuments as works of art. Considering the historic city as a work of art which needs to be preserved, thereby it emphasizes **the importance of visual integrity and clear presentation of the monument**[2] in relation to the surrounding environment and urban landscape. In this regard, the conservation of a site or historical city is seen in relation with its landscape.

In this direction was oriented also the Declaration of Amsterdam 1975[3] , which set out a wider perspective regarding the protection of the architectonic complexes, considering the importance of the historical continuity of the build environment. **The historical environmental continuity is seen from a human perspective as a human necessity for identity and sense of security**. In this regard, the Declaration of Amsterdam, draw attention to the role of humans for an integrated conservation approach. Moreover, Amsterdam charter, highlight the necessity to conserve urban ensembles instead of single monuments, as an artwork. This plays an important role in human well-being by ensuring social equilibrium, sense of totality, and the preservation of historical conscience as part of human memory, which needs to be transmitted to future generations.

In 1976, the traditional city in terms of historical heritage was defined as historic urban landscape and a series of restrictions were approved under the international

1 The Athens Charter for the Restoration of Historic Monuments – 1931, Available from:http://www.icomos.org/en/charters-and-texts/179-articles-en-francais/ressources/charters-and-standards/167-the-athens-charter-for-the-restoration-of-historic-monuments.

2 International Charter for the Conservation and Restoration of Historical Monuments and Sites (The Venice Charter 1964), Available from: https://www.icomos.org/charters/venice_e.pdf

3 Declaration of Amsterdam 1975, in the Congress on the European Architectural Heritage 21 - 25 October 197, Available from: http://www.icomos.org/en/charters-and-texts/179-articles-en-francais/ressources/charters-and-standards/169-the-declaration-of-amsterdam

charter of Warsaw – Nairobi in order to safeguard them, given the rapid contemporary urbanization and the transformations which often leads to incompatible interventions and the loss of the traditionally established visual integrity of the built environment.

Following this consideration about the role of the historic urban landscape conservation in view of its current and future significance, UNESCO in the "*Recommendation Concerning the Safeguarding and Contemporary Role of Historic Areas*" (Warsaw - Nairobi, 1976)[4], highlighted the importance of considering the conservation of historical areas in relation to the surrounding environment, which is a visually integrated part of the image of the historical areas. [*Every historic area and its surroundings should be considered in their totality as a coherent whole whose balance and specif c nature depend on the fusion of the parts of which it is composed…]* (Article 3 of the Nairobi Recommendation[5]).
In addition, in order to achieve this wholeness, it suggested analyses and definition of the dominant features[6] of the historical area which represent its character.
Thus, the recommendations of this charter on one side proposes protection restriction for the monuments and the necessity for technical specifications for new interventions and on the other side stressed research and education of fulfilling these objectives, which should be treated case by case.

Based on this, later, the succeeding Washington Charter of 1987 for the Conservation of historical towns and urban areas, synthesized the core qualities to be preserved as a material historical character of the town and the spiritual elements to it attached.[7] "*The conservation plan should aim at ensuring a harmonious relationship between the historic urban areas and the town as a whole*"[8]. By adopting these elements, the historical city and its surrounding environment is meant to be developed and adapted harmoniously to the present ways of living, maintaining it alive over time and creating a coherent whole by conserving the urban landscape character.
The most updated international document dealing with conservation of the historic urban landscape, is the "*Valletta principles for safeguard and management of historic cities, towns and urban areas*", of 2011. Since the Washington Charter, towns and historic cities worldwide have faced serious problems due to a fast urbanization

4 *Recommendation concerning the Safeguarding and Contemporary Role of Historic Areas,* Nairobi Recommendation, 1976,Available from:http://portal.unesco.org/en/ev.php-URL_ID=13133&URL_DO=DO_TOPIC&URL_SECTION=201.html

5 Id. Art. 3

6 Id. In art. 28 are specified the dominant features of the historical landscape: "*Analysis of the urban context should precede any new construction not only so as to def ne the general character of the group of buildings but also to analyze its dominant features, e.g. the harmony of heights, colors, materials and forms, constants in the way the façades and roofs are built, the relationship between the volume of buildings and the spatial volume, as well as their average proportions and their position. Particular attention should be given to the size of the lots since there is a danger that any reorganization of the lots may cause a change of mass which could be deleterious to the harmony of the whole*".

7 In the "*Charter for conservation of historic towns and urban areas*" (Washington Charter – 1987) the elements defining the historical urban character are the following:
a)Urban patterns as defined by lots and streets;b) Relationships between buildings and green and open spaces;c) The formal appearance, interior and exterior, of buildings as defined by scale, size, style, construction, materials, color and decoration;d) The relationship between the town or urban area and its surrounding setting, both natural and man-made; and e) The various functions that the town or urban area has acquired over time. (source: http://www.icomos.org/en/what-we-do/focus/179-articles-en-francais/ressources/charters-and-standards/159-charter-for-the-conservation-of-historic-towns-and-urban-areas)

8 id..

process, economic and social pressure which constitute a significant threat from outside for incompatible transformations of the residual areas around protected historic centers.
In this new context, Valetta principles are oriented to guarantee a harmonious adaptation of the historic contexts to the contemporary conditions. Therefore, it opens up to a broader scale of safeguard, by considering a territorial understanding of the historical city as part of a surrounding urban, natural and landscape context. In contrast to the traditional approach in urban conservation, which focuses mostly on single buildings and space investigation, this document suggested a wider view, based on the analyses of the relationships between historic space and the surrounding, as historical cities visual quality depend also on the quality of and character of the surrounding areas. In fact, the perception of the historical city does not depend on the single architecture or spatial unit taken singularly, but on their interplay and the role, the single entities have in the definition of the city image as a whole. In addition, the relationship between the urban layout and natural setting has significant influence in the historical urban landscape, contributing in the definition of a coherent whole which includes the urban layout, its parts and context features that determine static or dy*namic ways of spatial perception, experience, and enjoyment.*

Herein, Valletta "Principles", highlight the importance of safeguarding both historic cities with their urban heritage distinguished elements and their surrounding environment, by looking beyond the notion of historic center or urban ensemble and including a broader urban context and natural setting. In terms of spatial dimension, it defines two areas of conservation:

1. the historical urban setting
2. the buffer zone.

The historical urban setting is defined in Valletta document[9] as "t*he area surrounding an historic city that forms with it an indissoluble unity, since it is connected with the way in which historic city is perceived and lived"*[10], while **the buffer zone** or the residual area around the historical setting is considered "a*n outside area aimed at protecting the historic city and its setting against the impacts of changes occurring in the surrounding areas, considering both physical, social and visual impacts*"[11].
Herein, seen in a broader perspective, the visual perception the city and the positive experience of space (such as particular panoramic views, a skyline, view lines, landmarks or road characters) can become important instruments to define the quality of the historic urban landscape in its totality.

"Perspectives, views, focal points and visual corridors are integral parts of the perception of historic spaces. They must be respected in the event of new interventions. Before any intervention, the existing context should be carefully analyzed and documented. View cones, both to and from new constructions, should be identif ed, studied and maintained"[12]

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9 The Valletta Charter or The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas 2011, Available from: http://www.icomos.org/Paris2011/GA2011_CIVVIH_text_EN_FR_final_20120110.pdf

10 Id. (Part 1 of Art E)

11 Id. (Part 1 of Art E)

12 Id. (Part C of Art 4)

These dominant elements characterizing the historical urban landscape define the urban spatial character and can be considered as a synthesis which can be applied to new interventions respectful and consistent with the morphology and spatial organization of the historical city.
In fact, the problem of new interventions and transformations of the historical city, is not that much focused on the historic center, as the legislation provides sufficient tools to be implemented in order to conserve and protect monuments, but regards, in particular **the buffer zone**. In this residual area, the regulatory plan regulations are insufficient to determine proper tools to deal with the problem of visual integrity and coherence with the historical urban landscape.

Thus, the position of Valletta principles is that of proposing, on one hand, a continuity with the past in terms of morphogenesis and visual character, and on the other hand recommending an innovative interpretation of the historical context conditions in the limits of variation allowed by the constants determined to safeguard it. Hence, it opens up to a dialectic with the surrounding context which means spatial, visual and functional coherence in the relation between parts to constitute a whole and complete image. Finally, its proposal in terms of urban landscape conservation and safeguard is to preserve all the notable elements such as urban patterns, buildings dominant *features def ned in its geometric structure and perceptive elements such as volume, scale, materials, color etc., and the relationship with its surrounding setting.*
Considering the most recent documents that deal with the safeguard of the historical city it is evident that they have adopted mostly an urban landscape approach, as they see the historical city in a broader perspective of conservation, by considering human visual perception of the historical city and their experience within this context as core element that can describe the historical character to be preserved and the historic urban landscape to be safeguarded in its totality.

In Albanian context, the visual integrative safeguard of the historical city image in its totality has been only recently recognized. Historical cities were considered imprimis as a category of cultural and historical heritage to be protected only in 1948 with the decree on "*The Protection of cultural monument and rare natural objects*"[13]. In 1961, two Albanian traditional cities (Berat and Gjirokastra which are actually under UNESCO protection) were nominated as "museum cities" and in 1971 were set under protection by adapting the regulations for the administration of the museum city of Berat, which was declared as valid also for Gjirokastra as long as there were no specific studies on its architecture and urban landscape. For this reason, their nomination as "museum cities" was followed by a huge work of survey and research, regarding the history of urban development and in particular the documentation of the traditional architecture including architectonical and technical details of buildings. Based on this, were finalized studies on buildings typology and an assessment of existing buildings in terms of architectural and historical relevance. Finally, was determined a list of protected buildings within the museum area (divided according to two main categories of protection: 1st and 2ndcategory) and was built a guideline on their restoration and preservation, and the conservation of the museum area in general. Meanwhile, regarding interventions in the historical area around the museum area, these regulations do not enter into details but recommends interventions that are in line with the characteristics of the historical city.

13 Mbi mbrojtjen e monumenteve të kulturës dhe të sendeve natyrale të rralla", Dekret Nr. 586 dt. 17.3.1948, G. Z. Nr. 39/1948, aprovuar me Ligjën Nr. 609 dt. 24.5.1948, G. Z. Nr. 72/1948

Gjirokastra and Berat historical cities regulations, referring to the buffer zone interventions state that [*Allowed interventions in protected areas* ***should be posed in harmony*** *with the morphological elements of the traditional architecture…*][14] . Although the national legislation and the specific regulations provide a general approach to safeguarding the historical city, **the lack of urban morphological studies and specific recommendations opens up a subjective interpretation of the existing guidelines**. This delay in providing objective tools to intervene in the marginal area around historic centers has caused a continuous decay of the historical city image due to close by disturbing interventions.
In controversy with the evident visual degradation of our most important historical cities Berat and Gjirokastra which since 1961 has been put under protection, there is a tendency to expand the list of protected historical towns and provide similar "conservative" regulations for the historical center and lack specific guidelines about the intervention in the buffer area.

Herein, there are some recently nominated historical centers such as Vuno[15], Qeparo[16], Dhermi[17], Përmet[18] etc. (Fig. 1). Both of them once nominated, were immediately set under protection, although there were limited studies about their traditional architecture characteristics, urban morphology, and urban landscape character as a base for new interventions to be confronted to. In fact, according to these decrees[19], [..**new interventions in the residual area need to be in line with the architectonical and decorative character of the traditional buildings, presenting simplified morphological, compositional, volumetric elements and a similar external façade color**]. These prescriptions in absence of detailed studies, risk to limit new interventions and upgrade projects in the residual area, otherwise these historical areas become vulnerable to subjective interventions that can highly impact the historic urban landscape and lead to its visual decay. Especially in the last years, in the historical areas of these small towns and in the historical villages, the interest to upgrade existing buildings and to build new ones has led to a gradual degradation of the traditional image of the city as these interventions lack a reference framework or a series of rules that guarantee the integrity of the historical city image. In this condition, it's evident the pressing need to determine, based on the study of the historical urban landscape character, a series of principles that characterize the historical city and define a series of guidelines that can be used to intervene congruently in the residual area by considering the historical city image as a whole.
These guidelines should be based on objective parameters which can serve to

14 VKM Nr. 619, datë 7.7.2015 Për shpalljen "*Qendër historike*" të një zone në qytetin e Gjirokastrës dhe miratimin e rregullores "*Për Mbrojtjen, Konservimin e integruar dhe Administrimin e qendrës historike dhe zones së mbrojtur n ëqytetin e Gjirokastrës*", Part 9 of Article 7, Architectonical elements such as roof, facades, finishing's, surrounding walls, and colors should be in harmony with the morphological elements of the traditional architecture.

15 VKM, nr. 30, datë 20.1.2016, Përshpalljen e qendrës historike të fshatit Vuno dhe miratimin e rregullores për administrimin e saj të zonës së mbrojtur përreth.

16 VKM Nr. 636, datë 7.9.2016, Për shpalljen e qendrës historike të fshatit Qeparo dhe miratimin e rregullores për administrimin e saj të zones së mbrojtur përreth.

17 VKM, nr. 29, datë 20.1.2016. Për shpalljen e qendrës historike tëf shatit Dhërmi dhe miratimi e rregullores për administrimin e saj e të zonës së mbrojtur përreth.

18 VKM, nr. 32, datë 18.1.2017 Për shpalljen e qendrës historike të qytetit të Përmetit dhe miratimin e rregullores për administrimin e saj të zones së mbrojtur përreth.

19 Id. 15, 16, 17, 18 Art. 6

assist and guide new interventions with the aim to reduce the likelihood tendency of building which is evident to present and overly large negative impact on the historical city image. Thus, the significance of this study, is to contribute in adjusting the residual areas around the historical cities in order to preserve the city image as a whole, guarantee visual sustainability and a general sustainable development.
Starting from a concrete case study, this research will try to build a methodology of analyses of the purely visual, morphological and structural character of the historic urban landscape. Given the large number of historic centers in Albania recently nominated as areas to be protected, this methodology can be used for all the above mentioned case studies in order to provide concrete and objective tools to orient the physical transformations of the buffer areas around the historical center and to ensure that new interventions serve to adjust the historical city image by being harmoniously integrated with the historic setting.

The selected case study on which the research is focused is the historical city of Gjirokastra, in South Albania. Gjirokastra was chosen firstly because of its outstanding visual historical and cultural values. Secondly, as part of UNESCO heritage, the traditional city has great cultural and historical touristic potentials, which risk to be compromised in the current conditions of decay not only because of limited maintenance interventions within the museum area, but also due to a huge number of incompatible transformations and additions in the marginal area that compromise its visual integrity or its image as a whole. Thirdly, the existing regulation on the protection, integrated conservation and administration of the historical center and protected area of the city of Gjirokastra stresses the role of the residual area around the historical center in the enriching, completing and protecting the historical landscape of the city, but still recommending only in general subjective terms intervention modes. This dialectic relationship between the historical city and the residual area can on one side, enhance the visual integrity of the historical center by adjusting the residual area and introducing it as an integral part of the city and on the other side upgraded to contemporary use the historical city and ensure its preservation and continuity over time contributing to its sustainable development. Still, the current legislative framework on interventions in the buffer zone (or protected areas) around the historical centers allowing subjective interpretations needs to be further enhanced in order to address objective criteria of intervention that work in harmony with the historic urban landscape.
In this evident legislative gap, this study finds significant exploring, representing and analyzing the historical city image through visual perception and trying to define some constants which can be used also in the residual area in order to achieve the queried visual integrity.

DECLARATIONS OF PROTECTED HISTORICAL CENTERS IN ALBANIA. SIGNIFICANT CASE STUDIES

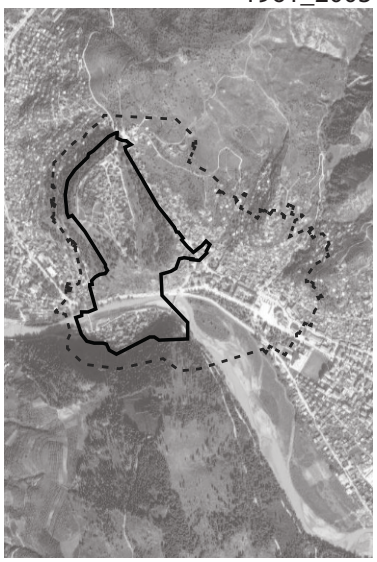
VKM, nr. 172, datë 02.06.1961. "*Mbi shpalljen e qyteteve - muze, "Mbrojtja e monumenteve*", .

1961_2003_2015

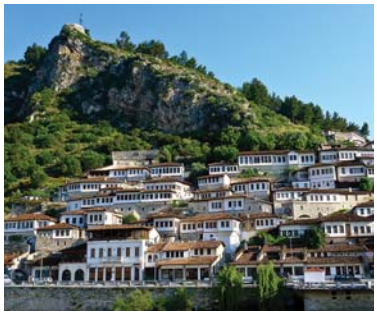
GJIROKASTER

VKM, nr. 172, datë 02.06.1961. "*Mbi shpalljen e qyteteve- muze, "Mbrojtja e monumenteve"*, .

1961_2003



BERAT

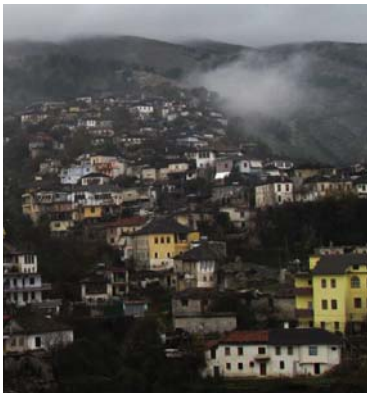


VKM, nr. 32, datë 18.1.2017 *Për shpalljen e qendrës historike të qytetit te Permetit dhe miratimin e rregullores për administrimin e saj të zonës së mbrojtur përreth.*

2017

PERMET

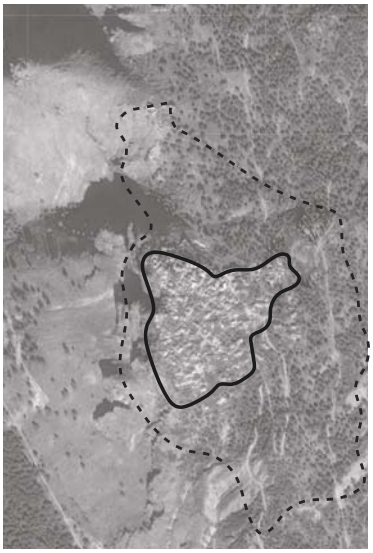
HISTORICAL CENTER



RESIDUAL MARGIN

VKM, nr. 30, datë 20.1.2016, *Për shpalljen e qendrës historike të fshatit Vuno dhe miratimin e rregullores për administrimin e saj të zonës së mbrojtur përreth.*

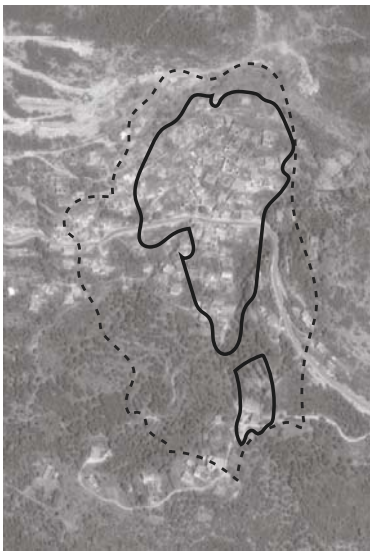
2016



QEPARO

Nr. 636, datë 7.9.2016, *Për shpalljen e qendrës historike të fshatit Qeparo dhe miratimin e rregullores për administrimin e saj të zonës së mbrojtur përreth.*

2016

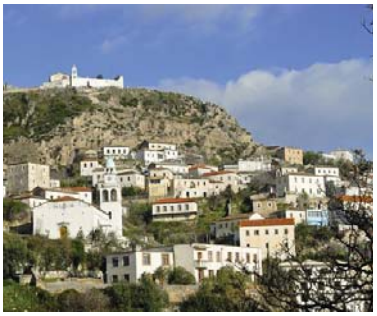


VUNO

VKM, nr. 29, datë 20.1.2016. *Për shpalljen e qendrës historike të fshatit Dhërmi dhe miratimi e rregullores për administrimin e saj e të zonës së mbrojtur përreth.*

2016

DHERMI



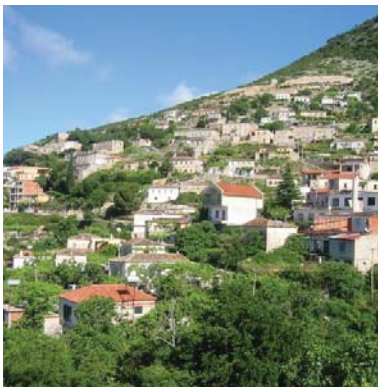


Fig. 1 Protected historic centers in Albania (source: Author's)

II. Research state of art

Theoretical background on urban design theories
The theoretical background on the perception of the historical city image is mainly based on late 19th and early 20th century theories. These theories emerge in reaction to a merely functionalist modern planning and to the repetition and standardization of building which imposes a monotone order in the city. They were based on systematic observations and deductive experiments on the historical cities which presenting an organic structure, a repetition without falling into the monotony of buildings seem to be closer to human visual preferences and psychological needs.

The main principles of urban landscape quality discussed in the classical urban design theories of Camilo Sitte (Sitte 1889, 1945), Gordon Cullen (Cullen 1971), Rob Krier (1979), Aldo Rossi(1982), Christopher Alexander (2002, 1965, Alexander 1979), Kevin Lynch(1960) have been even previously articulated in conceptual terms in the historical treatise, the more that wholeness or the unity in articulation of parts was an ideal of Greek, Roman, Renascence and illuminist theoretician of architecture. These writings are usually limited in explaining the genesis of wholeness as a metaphor or through a comprehensive image but do not provide a methodology of analyses that can orient to envision holistic patterns of relationship.

In addition, the recent theories explore various elements of urban visual perception by analyzing the part-whole relationship including morphological aspects such as the skyline perception or the relationship between buildings and the natural setting, spatial units and spatial patterns of continuity, the relationship between the building unit and the urban fabric and structural relationships between parts. By exploring and analyzing urban build and spatial typologies, these theories propose geometric, formal or structural relations between parts that constitute a wholeness, as patterns that describe qualitative visual and morphological feature characterizing the historical urban environment.

Likewise, even the representation tools were different. Camillo Sitte in his studies on European medieval cities uses simplistic and conceptual urban scale drawings which suggest aesthetical principles of urban design. These drawings represented the complex spatial organization of the city by showing the close relation between buildings and streets or plazas and even the inside-outside relation, in terms of isolated compositions and also the interlock as a whole keeping the continuity of the urban tissue. As conceptual patterns, these diagrams can be considered as tools or guidelines for urban landscape design. In this regard, Sitte had a large influence, which leads later, to other similar diagrammatic representation of urban space, or buildings prominent characteristics such as in the books of Gordon Cullen.

Sitte's studies were mainly based on the visual perception of the urban space considering it as a continuous network of "solid and void" and putting into evidence the characteristics of the single episodes (the unity of the single spatial patterns or the relation between the voids), as parts constituting the whole and the logic of spatial sequences (systemic approach) between the urban rooms by establishing dialectic criteria or contrasts such as openness-closeness, order-disorder, symmetry–asymmetry, continuity –discontinuity alternated to balanced forms. In

their view, the city is a collection of patterns (Collins, Collins 1986 pg. 16, 20) that produce a coherent image.

In this context, Christoper Alexander adopted a more advanced approach, interpreting the city visual unity as a structural frame (Alexander 1979, pp.68-70) and extending the analyses not only on spatial networks and the relation between close by elements but also considering the relation between all the elements part of the visual frame which contribute in the visual unity and constitute a unified whole. The field of vision was proposed also by Gordon Cullen who developed an idea of heterogeneous elements part of the urban scenery forming a unified whole, which had been later resumed by American theorist Kevin Lynch defining the image of the city as a structural unity of primarily urban elements which contribute in human's *orientation* and develop their *imageablity*.

Based on the above-mentioned theories, worldwide many historic cities have been analyzed and accordingly upgraded using the constants derived from those theories. In Italy for instance, during the second half of the 20th century there has been many "Landscape plans" or "Color plans" (Piani paesaggistici, Piani di colore) that have guided and oriented interventions in historical cities and their surrounding protective areas. This kind of studies and plans still lack is Albanian context, although there is a significant heritage in terms of historic cities and settlements to be protected. Regarding architecture, in the case of Gjirokastra and Berat there have been important studies and documentations (through photos, architectural drawings, and constructive details) and there is a typological classification of residential and religious buildings. However, there is no scientific study on urban morphology or the definition of an urban landscape visual character which can influence the aesthetics of urban form of traditional cities. In this circumstances, similar studies in the case of Gjirokastra will constitute the basis for this research.

State of art and theoretical contribution

This theoretical background will contribute in redefining the role of visual perception in the development of historical cities as an important component that contribute in the sustainable development of the historic city. In fact, the classic *three spheres of sustainability, namely social, economic and environmental, will be enrich with this new human-oriented aspect, that is def ned as "visual sustainability" and refers to* visual and aesthetic aspects of urban landscape which contribute in individual psychological well-being. This new explicit dimension of sustainability has not been explored sufficiently and in an objective way referring to the particular case of historic cities (both from the spatial and environmental point of view and from the human perception and cognition), although the above mentioned authors have intuitively understood its influence and importance, and have tried to render it through existing examples either graphically (drawings, maps, diagrams, patterns, etc..), literally (text description), through photographs or by proposing specific design tools (structural elements(Lynch 1960), patterns, geometrical proproprieties (Alexander 2002) etc. .

III. Research objectives and limitation

Research objectives

1. The main objective of this research is to identify objective parameters to take into account when intervening in the buffer zone around the historic centers, in order to guarantee the visual sustainability of the historic city image as a whole.

- Establish a methodology which can be replicable for the understanding and identification of objective parameters in other historical cities or settlements in Albanian context or internationally, which can orient interventions in harmony with the historic urban landscape.

- To identify and describe representative examples of cities, or architectures in which a certain objective parameters or design constant plays an important role in the definition of the image as a whole.

- To establish the role of “visual sustainability” as a core component in the sustainable development of historic cities in Albanian context and internationally, in particular in relation to human’s well-being and visual qualitative urban landscape. This component of sustainability can positively affect the preservation the historical urban landscape as a heritage for future generations and can play an important role in cultural tourism development which on the other side sustains economic development.

2. Referring to the case study of Gjirokastra, the objective of this research is determine design tools for building interventions in the residual margins of the historic area in order to adjust the historic city image.

- To analyze and describe the synthesis of Gjirokastra historic urban landscape.

- To identify constants of objective parameters that describe the visual quality of the historic urban landscape.

- To compare these parameters with other examples in order to prove that this methodology of analyses and investigation is valid also for other cities.

3. To establish a methodology of study of the historic urban landscape from human visual perception perspective.

- To analyze and describe the urban landscape of Gjirokastra from human visual perception perspective.

- To identity the main aspects of urban landscape of ottoman cities in the Balkans by comparing them with Gjirokastra case.

Limitations of the research

1. Limitation of reliable data, due to the lack of precise evidence regarding the transformation of the historic city of Gjirokastra.
The historical city of Gjirokastra, although is put under protection, in the recent years has been transformed in an inappropriate way and its difficult in some aspects to determining its historical character, due to the lack of historical maps that show its evolution or the historical sources. Accordingly, various aspects of the research such as the analyses of urban space, buildings plots, relationship between the road and

the walls or greenery) will be analyzed based on today's evidence considering those part of the city which have been less transformed and selecting those buildings that present sufficient archival documentation corresponding to the current state of conservation. This depends also on the limits of time, within which it's impossible to detect plans, facades and sections of a large number of buildings.

2. Lack of prior studies on this topic in Albania context and in particular referring to the case study of Gjirokastra.

Although there is a historical study on Gjirokastra development and transformation, there is a gap in morphological analyses at the urban level. Albanian literature and morphological studies about Gjirokastra are very limited. The only materials that put into evidence the characteristics of the historic urban landscape were set by traveler's drawings, photos, paintings and also by literature descriptions. No in-depth studies about urban morphology were undertaken. The only serious study of Gjirokastra museum area is that of architect Emin Riza, which will constitute the starting point for this research. Due to the lack of historical maps, but also detailed actual maps, this study was mainly focused on a typological classification of historic buildings and on the description of new forms and materials.

However, various transformations of the road web over time and the lack of historical maps do not allow us to came to an original state in order to understand the strength of the current road structure, apart from the main directions. Nevertheless, defining the typical road sections and sequences it's possible to understand the spatial quality in terms of repeatable spatial patterns.

3. Limitation on specific fields surveys color and texture analyses

Color and texture study is based on the direct observation, photographic documentation and confrontation with the palette of colors and is supported by previous studies on the geological formation of the materials used in the facade. Due to limits of time and difficulties to determine original colors, the study of specific color categories will remain at a basic level, regarding the definition of chromatic tones. Nevertheless, for the purpose of this research, this level of definition may be quite sufficient for the proposition of basic colors and their gradations as a design tool.

Delimitation of the research

Analyses of architectural types: Focus on house typology.

The contemporary necessities to provide commercial or other public activities mixed up in the city is not considered in this research in the case study of Gjirokastra. The traditional character of small-medium scale Ottoman cities is that in which trade activities were usually concentrated in the central area in a separate structure (the bazaar) not mixed up with the residential buildings, and the only public buildings were the mosques, distributed in each neighborhood. Therefore, this research with consider only tangentially the role of commercial buildings or commercial activities in the overall city image. In addition, although the mosques were spread within the city in each neighborhood, in the case of Gjirokastra, during the communism have been largely demolished. Lacking the evidence on the historical role they had on the skyline of the city, through their minarets, this research will mostly concentrate on residential buildings typology, the "civic tower" of Gjirokastra which seems to be the most prominent element of the city image and around which the spatial pattern is organized.

IV. Proposed methodology

The purpose of this thesis orient the research outcome to guidelines and recommendations for the advancement of the design field within the framework of interventions that intend to safeguard the historic urban landscape of Gjirokastra and adjust the residual margin around the historic center.
As it is recognized, traditional design practices have produce tacit knowledge's, which if considered in their synthesis can contribute in the advancement of the design and serve as reflections for new proposals. In this sense, the methodology of research from design moves from the analyses of a case study to the definition of principles and reflections (Fig. 2).

In this process, theoretical background is also important to understand previous contributions and a specific methodology of analyses.
Accordingly, based on the above discussed theoretical background as part of an international literature review on the visual quality of the city image, the purpose of the thesis to determine a series of parameters or constants (as patterns of relationships) that characterize the historic urban landscape of Gjirokastra taken as case study and accomplish by analyzing and interpreting local context at the point to define constant visual elements that contribute in defining the city image as a whole. These constants need to be implemented also in the residual area in order to guarantee the visual integrity of the city image as a whole. Thus, it is crucial that new interventions demand a detailed survey and evaluation of historical architectural character so that they can express an aesthetic unity and being distinguished at the same time from the existing historical layer. The essential constituents of the architectural character of a city or settlements are embodied in its structure, volumes and other elements analogies, rhythm, gradation, echoes, contracts etc.
, which will be explored through the following design theories.
Accordingly, the historical urban patterns of Gjirokastra will be identified and interpreted based on three main theories on urban design related to visual perception:

- Gordon Cullen and the townscape tradition which examine the visual relation between the spatial patterns and buildings in static and dynamic terms.
- Kevin Lynch's theory which explores the city image through the analyses of remarkable structural elements that describe its image as a whole.
- Christopher Alexander who defines geometrical proprieties (such as centers, the level of scale, gradation, contrast, local symmetry, positive space etc.) of living environments or things that present wholeness.

Fig. 2 Proposed methodology (source: Author's)

Following these theories, the proposed methodology of analyses that lead to design tools from te synthesis of form of the existing urban landscape will be based on the following main steps:
1. An historical analyses of the city and its course of development in relation to the influence on the morphological composition of the city, the landscape features and the way they have influenced the urban formation and environmental elements and the way they interplay with the built form.
2. The structural character of the city
3. Identification of characterizing buildings that constitute the repetitive constant elements. (primarily buildings or landmarks that constitute the “unique features” of the city)
4. The structural and the geometrical features of the spatial pattern.

This analyses can bring into sight:
a. Skyline character
b. A mental map with dominant structural elements.
c. Constants of the architectural character of the city as a whole;
d. Patterns that describe a visual understanding of space.
Given the limitations of the research, in particular referring to the transformation up to the total alteration of some historical buildings, the total demolition of most of the religious buildings during the communism and the lack of historical maps on urban development, the research will be based on:

1. Literature overview
The first important publication on Gjirokastra architecture is the study of architect Emin Riza which was used also as a basis for the preparation of UNESCO nomination document. This text includes a historical overview of the city formation, a detailed description of buildings typology, spatial organization, and architecture of the houses ending up with constructive materials and conservation challenges. In addition, the scientific journal “Monumente” published by the Institute of Cultural Monuments will be overview as the main source of information about heritage scientific studies in Albania. Recently, other scientific papers on Gjirokastra have been overviewed and taken as reference.

2. Archival research
Archival research is primarily based on architectonical drawings of buildings that have been selected to complete literature gaps. Selected buildings are usually first and second category buildings presenting more available material. Archival research is also based on historical maps (although there is limited material), historical photos, paintings and graphical representation of Gjirokastra landscape.
Hereby, in view of the acquired materials it’s expected the following elements to be selected and analyzed 4 typologies of neighborhood; 34 houses of the three main typologies (5 of the simpless and less evaluated type and 15 for the other two type), which is sufficient to understand the main features and also small variation within the single type; 12 typical houses which include the parcel configuration in order to understand the relation between buildings the surrounding space, in different kind of terrain and position towards the road and access; particular buildings: particular houses architecture, religious and bazaar buildings; typical road section of two main types of road, typical road perspectives, 5 nodes configuration for each constant a comparative analysis with other cities will be made in order to understand the

possibility of this methodology to be applied in other similar cases.

3. Field survey
Field survey is based on observation over the selected examples and urban space in general, drawings of typical road perspectives, measurements of road sections, verification of materials, colors and textures through photography.

Starting from the above mentioned steps, the morphological analyses of the historical center can be specified as follows:

A. Historical analyses on the formation and development of the historical center

- Geographical context and the relation to the natural environment
- Form, dimension and modes of development of the historical city (linear; radial development; centric etc.)
- The character of the social structure of the city.
- Neighborhood or the division into parts of the city
- Extensions and transformations over time.

B. The morphological character of the settlement

1. Morphological and structural character as a whole and identification of units.
2. Structural elements
3. Units feature: homogeneity diversity of the units.
4. The general aesthetic character or physiognomy of the settlement.

C. The buildings. Primarily architectural types.

1. Houses (civic kulla) analyses and classification.
2. Houses type: function and distribution
3. Houses morphological feature for each type: the genesis of form; geometry; proportion; dominant shapes; silhouette; hierarchy; symmetry; solid void relation; surface material and texture;
4. Morphological analyses of external detail elements:
- Detailed elements and their position towards the whole
- Openings: geometry; proportion; dominant shapes; hierarchy; gradation; echoes; symmetry; rhythm of aggregation;
-Roof: shape, proportion, color etc.
- Unique examples as a point of reference and landmark for the settlement.

D. Spatial pattern

1. Roads network
-Classification of road networks morphology
- Road form, proportions between the width of the streets and the height of the buildings, sections rhythm.
2. Nodes and open spaces
- Spatial types (enlargement of roads, nodes, building entrance enlargement)
- Their structural organization and role as reference points in the general city image.

E. The relation between the built and open spaces

1. Building sections in relation to the plot and the road, facade along the road.
2. Buildings arrangement in space: orientation; main and secondary volumes position, space between them; visual relation in height; solid-void interchanges.
3. Prominent morphological features of the buildings: their repetition, level of regularity; frequency of repetition; level of variations

As a result, a series of constants features will be defined in the case of Gjirokastra, which will constitute the basis for the definition of guidelines and recommendations.

V. Expected results

Research suggests a methodological approach that put into evidence the visual quality of the historic city of Gjirokastra decoding constant elements and principles in order to use them as patterns for new interventions in the residual area intending to adjust and preserve the historic city image and the historical significance of the place, as imperative components for a sustainable development. The final goal is giving practical tools and a guideline for professionals and institutions to intervene in a sustainable way in this particular context, and to improve and specify the legal framework. The synthesis of the historic urban landscape will constitute the basis of the design of the residual area. In fact, inputs given at the end of the research are meant to be tools and instrument that an architect and urban planner should integrate during the design process, but also professionals of the Institute of Monuments can use to objectively judge the compatibility of the project with the historic city image in order to respond to specific legal criteria about their visual harmony and morphological reference.

VI. Stakeholders

- **Professionals working in Gjirokastra context**

Direct stakeholders that might have interest in this research are architects and urban designers that will work in Gjirokastra context commissioned by inhabitants to build in the vacant land around the historic city or to transform existing buildings.

- **Institutions, academia and professionals or researchers working in those institutions**

The Ministry of Culture and professionals working in the field of heritage in the National Institute of Cultural Monuments can have an interest in this research firstly because of the safeguard of the historic image of Gjirokastra in particular and the provided methodology which can be used in other historical cities. Secondly, the objective parameters and guidelines that will be provided as final outcome in the research will constitute a practical and objective tool to evaluate projects that require the approval of the Institute. This can serve also to professionals working in the planning office in the municipality. The outcome as a developed methodology can serve also to professionals in other municipalities which have under their administration towns or villages recently nominated as historic centers. Based on this methodology, they can study their particular context and develop similar guidelines that can be integrated into the regulatory plans or can be seen as a separate document for the administration of the historical city. This can be done also by University researcher, which can

extend this research to other historic centers.

- **International institutions**

UNESCO United Nations Educational, Scientific and Cultural Organization and ICOMOS, the International Council on Monuments and Sites, as international organizations dealing with world heritage and aiming to ensure the conservation status of properties can present interest in this research as it deals with the particular aspect of conservation, which has to do with the safeguard of the historic image of the city and as its visually perceived in its aesthetical and morphological quality, moreover that Gjirokastra is part of UNESCO heritage.

- **Local inhabitants and visitors**

Local inhabitants can have interest on this research as it has to do directly with the safeguard of the city image they perceive visually, its morphological character and cultural identity to it related. Regarding local community, it influences directly humans psychological well-being and a sense of place attachment while visitors can perceive the historic city image in its visual integrity or wholeness.

- **Other indirectly interested stakeholders**

The Ministry of Tourism can present interest in this research, and also the possibility of extension of this studies in other historical centers, as one of the basic conditions for cultural tourism development in these historical cities is the visual aesthetical quality provided and the local character of the city image.

VII. Innovation of the research and international interest

This research contributes to the development of the field of urban landscape studies in the area of historic and cultural landscapes. First, it points to the issues related to the modernization of the historical cities and questioning the appropriateness of new interventions or transformations in the buffer zone around the historic center. Secondly, it tries to address the question of growth, densification, and adaptation of these residual areas in relation to the safeguard of the historical city image as whole seen from the perspective of human visual perception. Thirdly, it opens a new perspective on visual sustainability as part of a sustainable development and a sub-component that reflects the social contribution in terms of safeguard of the visual aesthetical quality, collective memory, spirit of place and place attachment and the environmental quality as visually perceived quality of urban landscape in terms of pure city image, morphology, structure and character of place.

- **Balkans Context**

This study can be a starting point to guide contemporary interventions in the residual margins of open historical cities, considering as a particular case the traditional Ottoman cities in the Balkans. Most of Ottoman cities in the Balkans have been largely transformed and the problematics of visual integrity of intervention in the margins with the historic center is still an open question, not sufficiently explored in this context.

In addition, the synthesis of form of Gjirokastra opens up comparative analyses with other ottoman cities in the Balkans or ottoman world which can put into evidence similarities but also specific visual feature of ottoman architecture in this context.

- **Mediterranean context**

This study can be part of the research for traditional settlements in Mediterranean Countries, contributing through local experience to enlarge the build environment heritage of the Mediterranean and to enrich its values of multicultural dimension in the field of visual quality of urban form and sustainable development of the historical urban heritage.

- **International context**

The methodology of analyses can present a wider interest, as it can be used in similar historical contexts worldwide.

VIII. Structure of the thesis

This dissertation contains the Introduction and 5 chapters (Tab. 1).
Introduction presents the statement of the problem, the reason for this study and the background of the research starting from the legislative gaps, research questions, objectives, and limitations as well as a methodological qualitative approach which brings to the identification of objective parameters on which to base recommendations and guidelines. This part argues also local stakeholders interest and further international attention due to the innovation of the research in terms of methodological approach and the possibility to be replicable in similar contexts.

In **Chapter 1,** introduces the concept of visual sustainability of the historical urban environment within the general frame of sustainable development of the historical city, in order to enrich with a new human-oriented aspect, the circle of sustainability. Accordingly, this chapter will investigate the nature of human-environment interaction related to the visual aspect of image perception, with the purpose to understand the features of a qualitative historical urban environment. Based on the visual laws and findings of Environmental psychology, a set of attributes related to the historical urban landscape is introduced as objective criteria's, which contribute in defining the concept of visual sustainability and discuss it in a broader perspective.

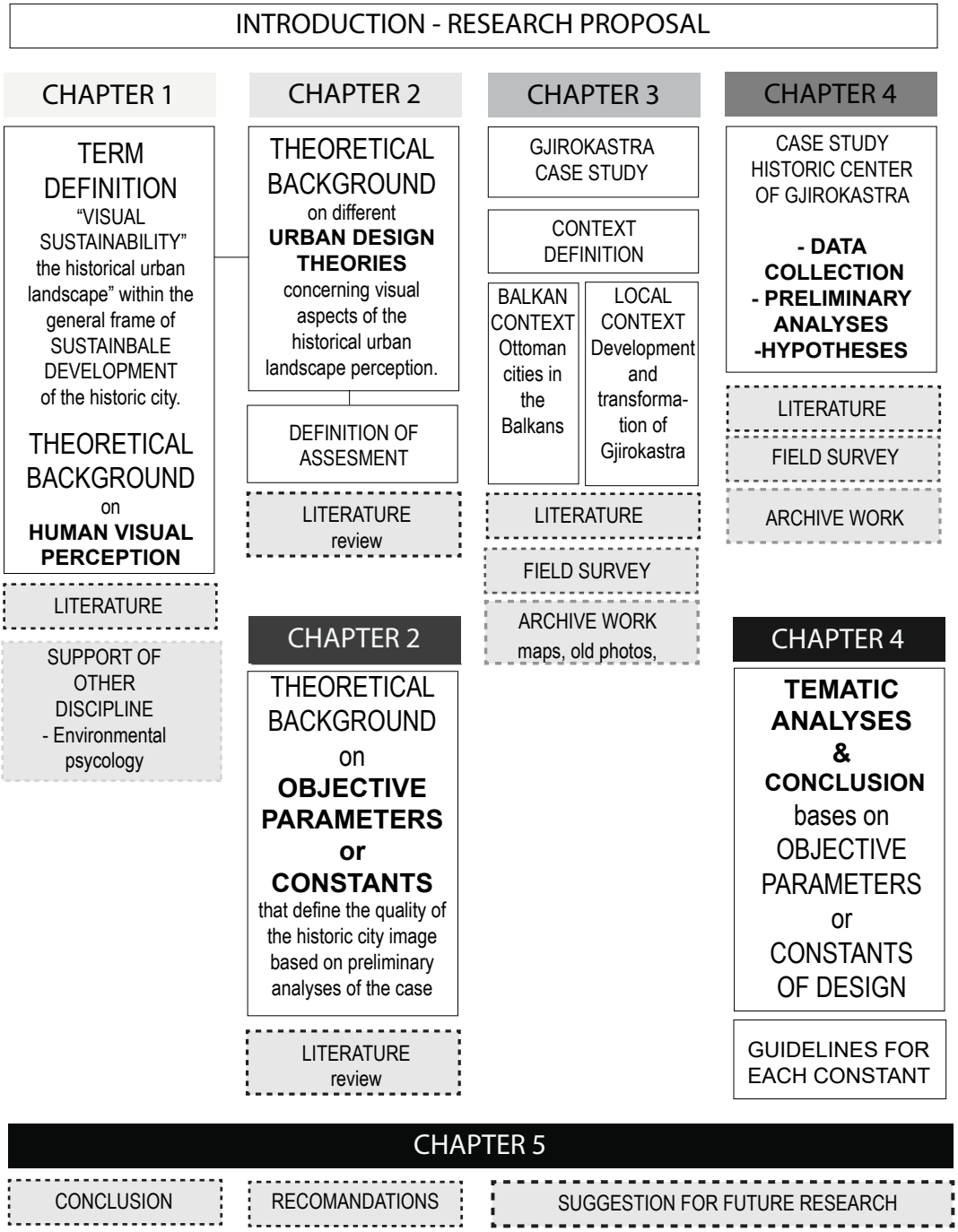
In **Chapter 2**, **the initial part** will elaborate a theoretical background on different urban design theories concerning visual aspects of the historic urban landscape perception, with the aim to describe and present an adequate method of analyses that explains the sustainable image of the historic city as a whole or what have made those historic urban ensembles of great formal coherence and appealing for human's sight. Hereby, starting from the critics of Camillo Sitte, Pier Paolo Pasolini and other personalities towards modern interventions and following up the interest for the aesthetics, morphological and structural character as a whole of traditional architecture and settlements, Kevin Lynch's, Gordon Cullen's and Christoper Alexander's theories will be basically discussed with the aim to build a methodological approach in analyzing and assessing: the structural and morphological character of the city; the structural and the geometrical features of the spatial pattern; the characterizing buildings features as part of the city image as a whole as well as unique urban feature that contribute in constituting a living environment or things that present wholeness. At least, theoretical approaches related to the sense of place will stress the importance of place and historical architecture for the sustainable cultural image of the city arguing further the definition of a sustainable traditional city image in

terms of the safeguard of cultural and historical background. In this part, concepts such as sense of place, genius loci and collective memory based on Aldo Rossi and Christian Norberg-Schulz urban theories will be analyze in relation to physical characteristics of the historical city with the intent to determine physical elements that embody them and play a supplementary role in the visual perception of the historic city image.
The second part of Chapter 2, will focus on the specific constants that are valid for Gjirokastra which derive from the preliminary analysis of this context. These parameters will be discussed theoretically and illustrated by using examples from art, architecture and urban landscape.

In **Chapter 3,** the case study of Gjirokastra as a typical example of a Balkan ottoman city will be introduced starting from a regional framework. After giving an overview of the general spatial characteristics and organization of the ottoman city in the Balkans, and having an outline of nowadays developments, transformations and challenges in relation to their historical image, an overview on urban formation and development will be elaborated for the case of Gjirokastra, putting into evidence urban morphology, the main structural parts of the city, their evolution over time and the main architectural typologies. Following the description of the development and transformation of the city after the fall of the ottoman empire up to nowadays transformation, this part will introduce the current legislative framework on constrains and allowed interventions in the residual margins of the historical city. This area under high construction pressure according to the legislative framework playing an important role on the image of the historic city, needs to be adjusted properly, in harmony with the historic center and contributing in the wholeness the city historical image. Still, the legislative gap identified will be subject of further studies on constants that define the character of Gjirokastra image and which can guide the future development of this fragile margins of the city.

In Chapter 4, with be elaborated the synthesis of urban form of Gjirokastra. Concrete parameters that define Gjirokastra urban character will be explored based on the previously mentioned theories. These constants are key concepts or patterns of relationship that can guide and orient future intervention, congruent with the wholeness of the city image. They have been analysed starting from the large scale by defining the relationship between the build mass and the natural landscape setting, the single building unit and the whole build environment and the relationship between the spatial unit and the spatial patterns.

Finally, **Chapter 5** presents the conclusions. First, will be summarized findings and results of the analyses of the case study, discussing the synthesis of Form of Gjirokastra: constant elements and possible variation as part of a design process. In addition, suggestion questions for further research will be articulated. Finally, based on the above findings, recommendations and guidelines will be developed.



Tab. 1 Structure of the thesis and chronological development of the research (source: author's)

CHAPTER 1
SUSTAINABLE HISTORICAL CITY IMAGE

Brief: *The aim of this chapter is to try to def ne and address the concept of visual sustainability of the historic urban landscape setting it as a subcomponent of the three spheres of sustainability, namely social, economic and environmental, in order to enrich it with a new human-oriented aspect. With this regard, this chapter will investigate the nature of human-environment interaction related to the visual perception of the city image and human's positive effects based on f ndings of Environmental Psychology referring to following main theories: Evolutionary theories, Cultural theories and WVisual theories of perception, with the purpose to understand the physical attributes of a qualitative historic urban landscape. In view of this objective criteria's, the concept of visual sustainability will be f nally discussed in a more objective perspective.*

1.1 VISUAL QUALITY OF THE HISTORIC URBAN LANDSCAPE

"In the post-war rush to turn town planning into an applied science much was lost – the city of memory, of desire, of spirit; the importance of place and the art of place-making […]"
Leonie Sandercock (1998)

The interest on the historic urban landscape emerged with the advent of modernism and modern planning. Historically on the contrary to 'regular planned' modern cities, traditional settlements, in particular, the medieval one, were usually build with an 'irregular organic' form", ordered from authorities and conducted by skillful master craftsman's following a common sense related to construction, but mainly dictated by the topography and the natural setting. Nevertheless, regarding the artistic aspect, they seem to be more appealing to the sight compared to modern cities as their image is organic and highly integrated into the natural landscape. It seems that modern cities had something wrong concerning formal and beauty questions, which is transmitted to the people visually or is perceive emotionally, spiritually and psychologically, by moving through it. In modern cities, the qualitative dimension is focused mostly on healthy and functional aspects, rather than responding to the psychological needs related to human perception. The Athens Charter (Congress Internationaux d'Architecture Moderne (CIAM) 1933, 1946), in fact, stresses mostly these two aspects, which related to the advent of the machine and the consequent changes in man's habit, has oriented the city planning in these directions. Due to these changes, the city was conceived as a machinery which should accomplish functional and healthy needs such as air, sun and green for the building blocks, access, fluid movement, efficient transportation, provide recreational areas, etc. losing the organic form. Hereby, modern cities usually present a pure functional structure, with large and regular road grid to guarantee fluid traffic, a system of parks, open spaces and playgrounds, a regular and often geometrical pattern of buildings responding to the sun, air and green space standards but have no consideration for the spatial quality that is perceived by the people and the negative effect that can inflict upon them at the psychological level. At least, in the last century, from irregular and organic systems which are similar to the natural settings and fit with them in a balanced way working in oneness as an ecological system, there was a tendency to approach a mechanical system, which is very reductive since the spatial layout of new developments takes into account mostly functional and

physical needs, neglecting the visual and psychological human needs which are equally important for human well-being.
We can understand it just taking a look at the new developments in our cities which present a totally different character and lack aesthetical visual quality. Regarding new developments in the margins of historic areas, the impact is greater and people acknowledge the growing disqualification of the historic urban landscape and visual appearance of historic cities. This can be considered as a disservice to the community since the visual quality of the urban environment reflects directly social and psychological human wellness.

In European context, post-industrial technocratic approach in modern planning and the further post-war rationalist, standardized approach in building new residential areas, although were considered as a good reaction to the industrialization bad consequences such as population growth, pollution, poor sanitation, hygienic problems and chaotic conditions, gave rise to other urban social ills and mainly to formal brutality. In architecture and urban planning, the prize of progress, the abolition of city walls and that of an expansive dimension, was a certain degree of sterility regarding urban artistic aspects and a total lack of humanity in conceiving urban landscape. This was reflected in various moments of modernity. Modern planning technocratic approach (developed during the technological optimistic period of modernization) for instance, experienced a deep crisis during 1950 which had led to even questioning if the urban environment where we live has to be only a mere technical functional problem to be solved by planners or something important related to the human aspect was missing, and architects and planners need to turn their attention to this essential aspect. In addition, the separation of urban planning or urbanism from architecture is reflected in the urban scale, in the loss of urban landscape spatial quality, since the spatial layout being the task of planners is mainly dictated by economic, social and environmental functional needs. Architecture, on the other hand, is considered usually as an intimate question of interior space or as an external object that can contribute in a fragmentary way to the overall image of the city. However, in this context, different authors (Piccinato 1935, 1977, Rossi, Eisenman 1982, Zevi 1997, De Carlo 1965) sustain the primary role of architecture on the spatial configuration of the city, highlighting also the importance of integrated knowledge, as the urban form should respond not only to functional demands but present also a high architectural quality.
Traditional cities configuration and their spatial layout reflect this spatial quality that characterizes an architectural approach in urban configuration based on a continuous interaction with the place (local context) and humans. This determines its pleasing quality and the degree of appeal that characterize the spatial configuration of the historical cities. Giancarlo de Carlo describes this configuration in historical cities in view of the void and street system as spatial chains and sustains that this constitutes the quality of the historic urban landscape. [*…in the cities, the streets are the constituent and qualitative elements. That why cities are ugly or beautiful, depending on the beauty or ugliness of the street form which they are composed…*] (De Carlo 1988 p.25).
In this sense, when designing new developments, especially in continuity with historic centers, we need to look back to the morphology of the traditional cities and learn from past solutions which seem to be more beautiful, alive, integrated with nature and human, qualities that modernism seems to have neglected. In addition, this aesthetical quality is achieved not only by the visual harmony and integration

with nature which characterizes traditional organic cities but also by presenting a visual integrity of the built mass and spatial configuration as a whole. The literature suggests that built heritage and its integrity as a whole found in traditional cities is essential to transmit a sense of well-being.

Out of this impulse, traditional cities turn back to the center of attention, as life-enhancing models, that can inspire modern urban design by also contributing in humanistic urbanism. This positive visual character of the traditional cities has been a large object of study during the last decades. Architectural and urban design theoretical studies related to urban morphology and human aspects had tried to identify the causes of the appealing image of the traditional city, first by bringing it to a large attention of professionals, exploring the elements that embody it and their internal rules. In this regard, both physical and affective values of historical cities related to the user need to be taken into consideration. The physical components are associated with typological and morphological features of the urban landscape which affection values are related mostly to the character of a place.

Nowadays, this topic needs to be addressed further, being closely linked with the social, environmental and cultural sustainability and to build up scientific methods to integrate them into a modern urban design, in order to enhance the humanistic aspect of our cities.

In the process of ordering the dynamics of urban growth and transformation happening in particular in the marginal area of historical cities, the traditional city image considered in its full complexity need to impose itself as a major component of sustainability.

Despite the statement of its importance, in Albanian context, this component is almost absent from public institutions attention, although it's taken in consideration in the legislation on historical cities safeguard, or at least in urban studies and professional architectural practice. Herewith, as in Europe, a similar situation occurred, with several years of delay. In fact, in the first half of 20th century, the country has undergone a process of modernization and urban growth which led to the formation of modern cities. This process has affected also traditional cities which in most of the cases in the historical area were adapted losing the unitarily and the continuity of the urban layout and in the case of large expansion, a new center was extended outside the existing historical city in total contrast and separation.

Thus, the image of new developments results as fragmented, in some cases tries to integrate to the morphology of the historical city, hardly resulting as organic due to their mare functionalistic attitude, and monotone in the case of new neighborhoods. The new rationalistic neighborhoods, although have large spatiality, seem to have lost the human dimension. They are characterized by uniformity and a monotone repetition which is not stimulating for the human senses. When inserted in the historical area, they disrupt the harmony of the urban landscape with a lack of concern for aesthetic quality and consequences of the visual appearance of the historical city. According to Lynch (1960), changes in the urban environment related to technical and functional aspects, can be emotionally upsetting for the people and disrupt their perceptual image.

Considering the effect of new developments upon the historical city image, we must be aware that visual appearance can be an important component to be considered in the search for sustainability of the historical city image and the aesthetical quality of the traditional landscape.

In Albania, the historical centers of two of the most important historical cities, Berat and Gjirokastra were almost preserved in their traditional character, although, they

are still disturbed due to close-by extensions.
It seems that some new interventions starting from the XX century, have recognized some visual quality not only in terms of architecture but mainly in their composition as a unitary ensemble harmoniously integrated with the natural landscape and their internal spatial configuration and thus, have decided to preserve them, developing new separate extensions close by. In fact, in both of the cases, the modern city has been developed as a totally separate part preserving visual scenery and vistas. Nevertheless, in the residual area around the historical center transformation and development has taken place without any regard to the visual quality of the historic city as a whole.
The visual values of the urban ensembles, which makes them preferable and pleasing to the view, have never been studied and represented scientifically by architects which had been focused more on the study of buildings typology, monuments and architecture characteristics and its components, lacking morphological studies at the urban scale and definition of synthesis of the urban landscape in relation to human visual perception.
On a contrary, artists intuitively have longly managed to capture and represent through paintings, photographs or literature description the visual quality of traditional cities filtered by their perception and represented artistically. We can mention from the watercolor paintings and illustrations of the English travelers Edward Lear[20] (Fig.3), George Gordon[21], Charles Robert Cockerell[22], to Albanian and foreigner landscape painters (Fig.4), photography (Fig.5), to literature descriptions of the image of the historical city Gjirokastra in Ismail Kadare novel “Chronicle in Stone”[23]. Those and other, artistic testimonies display the positive impression that cities had imprinted to locals or visitors.
The last decades of informal and chaotic urban developments in Albania, with its social consequences due to the morphology of the neighborhoods, the quality of urban space, and the total disregard to the relation with nature, have pointed out again the necessity to look back to our traditional settlements, as the greatest work of art produced by our society, and understand the characteristic of their pleasing image. In this sense, we need to investigate architectural form and urban landscape seen from the human perception perspective, their organicist and capacity to grow over time without losing their visual character, their characteristic of life, vitality, and harmony with the surrounding environment. This human-centered approach in urban planning, it’s more appropriate to talk about urban design or urbanism than urban planning, not only in a matter of scale but also assuming that urban design deals more with the nature of urban elements and their relationship as experience while urban planning is more focused on location, policy decisions and management, has attracted great interest in western countries in view of human–centered sustainable urban development.

In Albanian context, beyond the period of informal development, the design of the historical city excluding the museum area has been more and more oriented by urban

20 Edward Lear is an English painter and poet. The printings to which we refere are the series “Berati 1848” Houghton Library, Harvard University;

21 Lord George Gordon Byron (1788-1824) is British poet. In 1809, he set out on a grand tour of the Mediterranean in the course of which he Albania, leaving various illustrations and descriptions.

22 Charles Robert Cockerell (1788-1863), was a British architect, archaeologist and writer. From 1810 to 1817 he travelled in Greece, Albania, Turkey and Italy. In 1814, he ventured in Albania) to visit the realm of Ali Pasha, where he made several sketches. An account of this visit is given in his journal: “Travels in Southern Europe and the Levant, 1810-1817” (London 1903).

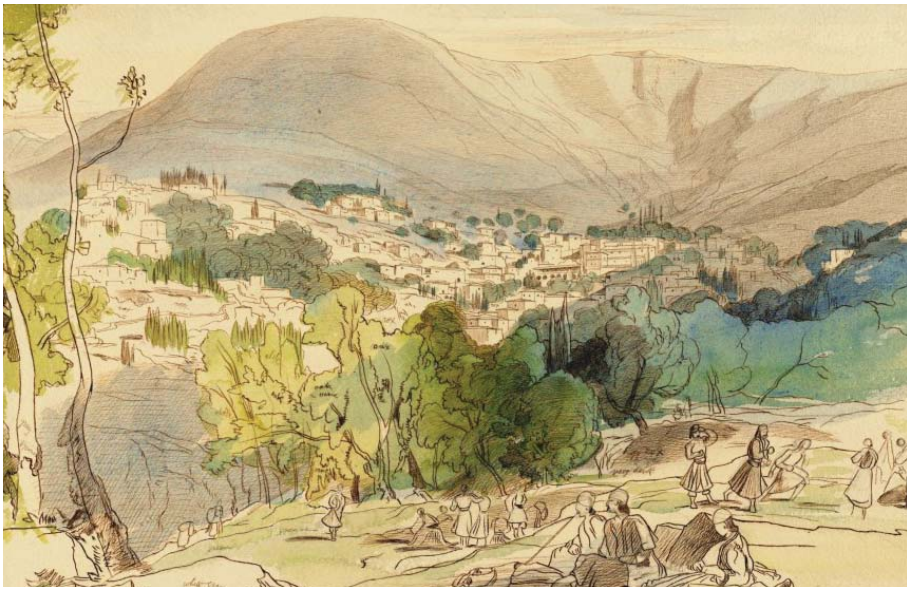
23 “Croniqle in stone” is a novel of Ismail Kadare, an Albanian well-known writer.

planning, which is based mainly on economic and management logic, rather than in urbanism as urban form and visual aspects related to human perception, which has to do directly with the relationship between people and the built environment.
As a response to nowadays approach, this research will argue the importance of an urban landscape outlook in urban development, rather than planning, because of the particularly rich historical and cultural context that has influenced the formation and the preservation in the time of traditional cities as part of the Ottoman heritage combined with the Mediterranean cultural context. In this sense, the spatial configuration of the built environment will work according to an architectonical logic similarly to traditional towns, since the house is considered as a small city and the city as a small house[24]. This logic of the historical buildings articulation tends to be perceived positively. Accordingly, the design of the urban form, will result from the articulation of spaces (similar to the architectural scale) based on the dichotomy characterizing traditional towns such as internal-external, public-private, full-empty, open-closed, build-natural, and spatial patterns of relations in urban scale such as inter-connected sequences of space, relation with the natural landscape, relation between unity and parts etc. Thus, the articulation of the physical environment will be directly influenced by human perception, interaction and his behavior towards the urban environment.
In this regard, it is important to stress the contribution of a human-oriented approach to a sustainable urban design equally to other sustainability components such as economic and functional comfort aspects. It can be considered as a prerequisite to social needs and mental health equally to the sunlight or other vital needs. Therefore, the basic premise of this work is to understand the definition of sustainability related to the image of the traditional city and the way it can be integrated as a new important component of sustainability in the field of urban design.
As the image of traditional cities is filtered by human perception, it is crucial the interest on the culture of vision and knowledge and on modern notions of environmental psychology studies which will help to enlighten the process of perception and cognition of the urban environment, the way we perceive city image and organize, identify and interpret this information through our senses. Continuing, will investigate on the elements of the urban environment as a force field that constitute external stimulus and the internal response of our brain conscious and unconscious. Other aspects of visual communication and perception such as the expressive and symbolic values of architecture or urban image will be explored in various forms and dimensions. In this regard, the study of visual aesthetics quality seeks to identify and understand factors that contribute to the perception of an object or an urban process formation that generates beauty, or how they can provide a pleasant experience (Lang 1987).
Base on this, different interpretation of city image related to visual perception will be explained in order to have a large perspective. Furthermore, we will attend the definitions of different authors referring to the dimensions of city image related to human perception with the aim to evaluate and quantify objectively visual sustainability, which up to now has been determined by subjective judgments of preference. The different approaches chosen, although can present some contrasting points between them, for the purpose of this study are complementary and aim to give a large perspective to the visual sustainability related to the urban form. This part will end up by defining a theoretical approach of analyses and evaluation of the role of perception in the traditional city image.

24 In Leon Battista Alberti Treatise “The art of building in ten books”, See also “City is House and House is City”: Aldo van Eyck, Piet Blom and the Architecture of Homecoming

a)

b)



c)

Fig. 3 Edward Lear watercolor paintings: a) Himarë, b) Vuno, c) Gjirokastra(source: Houghton Library, Harvard University online library, http://ids.lib.harvard.edu/ids/view/27807561?buttons=y , http://ids.lib.harvard.edu/ids/view/27807560?buttons=y ; http://ids.lib.harvard.edu/ids/view/28324334?buttons=y)

a)

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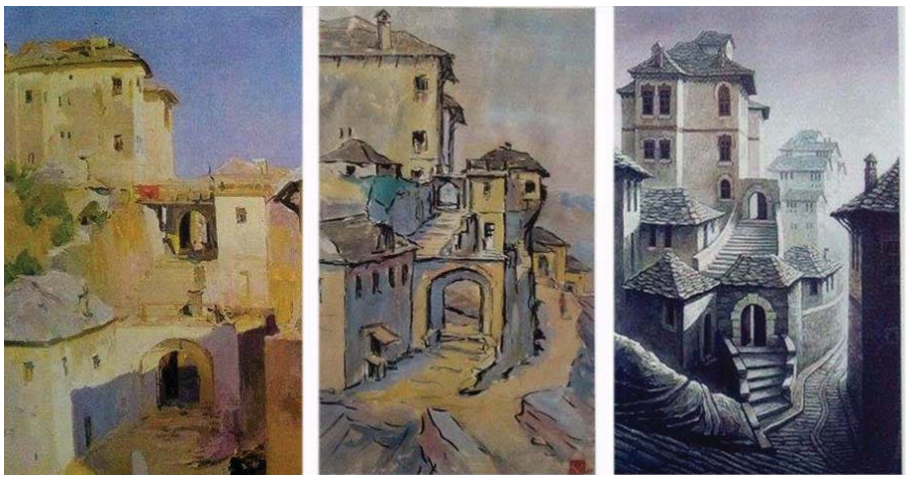

Fig. 4 a) V. Neumbert, Landscape from Dhërmi, 1958 (source: National Galery of Art, Tiranë); b) Ksenofon Dilo, Landscape from Gjirokastra (oil), (source: National Galery of Art, Tiranë); c) G. Khandjyan ,Ggjirokastra, 1959 (source: private collection, Jerevan); d) V. Talo, Gjirokastër, 1960, private collection, Vlorë; e) Sh. Bengu, Gjirokastra, 1999, (source: author's studio, Tiranë)

a)

b)

Fig. 5 a) Panoramic view of Gjirokastër, by Erich Andres, 1931, (source: National Library of Albania) ; b) Berat old postcard (source: https://www.delcampe.net/en_GB/collections/item/127830321.html)

1.2 REVISING THE CONCEPT OF SUSTAINABILITY

Nowadays, the concept of sustainability related to the historical city development is considered one of the most pressing goal issues. The most popular definitions of sustainable development regarding cities, after the oil crises of the 1970s, which has posed a question the insufficiency of resources for future generations, was declared by the report of the World Commission on Environment and Development (WCED) in 1987. According to Burntland report (1987), sustainable development was a "[…] *development that meets the needs of the present without compromising the ability of future generations to meet their own needs*" and was based on three main pillars: economic, social and environmental, which combined between them form three other components technology, process and space quality.
For the purpose of this study are relevant environmental and social sustainability and in particular, their combination which brings to the spatial quality. Spatial quality is the result of the relationship between the physical environment and its social use. This composite dimension is highlighted also in Bruntland report (1987) "[...] t*he strategy for sustainable development aims to promote harmony among human beings and between humanity and nature*." This expression points out the importance of social well-being based on the spatial characteristics of the environment, although this mutual component of sustainability has not been particularly explored. In addition, in Burntland report is mentioned also the importance of the preservation of the visual aesthetical quality of the environment, with reference to the natural environment *"Sustainability requires views of human needs and well-being that incorporate such non-economic variables as education and health enjoyed for their own sake, clean air and water, and the protection of natural beauty.*" (Bruntland 1987)
Subsequent definitions of sustainability stress again the importance of the human well-being in support of the ecosystem, even though it regards more the natural environment "*…development that improves the quality of human life while living within the carrying capacity of supporting ecosystems*"(IUCN 1991).
The attention to human-environment centered approach on sustainable development has urged the importance of exploring new domains of sustainability related to the quality of the human-made environment (built environment sustainability) based on people visual perception and to the effects exercised over them (social sustainability).
Nowadays, the spatial quality of the urban envir-onment includes an additional level of information which can be categorized in different thematic and focused sub-thematic of study. Likewise, the focus of this research is not the general quality of the urban environment, rather than the quality that is visually perceived by humans and is related to the form (or shape) of the city. In this regard, aspects of content such as rigorous functional organization related to the use of space or functional distribution are of course excluded. Accordingly, the new concept of visual sustainability as a human positive perceptual experience in the urban environment is seen as a smaller component of the spatial quality (Fig. 6), which can orient a qualitative design of the urban environment as well as guarantee (in this optical) social well-being. Thus, this visual and perceptual aspect can be considered as a parameter of analyses of the existing urban environment and evaluation of architecture and urban design interventions which can contribute to the sustainability of urban development, especially in this society of image in which we live nowadays.
Concerning the contribution of a sustainable vision in the overall evaluation of sustainability, it's important to understand objectively visual and aesthetic aspects

and use them as a tool to enhance the quality of life and individual psychological well-being (social sustainability) and the quality of the historic urban landscape (urban environmental sustainability). Hence, this study intends to propose a new domain of visual sustainability which is a subcomponent of spatial quality.
Concerning the contribution of a sustainable vision in the overall evaluation of sustainability, it's important to understand objectively the contribution of visual and aesthetic aspects and use them as a tool to enhance the quality of life and individual psychological well-being (social sustainability) and the quality of the historic urban landscape (urban environmental sustainability). Hence, this study intends to propose a new domain of visual sustainability which is a subcomponent of spatial quality.
Visual sustainability, as a new explicit dimension (or sub-component) of spatial

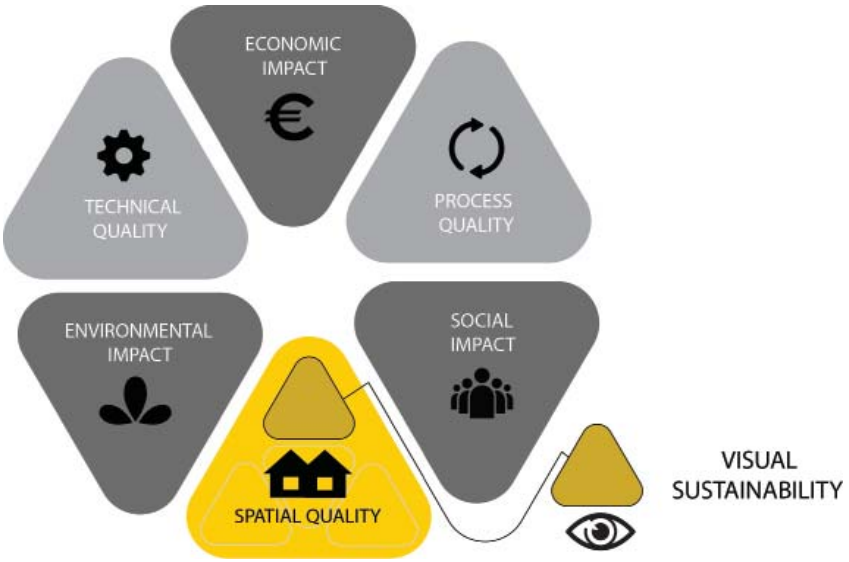

Fig. 6 Inquadration of visual sustainability component in the general def nition of "sustainability" in urban development (Source: from author)

quality in relation to urban development is encompassed in its general definition, but not explored sufficiently and in an objective way, although different authors have intuitively understood its influence and importance, and have tried to render it through existing examples either graphically (drawings, maps, diagrams, patterns, etc..), in literature (text description), photographs or by proposing new design tools. Usually, they focus intuitively on one particular aspect of visual sustainability (for instance, the quality of urban space in relation to the human dimension (Krier 1979); the role of monuments and architecture in the urban memory (Rossi, Eisenman 1982); the importance of orientation and wayfinding (Lynch 1960)). This concern that however there are attempts to study urban quality in relation to human perception, they result very fragmentedly. In addition, depending not only on the inherent quality of urban landscape but also on human perception, they rely on the new field of "environmental psychology"[25] , which has been only recently explored giving rewarding results.
Thus, in order to understand and quantify the positive psychological effects of perception related to the city image and orient the study of the urban environment visual quality, it's important to make use of Environmental Psychology knowledge's, which constitutes a good starting point in structuring different aspects of city image perception that can help to define objectively visual sustainability and the parameters through which its duality can be judged objectively.

25 According to Oxford Dicticionary definition, "Environmental psycology" is the psychology of people or animals in relation to their physical, natural, or social environments.

1.3 INSIGHT URBAN LANDSCAPE BY VISUAL PERCEPTION

"[...] landscape is composed of not only of what lies before our eyes but what lies within our heads."
(Meinig, Jackson 1979)

1.3.1 Human-environment visual relationship

The use of visual perception as an approach to reading, understand and shape the city, has been a widely object of research in the last decades, due to the concern for visual urban landscape quality in architecture, design and planning. People shape their physical environment to meet their physical, cultural and social needs, but the environment shapes and influence them as well. The relationship between humans and objects in the environment constitutes the basis for the configuration of the urban environment, as humans materialize their feelings in the form and spatial organization of their environment. Similarly, Amos Rapoport[26](1977) stated that the built environment contains a series of relationships among physical elements and people. The organization of these physical components needs to be set by a series of rules that affect positively human perceptual relation.
In this sense, the visual perception through which humans are influenced has become an area of concern for a new discipline, which can help to understand the human visual perception and cognition of the landscape and the interaction between people and their physical environment. Moreover, nowadays, in view of a more human-centered approach to the urban sustainable development, this issue seems to be crucial. In addition, since the focus of this thesis is visual sustainability related to the traditional city image, understanding psychological aspects of perception becomes very important for the purpose of this study.
An architectural object is an independent physical entity separated from the observer. Herein, we don't see the object entirely and its proprieties are only partially captured by our eyes, depending on the view perspective.
Moreover, reality, as appears to our eyes, is not a simple reproduction of the external world in our minds related to the perspective of view, but it is the result of a complex process of reception of sensory data, transformation, reconstruction, completion, combination (Arnheim 1974b, Kanizsa 1980). In this sense, the information about a certain physical entity is filtered by perception, which includes a complex psychological mental process (Fig. 7). Thus, understanding how individuals perceive urban environment is important to realize the attitude they have towards it and the effect that gets back from the environment, especially when the perception leads to a particular interpretation and representation of the physical reality.
The perception from the psychological perspective describes the way in which people through observation read and understand information from the surrounding environment. In parallel, due to a sensory perception linked with memory and experience, people understand the environment, organize and interpret the visual information through the senses. This need to understand the physical environment from the human perspective in order to learn how its improvement had led to the inception of a new psychology field: "Environmental psychology"[27], recently known

26 Amos Rapoport is and architect and one of the founders, and most influencial figures of Environment-Behavior Studies (EBS).

27 See Gifford in "Environmental psychology. Principles and practice". According to Gifford (2007) Environmental psychology is the study of transactions between individuals and their physical settings. On one hand, it examines how people relate to their surroundings, the psychological processes related to environmental perception and spatial cognition, as an interface between the environment and human behavior, and moreover stressing the feelings, beliefs and human's attitudes and reactions towards the surrounding environments. On

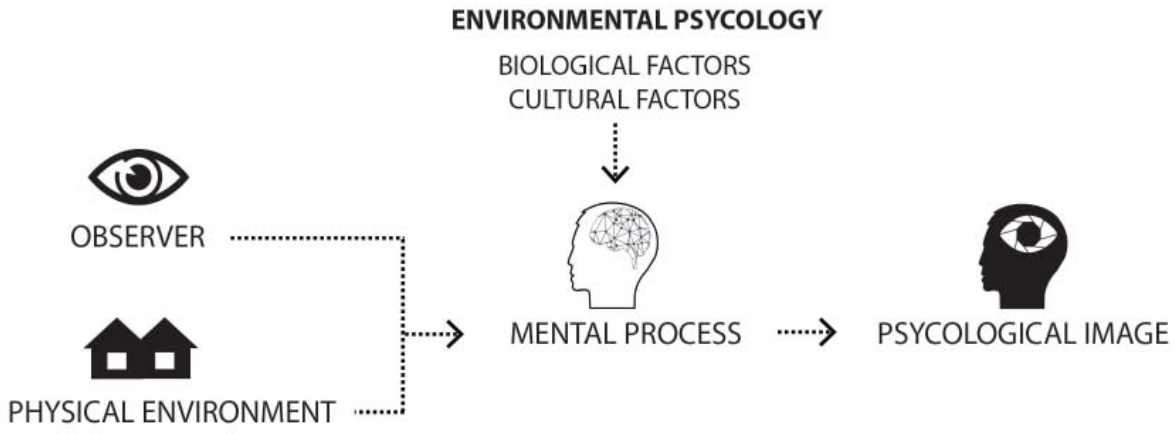

Fig. 7 Environmental psychology role on understanding the process of environment visual perception (source: Author's, based on Environmental psycology mental process interpretation)

also as "Environmental behavior-studies". In this view, this study will use findings from the field of environmental psychology that shows and explains why humans are visually and aesthetically attracted to a particular urban landscape configuration. These features are also found to have positive effects on human functioning and well-being.

In 2000, European Landscape Convention (ELC) adopted by the Council of Europe defined landscape as: "*[…] an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*", putting an emphasis on the perceptual dimension of the landscape and the mutual relationship between humans and environment in terms of cultural changes.

All approaches of environmental psychology, that can contribute, in our case, to the study of the urban landscape perception are based on three core assumptions (Jacobs 2006,p.47):

1. The way people perceive landscapes is influenced but not determined by physical landscape attributes since various factor intervene in the mental process by orienting human's preferences toward certain environments.
2. There is a complex mental process of information reception and processing that mediates between the physical form of the city as it is perceived and the psychological image that is built as a consequence of this intermediate mental process.
3. There are factors that influence the mental process of elaboration of the city image such as biological, cultural and individual subjective factor (Bourassa 1990,p.787-812).

Base on this, in the following section, an overview of three main theories explaining psychological aspects of environmental perception will orient our study of the urban landscape image trying to define the character of urban settings or elements of urban form that can trigger an effective state or a preference towards certain environments.

The examination of psychological aspects of perception is principally based on the specific literature of the Environmental Psychology field, but also on other authors (Arielli 2003, Martellotti 2008) which have dealt in particular with the visual quality of the built environment, architecture and visual arts.

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the other hand, it includes also studies that intend to orient the humanization of the built environment toward a positive impact on our senses, emotions, psychological state and consequently our well-being, as urban form communicates information to people through its surface, shape, geometry and its order of spatial relation.

1.3.2. Visual organization and aesthetics of urban landscape

The image of a perceived object in the visual field is the result of a psychological process. Visual theories of perception related to shape of a visual field perception deal mainly with the restitution of the formal qualities of objects within the field due to the mechanism of perception, through which the form is organized. They interest us, as they are frequently based upon the notion of visual preference and as consequence can provide attributes that describe the shape in terms of aesthetical quality and order.
In the second half of the nineteenth century, philosophers such as Christian von Ehrenfels and Alexius Meinong were the first to point out that the properties of objects (or group object in the visual field) as a whole cannot be reduced to the sum of parts that constitute them. Ehrenfels was one of the first who talked about objects own Gestalt, inspiring later scholars of the so-called “Gestalt Berlin school” (Wertheimer, Koffka, Köhler) that gave rise to the theory of visual perception. In fact, Gestalt psychology constitute the bases for the work and contribution in visual perception of Max Wertheimer (1923) Kurt Koffka (1935) and Wolfgang Köhler (1947). Through the study of simple objects perception, they found hints and organizational principles to evaluate their form. These principles are relevant also to understand the psychological process, to elaborate and restitute through an image the visual perception of the surrounding urban environment.
The term “Gestalt” according to Kohler (Köhler 1947), means both, form (or figure, shape) as a visible attribute of things and a concrete entity per se. In addition, Katz (1950) introduces the concept of whole, as the global organization of patterns, which characteristics are not determined by the single elements composing it, rather than by the internal nature of the whole.

This investigation was coagulated in the fundamental study of Wertheimer (1923), “the law of perceptual forms” which interprets group objects according to visual fields. Indeed, Gestalt theory is based on the innate approach of humans to group, organize and order visual fields or patterns in response to the stimulation received by the environment. “*[…]we always experience perceptual wholes, not isolated parts. We never see f gures alone but dynamic “f gure-ground” relationships*” (Behrens 1998).
Accordingly, people view the information from the environment (from the urban environment in our case) as a holistically whole made of meaningful entities, rather that disaggregated parts. Koffka (1935) defined it as the “demand character” of an object or its inner nature. Later, gestalt or form in psychological terms was defined as “any segregated whole or unit” (Uttal 1983 ,p.9).
In this sense, gestalts examined the whole from the perspective of structural mental processes (Fig. 8). The configuration of the whole is defined as a psychological structure made of elements and relations between elements, displaying a quality that cannot be described by the parts, as the unity constitutes more than the sum of parts.
For the purpose of this study, Gestalt approach has to do mainly with the analyses of whole-part relationship, from which a pattern or a configuration can be revealed.
Thus, Gestalt theory can help understand and examine the urban environment form, through the understanding of the rules of processing information. This law of processing information, which is an innate feature of human mind, can be reduced in a series of grouping principles as summarized in the figure below (Fig. 9), through

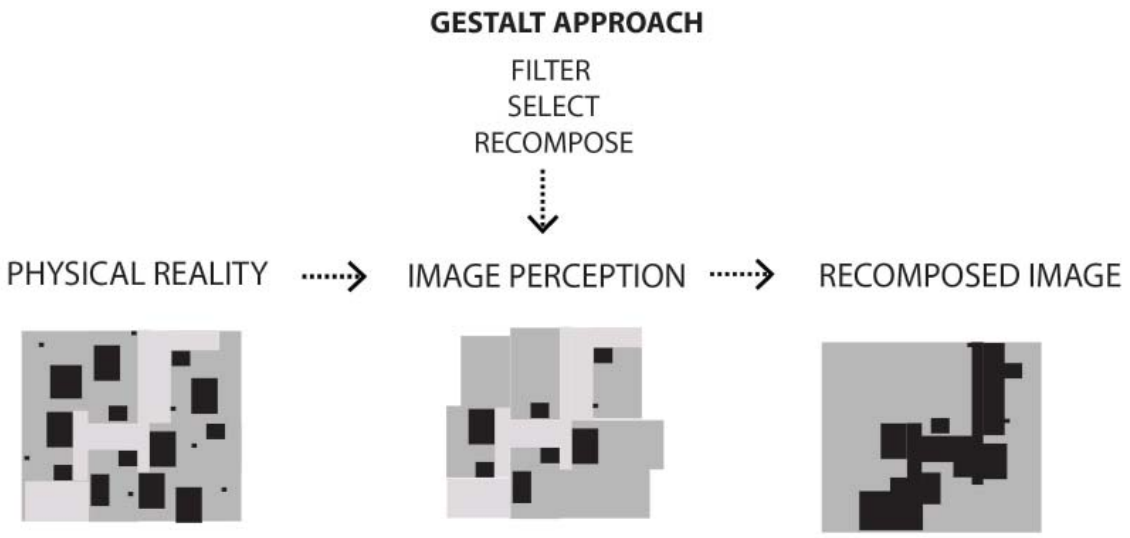

Fig. 8 Gestalt approach as a structural relationship between parts and the whole based on the laws of perceptual f gures (source: author's)

which will be defined various urban patterns or configurations.
The classical gestalt principle has dominated the stage for most of the 20th century. However, in the last years, new grouping principles (Fig. 10) articulated by scientists have become part of Gestalt theory, regarding principally rules on dynamic perception. Both of them constitute the syntax law of acknowledging how the image information is filtered, selected and recomposed through perception. In fact, according to Arielli (2003), the perceptual process is able to select, reorganize and rebuild forms and objects, extrapolate them from the background field focusing and distinguishing what is relevant to the view, based on certain visual rules.
In this sense, the view is seen a capacity to select, combine and create a structural relationship between single elements and the whole. Patterns or spatial configurations are the results of the ability of the perceptual process. Certain forms are read and composed more easily than others becoming figures in a background due to the visual intercourse.

Thus, the various Gestalt principles will serve as tools to identify prominent, recognizable figures and space relations. This will constitute the basis to understand and define the level of organization of the image of the urban landscape, being able then, to process aesthetics preferences. Moreover, there are also rules that govern the vividness of this figures due to their formal characteristics that make them dominant compared to other forms in the visual field. (Meiss 1990). Base on this, Bruno Zevi investigated on the role of space in architecture in his classical book "Learning how to see architecture" by interpreting voids and bodies relationship. Analyzing and interpreting historical buildings he defined a series of aesthetical attributes derived from spatial perception: unity, symmetry, emphasis, contrast, proportion, scale, character, etc. This coherent combination of elements forming balances figures or patterns (wholes) is based on Gestalt Principles. Thus, from the design perspective, that's why it is important to synchronize and order these elements in a composed system by using visual perception laws.

From a different perspective, Daniel Berlyne (1963), revising the evolutionary theories, claimed that aesthetical preferences for an image depend primarily on the complexity of environmental stimulus, which includes a variety of heterogeneous

composing elements including surprising elements, new elements, and incongruent elements. Berlyne (1963) noted that human can be disturbed by a certain amount of complexity, preferring an intermediate level of complexity. However, despite the level of complexity, what matters more is the organization as a "whole", which gives order to the complexity and makes it more legible. Heterogeneity and the organization as a whole stimulate the understanding and create at the same time uncertainty and surprise. These elements although there are not well defined, intend to achieve a similar level of visual order as described and defined by Zevi.

Gestalt as order

Gestalts, in fact, believe that the brain will project order into the image (Ehrenzweig 1967). The higher the quality of the image, the higher the capacity to produce order out of the complexity. Gestalt psychologists state that the understanding of a certain image is related to the visual whole which is more than the sum of single parts. With this regard, a good gestalt (or a good form) is the expression of a whole or unity, as our brain prefers and tries to see completeness. In completeness, human brain found harmony and beauty and the level of complexity describes the interest to explore it. On a contrary, an uncompleted whole creates a tension or psychological disequilibrium (Wolman 1973). In this regard, the good form (simplicity) law or the law of Prägnanz which explains our tendency to order and organize perceived objects forming an image is fundamental for our preference towards that image. It can guarantee balance and coherence. Moreover, Koffka considered a series of proprieties deriving from the good gestalt: "*psychological organization will always be as 'good' as the prevailing conditions allow; (where) the term "good" is undef ned (but) embraces such properties as regularity, symmetry, simplicity and others...*" (Koffka 1935). In addition, Katz found that good form or wholeness is synonymous of unity, harmony, inclusiveness, and conciseness (Katz 1950). Thus, complexity which can be reduced to simple forms is more appealing to human sight. With this regard, Prägnanz (good form) was defined as the "*tendency to see an object as being simple, regular, symmetrical, continuous, closed*" (Hamlyn 1957), which can be paraphrased as a visual necessity and preference for order.

Gestalt as aesthetics

Wertheimer's theory of Gestalt perceptions has been largely influenced by the preceding philosophies of aesthetic order. In fact, Gestalt psychology was based in part on Kant's philosophical investigations on aesthetic order[28]. According to him, human perception was moved by a certain order with a particular aesthetical attribute (or the mental faculty to understand but to be also sensitive), which he defined as a common aesthetic sense characterizing humans. This explains the aesthetical preference as a result of ordinary cognition going in parallel with aesthetical judgment.

Based on this, Rudolf Arnheim[29] sustains the innate aesthetical component to which human perception is related and consider that as an important component in gestalt psychology since its beginning: "[…] *from its beginnings gestalt psychology had a kinship to art. Art pervades the writings of Max Wertheimer, Wolfgang Köhler, and Kurt Koffka. Here and there the arts are explicitly mentioned, but what counts more is that the spirit underlying the reasoning of these men makes the artist feel at home.*

28 Kant, Immanuel, Nicholas Walker, and James Creed Meredith. Critique of Judgement. 1st ed. Oxford: Oxford University Press, 2007. Print.

29 Rudolph Arheim applied Gestalt principles to the study of visual aesthetics in his book "Art and visual perception".

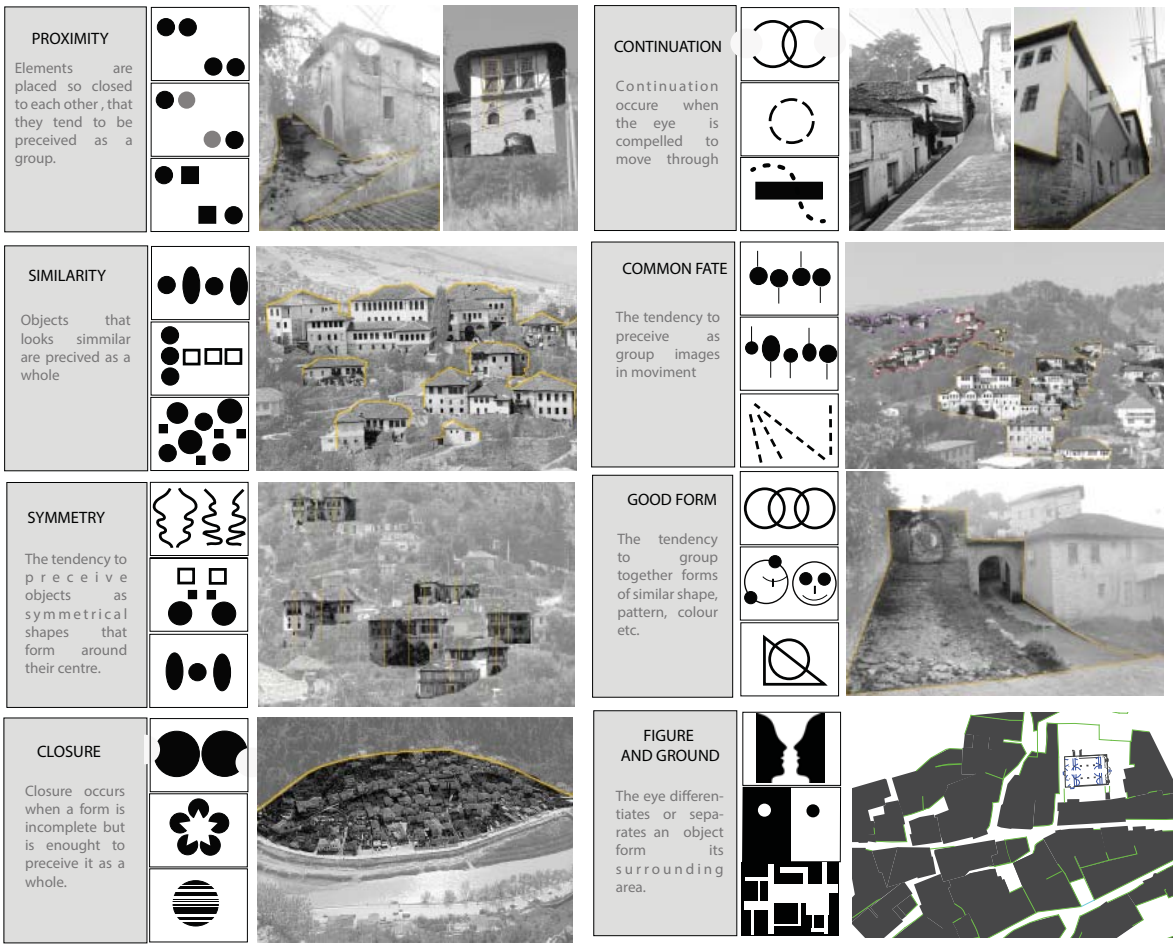

Fig. 9 Classical grouping principles in Gestalt theory adapted from (Palmer 2002, p.177-234); (Brooks 2015) (Examples from Berat and Gjirokastra traditional towns are elaborated by the author)

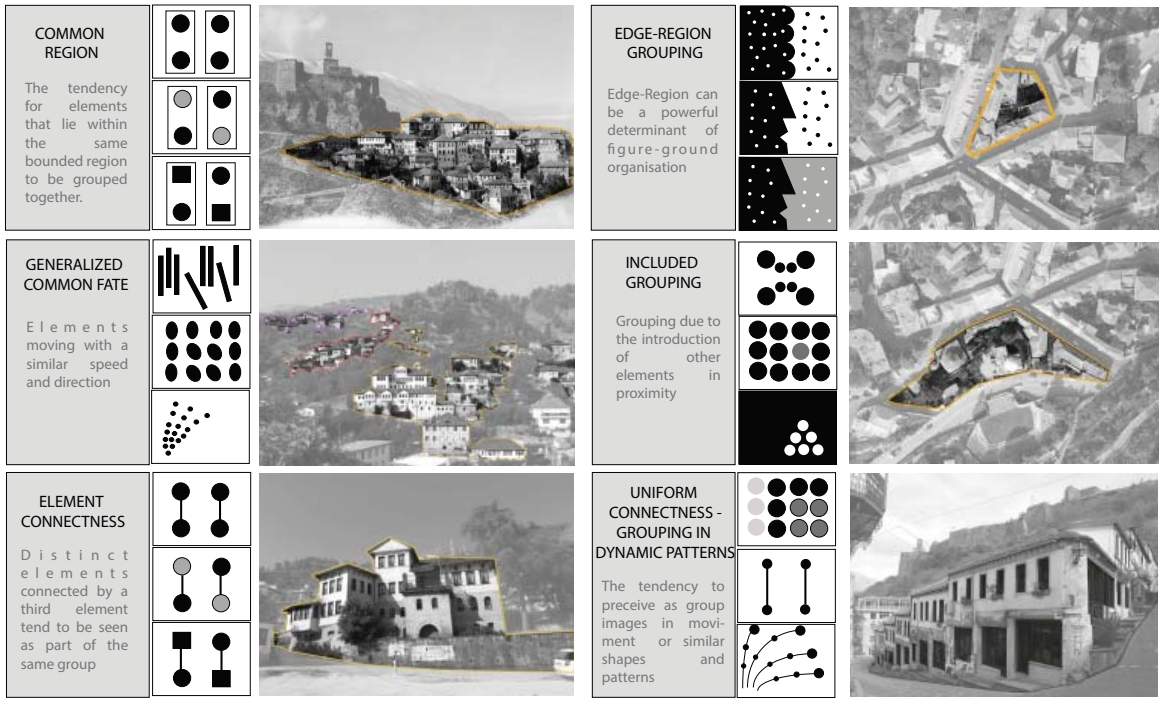

Fig. 10 Recent gestalt principles adapted from (Brooks 2015) (Examples from Berat and Gjirokastra traditional towns are elaborated by the author)

Indeed, something like an artistic vision of reality was needed to remind scientists that most natural phenomena are not described adequately if they are analyzed piece by piece. That a whole cannot be attained by the accretion of isolated parts was not something the artist had to be told" (Arnheim 1974a,p.5).
Before Gestalt, in fact, 19th-century psychologist, Gustav Theodor Fechner[30] had demonstrated that the aesthetical attribute of a perceived image can be described objectively and formally, and developed procedures of studying art based on an experimental approach. Later, Arnheim in "Art and Visual Perception"(1974a), emphasized an interpretation of image or space in their totality, by a balanced interaction of visual forces. In continuity with this, Gestalt psychology has emerged as a rational step forward in the demand for aesthetical quality. Due to this consideration, we can sustain in parallel to the attempt to order, the aesthetical component in gestalt laws of visual perception.

The importance of whole-part relationship in urban landscape perception
At first consideration, referring to architecture and urban landscape perception, the law of Prägnanz is the most relevant, because it considers a holistic approach in perceiving and evaluating urban landscape. In this sense, its qualities as a whole determines the characteristics of the parts. This does not exclude variety, but takes into account more the prevailing unifying character as an expression of aesthetic and visual preference. The lack of a prevailing unit character of the urban environment, creates incoherent urban environments, made of a cacophony of forms and objects which are considered uninteresting, un-preferable and not appealing. Traditional cities, usually present a character as a whole, since its parts are strongly interconnected and interrelated to each other, creating unity, harmony and simplicity of form, which appeals to the human brain, by having a high level of complexity that simulates the innate human need to understand and explore.
In this regard, urban landscape perception is seen as a field of potential relationships between various architectural objects floating in the urban space and both emerging by the difference between the architectural and urban space and interacting between them.
On a contrary, modernist rational city plans are usually based on a clear separation of parts. In this sense, their image is fragmented and cannot be re-conducted to a harmonious whole.
In this regard, visual theories in environmental psychology and the laws that derive from them, can contribute in understanding the traditional city image as a whole, by exploring the various relationships between parts. The articulation and the configuration of the image as a whole will constitute the basis of evaluation of the visual quality of the city image.

1.3.3 Innate biological preference as a bases for urban landscape

Human beings possess innate aesthetic standards, preferring those urban landscapes that include a series of features which provide them beneficial for the biological survival of their ancestors. This biological preference towards certain urban landscapes related to human's innate reflections of survival is sustained by evolutionary theories.
Evolutionist perspectives explain human's preference towards certain environments rather than others, as a result of the ability to face change and to be prepared to

30 Fechner, G. T. (1876), Vorschule der Ästhetik. ("Introduction to aesthetics"), Breitkopf & Härtel, Leipzig.

adapt to new situations by evolving each time. Regarding the relationship between the human beings and their physical environment, the zoologist Desmond Morris (1969) has highlighted the need of the human animal (comparing human being to the animal species) for a particular spatial environment that possess surprise, visual oddities, landmarks and architectural idiosyncrasies as they perceive the environment in terms of the ability to act on it and have control over it.
This is a direct consequence of man-made coherent and organized urban landscape (Gosling 1996), on which humans have a total control. Moreover, according to environment psychologists Saegert and Winkel (1990), biological evolutionary factors motivate the preference of certain environments instead of others.

Bases on the incidence of biological factors on mental processes related to urban environment perception, two main theories have been developed: 1. The Kaplan and Kaplan's theory of processing information and 2. Jay Appleton theory of prospect-refuge (Tab. 2)
Kaplan and Kaplan's (1989) theory of processing information from the environment postulates that people have two basic needs in the environment related to the acquisition of information: understand and explore. Both of them depend on the content and organization of the environment. In evolutionary theories, urban form or the image perceived is elaborated in relation to the degree of understanding and

General theory	Applied theory	Factors influencing urban environment preferences
Evolutionary theories	Theory of processing information	coherence
		legibility
		complexity
		mystery
	Prospect-refuge theory	safety
		controll

Tab.2 Evolutionary theory and concepts describing the visual character of urban landscape (source: author's, based on (Kaplan, Kaplan 1989) and (Appleton 1975) theories.

exploring the environment.
In this sense, stimulant landscapes, characterized by coherence, legibility, complexity, and mystery (Kaplan 1983a) raising the level of excitement and encouraging the activation is preferred to visually homogenous environments. In fact, visual stimuli may hinder the exploration and understanding of the environment layout, but at the same time can train people skills and capacities to survive (Berlyne 1971).

1. **Coherence** serves to immediately and easily understand the environment as a whole, structuring its image by reading its symmetry, repeating elements, unifying forms, and textures, highly visible parts. Coherence is the visual connectives of urban form at different levels due to geometrical proprieties that ties together various part of the city in a whole. (Fig. 11)
According to (Nasar 1990), cities can increase their positive image evaluation, enhancing the visual coherence or order through a variety of features, such as legibility, repetition, replication features of façades and volumes, the use similar

materials or uniform textures, contrast between design elements in the facade or between buildings and their natural context, identifying of landmarks or focal points etc.

2. **Legibility** means a clear understanding of urban parts (es. neighbourhoods configuration, street patterns etc.) in order to facilitate navigation and orientation in space. (Fig. 12). The presence of landmarks or prominent buildings, for example, can facilitate the sense of orientation. (Fig. 13) Both of them convey the feeling of being safe within the environment.

3. **Complexity** refers to the variety of elements, a richness of details and vitality that makes a certain environment stimulant, by being involved immediately in a scene, which enables than a step by step and slow exploration at different scales of detail. Nevertheless, complexity needs to be understandable and coherent at different scales and in space, in order to avoid anxiety and confusion, and stir up people's interest in the city. This means the existence of different levels of scale, but also the presence of order at different levels, which mean that complexity needs to be moderate as controlled by the order, otherwise, the risk is to fall either in monotony or in a chaotic situation (Fig. 14).

4. Mystery activates the desire to explore the city, penetrating more deeply into the different scenes, as it invites and promises to reveal new details. Hence, as suggested by Kaplan et al. (1998) the presence of curved paths or vegetation can partially obstruct the view creating an effect of mystery to the environment. This kind of atmosphere can stimulate people by challenging them to see behind to the extent of avoiding confusion and disorientation (Fig. 15).

Therefore, the degree of information should be in accordance with a human psychological capacity to react positively to a certain quantity of information. On this regard, according to Kaplan at al. (1998), if humans have to manage information out of their capacities, mental fatigue can occur. The overload of visual information can cause visual noise and disturbance, confusion and difficulty to decode the environment, by denying a cognitive control of the surrounding.

Consequently, we can affirm that people can benefit on certain urban environment configurations that are characterized by the previously discussed features at the point to be compatible with the human's capacity. In this regard, Kaplan (1983b) introduced the concept of congruence between humans and the environment which is seen as the capacity to recognize a place at the level to fulfill the natural need to orient, understand and explore. In this sense, complexity and mystery in the urban environment need to be maintained at a moderate level in order to simulate people enough but at the same time, not overload them with information and tire them mentally.
In historic cities, in particular, in European and Turko-Balkan medieval ones, this level is optimal compared to modern cities or Arab cities configuration. Accordingly, the introduction of objects or designed areas with a different visual and geometrical character, can overload the visual frame and cause psychological distress. In this case, both legibility and coherence will be no longer present. Returning to the above-mentioned medieval cities, the concepts that derive from evolutionary theories can be significant for the safeguard of the historical city image in terms of

morphological continuity in the residual area, at least in the buffer zone.

Another perspective on the evolutionary theory was developed by the noted geographer, Jay Appleton (1975), who presented the prospect-refuge theory based on Darwin's "Habitat theory"[31], stating that the humans relate to the surrounding environment similar to the animals in their habitat, preferring environments that provide refuge opportunities, but at the same time meet the need to control the environment, see without being seen, increase fitness and offer better chances for survival. Prospect has to do with visual control, with obtaining information, which gives people the feeling of power, security and psychological stability. Refuge with hiding, finding a safe shelter or seeking a protected space. Thus, in view of survival advantages, modern humans possess an innate genetic predisposition to visually prefer natural environments and organic urban settings, which remained them of their antecessors habitat including direct and indirect vistas and offering as well refuge, a sense of enclosure, such as hidden parts and shelters. In addition, he introduced also formal features of the environment such as the spatial arrangement and the urban form which act as characteristics that stimulated conditions of survival. Base on this, later, Appleton (1984) proposed as the most favorable environment, a strongly contrasting one, which offers an alternation of a strong prospect and then strong refuge instead of a balanced one.

Base on this, control and refuge in the urban setting are related, on one side, on the level of understanding of spatial configuration through the system of large public spaces or panoramic point that allow them to see clearly and have control over the territory and, on the other side, on the presence enclosures, protected areas, where it's easy to take refuge, feel safe and relaxed.
This is evident in the medieval towns, which were usually built in the upper part of the hill to visually inspect the surroundings as well as to ensure a protected place. They often have plazas open to the landscape from where it's possible to control the territory around and public spaces or yards with an extended visual perspective and in contrast present a narrow and twisted system of streets, that give access to the houses which are seen more in a perspective of refuge (Fig. 16, 17, 18).

In conclusion, since these hypotheses in a certain way conflict with the evolutional process and the essence of natural selection theory[32], they cannot be considered in absolute terms but assumed as unconsciously or innate visual preferences and dispositions of humans in relation to their environment. Accordingly, we can assume that humans are unconsciously oriented to prefer certain environments, which affect they state of mind and in a larger extend their well-being. Therefore, the design of our physical environment should be dictated by our biology or the biological factors that influence our attitudes towards preferring certain environments instead of others. Herein, the completion of historical cities, in particular interventions in areas that present limitations related to the preservation of monuments, is more related to the safeguard of morphological characteristics which seem to respond to this innate biological preference as they embody certain principles of form.

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31 Darwin, C. (1958). The origin of species. Amherst, NY: Prometheus.

32 According to the Darwin's (1958) natural selection theory, individuals which are better suited to the environment will survive. Thus their well being is not a matter of preference (as sustained in environmental psycology theories), either a question of adaptation.

COHERENT VS INCOHERENT

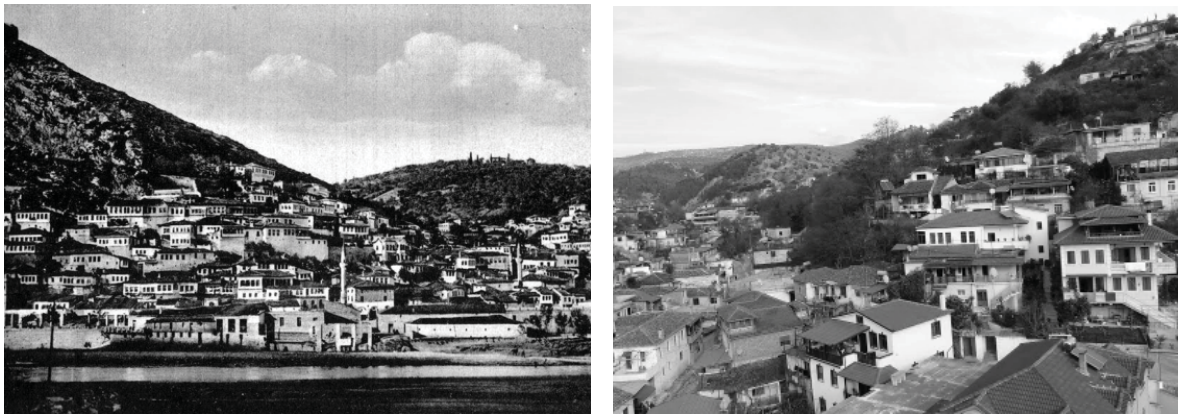

Fig. 11 Coherent vs incoherent image: a) Magalem medieval neighborhood, Berat, Albania (source: Postcard, https://www.shqiperia.com/Berati-i-shek.XX-energjia--dhe-topograf a-e-qytetit-te-gurte.29113/), vs Recent developments, Berat, Albania (source: author's photo)

LEGIBILITY AND ORIENTATION VS DISORIENTATION

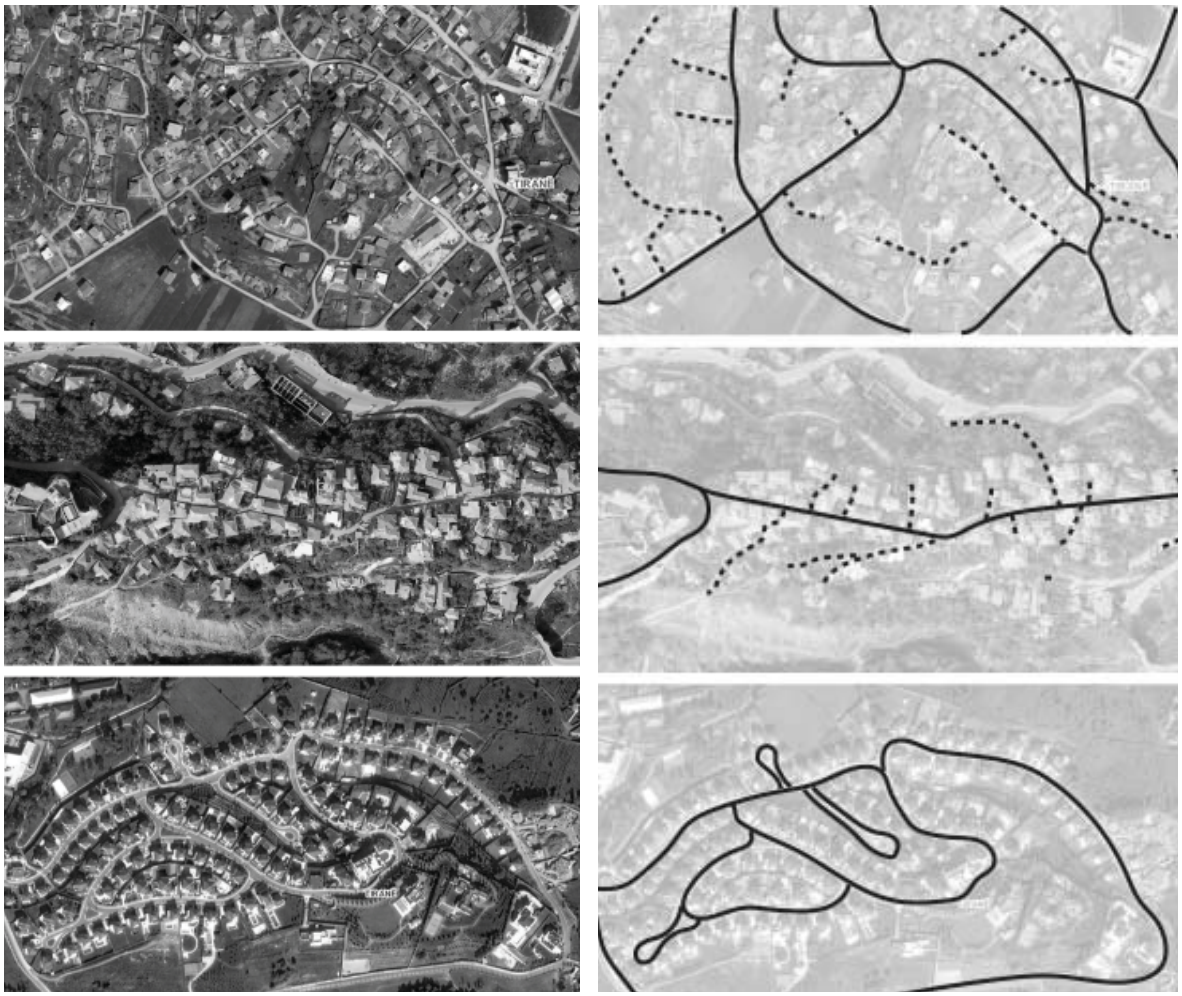

Fig. 12 Legibility and orientation vs disorientation: a) Domje, Kamëz caotic urban pattern; b) Pllakë Gjirokastra, organic urban pattern; c) Rolling Hills Vilas, Tirana suburbs, highly regular but still disoriented urban pattern. (source: author's)

LEGIBILITY AND ORIENTATION VS DISORIENTATION

Fig. 13 Legibility and orientation vs disorientation in the built environment image: a) Domje, Kamëz caotic urban image; (source: photos by the author) b) Partizani (Teqe) neighborhood Gjirokastra, presence of landmarks and recognizable objects as visual reference; (source: photos are made by the author) c) Rolling Hills Vilas, Tirana suburbs, identical repetition of buildings, lack of landmarks and recognizable objects. (source: http://albaelettrica.al/rolling-hills/)

COMPLEXITY LEVEL

Fig. 14 Complexity level: high, moderate, low: a) The Medina of Maroc, Maroc; b) Spira, Germany; c) Plan Cerda, Barcelona, Spain. (source: google earth orthophoto, 2016)

LEVELS OF MYSTERY

Fig. 15 Levels of Mystery: a. Alger casba road view: high level; (source: http://alger-16000.sky-rock.com/photo.html?id_article=179862263&id_article_media=-1) b. Modern neighborhood Durres, Albania (source: http://durreslajm.com/lifestyle/nostalgji-aspekte-t%C3%AB-ndryshme-nga-durr%C3%ABsi-n%C3%AB-vitin-1986): scarce level, c. Magalem road view, Berat; moderate level (source: author's photo)

CONTROL AND REFUGE

Fig. 16 Control and refuge: a) Civic towers as shelters, Gjirokastra; (source: author's photo) b) hilly settlement, control over the territory, Gjirokastra (source: Photo by Lav Lutalica (f ickr)

Fig. 17 Control and refuge due to the alternation of narrow roads with enlargements of private-public space. Berat road views (source: author's photo)

Fig. 18 Control and safety: Ostuni, Italy (source: http://www.helloapulia.com/de/ostuni) vs Gjirokastra (source: author's photo). In Gjirokastra the presence of dense vegetation creates a protective f lter for the view, not allowing to be seen, while Ostuni is more open and uncontrolled.

1.3.4 Historic and cultural dimension of urban landscape

This recognition and definition of the historic and cultural values of landscapes is an important component to safeguard when dealing with historic urban landscapes. According to different authors (Mead 1955, Hofstede 1980) definition, culture represents collective norms, beliefs, and cognitions in individual minds, common within a certain group, a category of people or population. These norms transmitted to the new members of the group, persist over a long time in a certain population, constituting cultural paradigms. The cultural understanding and the memory to communicate and transmit information is highly influenced by the epistemic need to relate and be part of a certain group (Richter, Kruglanski 2004). These constraints influence also, consequently the persistence of cultural artifacts which are usually interrelated on the other side to regional or local factors. In this sense, different cultural groups, usually identified also by geographical areas, are related to distinctive visual and cultural urban landscapes within which they are used to interacting continuously preserving them over time.
Based on this, different cultural theories sustain that cultural factors influence individuals' mind, orienting their preference towards certain built environments, due to the recognition of a known cultural, historical and social context. A particular topological landscape, a typical form of houses or street pattern, a typical urban landscape configuration and urban form, construction material and technique, artistic character or city color can influence people sensorial perception, as part of their cultural environment (Fig. 19; Fig. 20; Fig. 21).

Biophilia theory states that humans have a tendency to bond with what they know well, meaning that familiarity and experience are important drivers of a certain landscape preference (Tuan 1974). This means that the birth and living in a place develops over time a bond with people, as people get to know it over time. Nevertheless, cultural context either physical or symbolical can influence on the recognition of a place character and a consequent positive perception, since our cultural image of the world is limited by our vocabulary and shaped by the language we speak (Whorf 1956). This has led to place attachment, which means that we tend to be more conservative in our choice and prefer what we know, in terms of place characteristics, spatial configuration, social, cultural and physical elements and so on.

In this sense, place attachment is relevant to the study of human's response towards a certain urban landscape. Humanistic geographers defined is as "topophilia" and argue that people attachment with a meaningful space or setting is a tie that fulfills fundamental human needs (Relph 1976, Tuan 1974). In addition, Carmona et al (2003) analyzing the social importance of urban places explain the sense of connectedness to a place in relation to an intellectual and emotional involvement that certain places reward. Moreover, other authors argue that the sense of place in terms of character distinctiveness and place attachment (Jorgensen, Stedman 2001) stimulates the desire to stay in a place, which means that people feel comfortable (psychologically and spiritually) in a certain environment. In addition, the sense of belonging or resonance to a certain place in which people have passed part of their life becomes also an intangible bond that influences their feeling of comfort.

According to Scannell and Gifford (Scannell, Gifford 2010), there are three dimensions of place attachment: human, psychological process and the place itself (Fig. 22) .

Fig. 19 Two distinct cultural built environments and their visual character given by the housing typology a) Cobh, Ireland (source: http://citywallpaperhd.com/fr/photo/374-fond-decran-irlande.html), b) Amsterdam, Netherlands (source: http://www.istr.org/?Amsterdam)

Fig. 20 Two distinct cultural built environments and their visual character related to the buildings typology and urban pattern conf guration a) Santorini Greek island (source: http://www.greekarchitects.gr/site_parts/doc_f les/238.15.11.pdf), b) Casares Andalusia, Spain (source: http://www.greekarchitects.gr/site_parts/doc_f les/238.15.11.pdf)

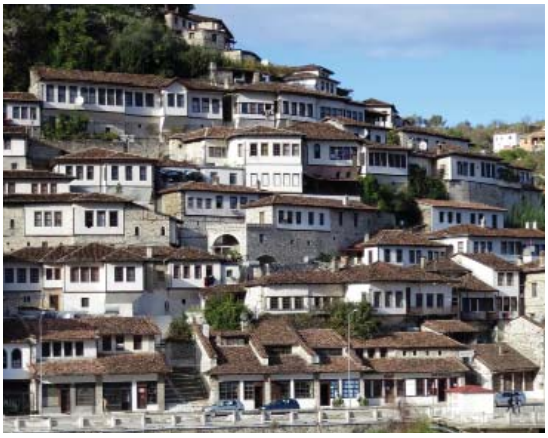

Fig. 21 Two similar cultural built environment of Albanian: a) Berat; (source: http://www.berati-tours.com/_) b) Gjirokastra (source: https://commons.wikimedia.org/wiki/File:Gjirokastra_Albania_2.jpg, author: Diego Galli)

Each of them concerns in different sub-components. For the purpose of this study, it's important to understand the dimensions of place attachment in relation to the collective preferences. Therefore, subcomponents regarding personal attitudes, such as individual experience and personal life experience will not be taken into consideration.

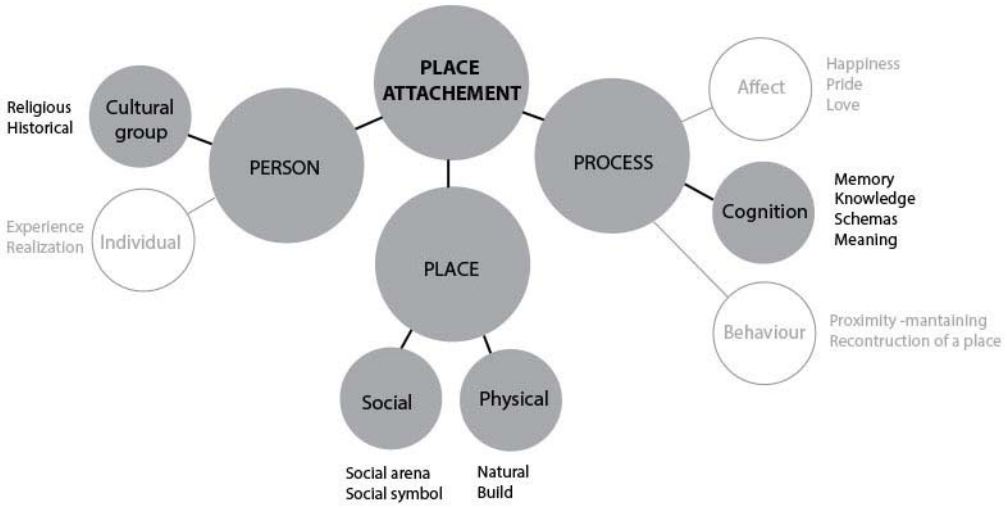

Fig. 22. The tripartite model of place attachment.(Scannell, Gifford 2010); In highlight the components that are relevant for this research.

1. The humans as collective groups are linked to a place through shared historical experiences, religions, rituals, beliefs and symbols, which constitute the collective culture of a certain place.
These stories, legends and rituals that people create when linked to the urban form bind them with a certain place or the city in general, and in time they became a common cultural image of the city. Historical events and characters linked with certain objects or urban space, rituals and religion habits bond with the character of the urban setting or the presence of certain buildings and recognizable symbols recall them familiar images, which move them spiritually. Considering people's spiritual attraction to certain places J.B. Jackson suggested that "*. . . certain localities have an attraction which gives us a certain indef nable sense of well-being and which we want to return to, time and again. So the original notion of ritual, of repeated celebration or reverence, is still inherent in the phrase. It is not a temporary response, for it persists and brings us back, reminding us of previous visits* " (Jackson 1994,p.158). This reflects the power that symbols, rituals, and social memory preserve over time and which can be transmitted through the urban form as the material body of the city image.

2. The psychological process of place attachment concerns with the nature of psychological interaction that occur between people and a certain a place. According to some authors, there are three psychological aspects of place attachment: affect, cognition, and behavior (Jorgensen, Stedman 2001). Affect has to do with subjective love experiences, personal emotional connection to a place, the feeling of pride that derives from it. Because of being subjective, it will not be considered as an influent factor in this research. Behavior as well is more an approach used in psychology to investigate about the place attachment in functional terms but doesn't suggest any measurable or comparative parameter related to cultural factors. Cognition is a process of thinking activated due to the spatial (urban form) perception that

has to do with memories, beliefs, meaning, learning and store of information that individuals associated with place identity connecting it to their self-definition. It is not a consequence of a direct stimulus that comes from the urban environment perception but is more an indirect sensation connected with the knowledge of the past (Downs, Stea 2005,p.10), which gives meaning to a place. In this sense, people draw similarities between themselves and a place at the point that they identify themselves with the distinct characteristics of place, feeling a sense of belonging, as it represents who they are (Scannell, Gifford 2010). In addition, theories on genius loci that emphasizes the unique character of a place, explain also the orientation at a sub-conscientious level to prefere this environment. People tend to be more attached to a landscape with a strong sense of place (Bell 1999, Norberg-Schulz 1980). Moreover, familiarity with a place influences the process of cognition and place attachment as it is linked to the capacity to understand and organize a certain environment.
Social recognition influence also the place attachment as a certain space due to continuous social activities or rituals is recognized as “a place” with a concrete meaning for the community. Thus it becomes a symbol of the collective memory. In this regard, the cognition of a place is materialized both through place identity, character and salient objects that bear collective memory (architecture, historical monuments, urban landscape) and embody also intangible characteristics such as meaning, place recognition and social memory.

3. The place attachment is related also to social and physical aspects of a place. The social gradient of a certain place (which determines place attachment) in the context of this research is related to the facilitation of social interaction that a certain place enables. Similarly, place attachment depends on the how physical structures enable interaction and sense of community. Despite the functional aspects related to the facilitation of social relationships, these spaces due to their physical form as a social node becomes a place of interest, to which people remain attached even if is not used for the same purposes.
In conclusion, taking into account the above theories’ findings, we can summarize, that the main tangible and intangible proprieties of the physical environment (Tab. 3), that determine place attachment, as a result of three main aspects of the cultural environment:
1. The presence of a collective memory;
2. A spatial quality of the urban environment in favor of social interaction;
3. A strong sense of place or place character.
Firstly, the presence of a collective culture can be made explicit through the history, religion, symbols, beliefs, etc. related to the city foundation and transformations

General theory	General factors influencing place preferences	Material and spiritual proprieties of place
Cultural theories	A spiritual collective culture	History
		Religion, symbols, believes
	A sense of place	Collective memory
		Place recognition
		Place character
	Coherence of the physical form and spatial configuration with social compoents	urban environmental degree of facilitation of social interaction, and sense of community (legibility, distinctivness, safety, vitality, access)

Tab. 3 Cultural factors inf uencing place attachment, based on the tripartite model of place attachment.(Scannell, Gifford 2010) . (Source: author’s)

over time. This is part of the spiritual culture. The higher it is, the stronger is the place recognition and attachment.
In Gjirokastra case, for example, part of the intangible collective culture is the famous legend of the princess *Argjiro*[33] which gave rise to the name of the fortress of "*Argjirokastro*" or the character of *Ali Pashë Tepelena*[34], which contributed in transforming the castle and developing to a great extend the city. In addition, with regard to the physical form and character of the city, its extreme slope and stony character as highlighted in I. Kadare novel "A Critique in stone", or the "Sokaku i të marrëve" (Mad's road) have become a symbol of Gjirokastra. These are examples of symbolic and historical features that constitute a common cultural image of the city.

Secondly, the sense of place can be explicated through the collective memory which depends on certain prominent elements of the physical environment; the congruence of the physical environment with cultural and social aspects and the meaning of a place; the presence of a strong urban landscape character. These characteristics are both spiritual and material.
Referring again to the Gjirokastra example, important houses such as "Babaramo", "Skenduli" etc., public buildings such as the mosque, the churches, the hammam, etc. have contributed to the formation of the collective memory as prominent elements of the urban configuration. Moreover, the presence of black and white local stone which is the lightmotive of the city (as roads, houses and even roofs are made of stone), has defined a dominant character of the city, describing also its identity. This was highlighted and have been in large scale recognized, partly due to well-known literature novels[35], movies[36] that used the city as location , and paintings[37] of well-known authors .

Finally, the coherence of the physical form and spatial configuration that lead to place attachment is related also to the degree of facilitation of the social interaction considering the importance of social component in "place" formation. Accordingly, social interaction and as conseguence place attachement is highly influenced by the physical form attributes such as legibility, distinctivness, safety, vitality and access. Thus, the presence of intermediate private-public spaces (a hierarchical system of space), the integration of panoramic points in the urban pattern, the existens of a net of positive spaces in the city (which creates vitality), enable control and facilitates the social activities which gave rise to the sense of community and place attachement.

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33 According to legend, during the final siege of the city by the Ottomans, Princess Argjiro, the sister of the city's ruler jumped from the walls of the castle together with her son not to fall alive into enemy hands. From here came the name "Argjiro castle". From: "*Një histori e shkurtër e Gjirokastrës [A short history of Gjirokastër]*" http://www.gjirokastra.org/albanian/al_sublinks/per_gjirokastren/mbi_gjirokastren_historia.html (Retrieved 07.09.2017)

34 Ali Pasha (c. 1740-1822) was the governor of the weastern Rumelia, the Ottoman Empire's European territory known also as the Pashalik of Yanina in which Gjirokastra was an important centre. He played an important role in Gjirokastra castle extension and in the development of the city structure outside the fortress. (Godo, Sabri, *Ali Pashe Tepelena*, Shtëpia botuese Dudaj, Tiranë 2003).

35 In Ismail Kadare novels: "*Gjenerali i ushtrisë së vdekur", "Kronikë në gur", "Çështje të marrëzisë*" .

36 such as: "*Përrallë nga e kaluara*" by Dhimitër Anagnosti; "*Pranverë në Gjirokastër*" (1978) by Muharrem Fejzo; "*Gurët e shtëpisë time*" 1985 by Dhimitër Anagnosti, etc.

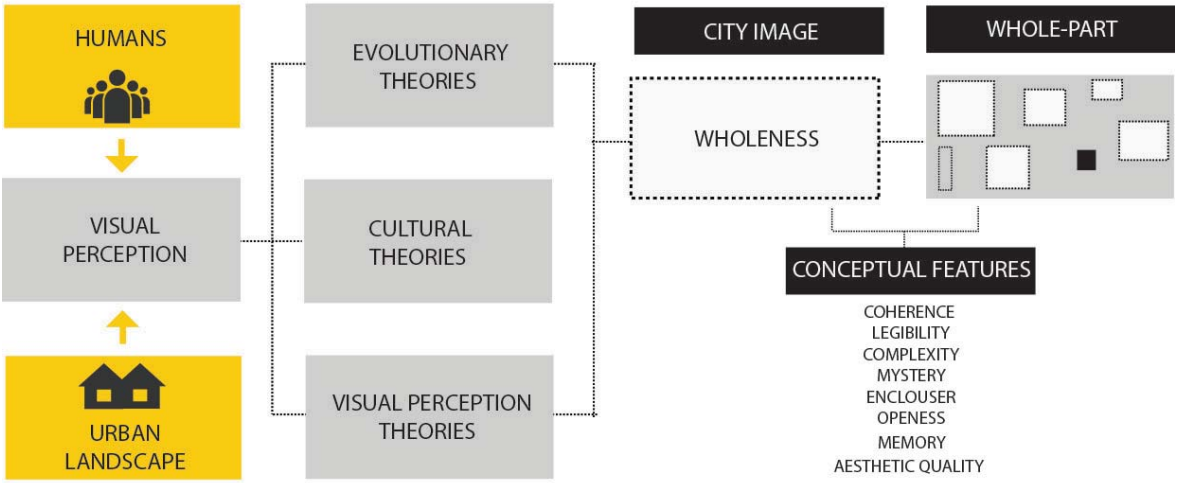
37 such as: "Gjirokastra I", "The Town without Childhood", and other Shpend Bengu Gjirokastra series, (source: http://www.albanianarts.com/aart/artists_preview.php?id=0000000950&ticket=aWQwMDAwMDAwOTUw); Gjirokastra lithografies of Edward Lear, Thomas Allon, etc.

1.3.5 Conclusive remarks

In trying to define a new sub-component of urban development sustainability related on one hand, to the quality of the urban landscape as it is visually perceived by and on the other hand on the positive effect that its image can have on people, it was important to understand that human mental processes of visual perception compiled into three main theories [38] is seen as a holistic activity in which the single parts are intimately interconnected and explicable only by reference to the whole (Tab. 4). Both of them insist on an idea of ordered wholeness as a guide to a qualitative urban landscape which reflects on the goodness of people living the city.
The different perspectives proposed a series of proprieties and physical ways of organization of urban landscape that brings back to wholeness by considering various patterns of relationship between the single parts.
The two main Evolutionary theories[39] affirm that stimulant visual landscapes, in order to respond do innate biological needs, have to be coherent, legible, offer complexity and mystery at a moderate level, as well as a contrasting visual control and the possibility to be hidden or have visual control ever the territory. This concept of wholeness can be fulfilled only if there is an interconnection between parts that reflect this idea of wholeness at different scales.
Cultural theories, as well, sustain that preferable urban landscapes are those in which people can identify visually a known historical, cultural and social context, which creates them a sense of belonging or with which they enter a resonance.
The collective memory of a place is recalled, as a mental intercourse of monuments or primarily historical and collective objects or places. The single elements put together as a whole constitute city's predominant historical image.
In addition, historical experiences, religions, rituals, beliefs, and symbols recalled through certain objects or places that contribute to the formation of the character of a place, reconduct to a collective culture idea, that characterizes the image of the city in its wholeness.
Social intercourse and physical aspects of a place that enable this activity, such as public-private nodes, places of interest etc. can contribute also in constituting the

38 Refering to te previously discussed: Evolutionary theories; Cultural theories; Visual theory of perception

39 Referring to the Kaplan and Kaplan's theory of processing information and Jay Appleton theory of prospect-refuge



Tab. 4 Conceptual features deriving from visual perception environmental theories that describe wholeness from part-whole relationship. (source: author's)

image of the city as an aggregation of separate places into a continuum and unique idea.
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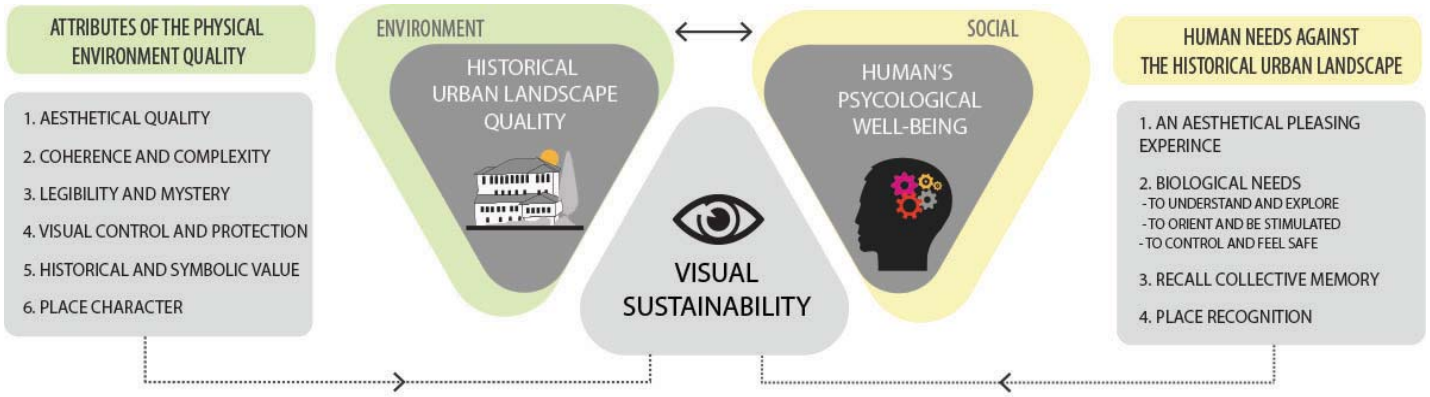
Social intercourse and physical aspects of place that enable this activities, such as public-private nodes, places of interest etc. can contribute also in constituting the image of the city as an aggregation of separate places into a continuum and unique idea.
The visual theory of perception is also focused on describing organization principles of objects or visual landscapes that constitute wholeness. Similarly, in this view, under visual perception, the city image is analyzed in its whole-part relationships considering the visual frame as a structure made of elements, which in human's mind are related to each other according to defined grouping principles such as: proximity, similarity, symmetry, closer, continuity, common fate, good form, common fate, figure-ground etc. Based on these visual intercourses between the single parts is possible to compose and distinguish forms and objects that are relevant to the view and became figures or good shapes.
These elements describe the aesthetical quality and order of urban form starting from objective organization principles. Thus, the various gestalt principles will serve as tools to identify prominent, recognizable figures and space relations, that constitute wholeness and have an aesthetic valence.
In conclusion, urban landscape that lead to human's preferences, is characterized by wholeness in term visual organization and mental structure. Both of them are revealed through part-whole relationships.



Tab. 5 Visual sustainability as a result of interaction between humans and environment. Environments attributes and human needs for a visual sustainable historic urban landscape (source: author's)

1.4 HISTORIC URBAN LANDSCAPE "VISUAL SUSTAINABILITY"

"Sustainability is about enjoyment"[40]
Richard Rogers

1.4.1 General framework of visual sustainability

In the previous sections, tried to set the concept of visual sustainability in relation to the three spheres of sustainability, by positioning it in-between "Social" and "Environment" aspects of sustainability as it directly linked with human – environment interaction. In this sense, visual sustainability refers to the visual quality of urban landscape which is reflected than to human well-being. (Tab. 5)
Since antiquity, in fact, visual sustainability, although not explicitly, has been taken in consideration when building cities. The same Aristoteles when arguing about the principles of construction of the city sustained that the city should be built in a way to guarantee and transmit a sense of safety and happiness. These feelings reflect a positive state of mind affecting human well-being. Later, architect Amos Rapoport, in his studies on human aspect of urban form, examined the way people perceive the city, the effects of urban forms on people, and the role of images and sustained that cities should be designed to meet people's environmental needs and preferences (Rapoport (1977 ,p.48)). Therefore, we can claim that if we want to respond to human satisfaction we need to shape our environment in order to meet these needs.

The previously discussed "Environmental psychology" theories [41] highlighted a series of attributes of the environment in relation to human visual perception and mental satisfaction.
-An aesthetical quality of the urban landscape. The aesthetic quality that is materialized in the urban form concerns psychologically people more than any other urban quality. It refers to the pleasing combination, composition, and organization of urban elements according to visual perception laws generating a good form. Moreover, it refers to an idea of wholeness suggesting a visual unity of the perceived image.
-Visual coherence. Visual coherence has to do with human's innate ability to organize the visual frame (image of the city) as a unified whole, seeking out the simplest form that integrates the various parts. This grouping principles according to Gestalt theory of visual perception is reinforced by repetition, similarity or resemblance, proximity, common enclosure or common background, same orientation or alignment, homogeneity of textures or materials, contrast, gradation, hierarchy, etc. Visual coherence creates wholeness. Thus, it enhances the aesthetic quality of the urban landscape.
-Visual complexity. Visual complexity is related to a human need to be simulated visually to explore the urban landscape, looking for details at different scales.

40 Part of the Annual Lecture delivered at the Harvard Center for Green Buildings and Cities (HCGBC) by architect Richard Rogers on 18th of October, 2016. In this occasion the Pritzker Prize-winning architect focused his talk on approaching sustainability in relation to the interactions between buildings and inhabitants. In addition, I would like to bring to your attention one more expression from his lecture: - "I'm talking less about the technology of sustainability, but rather the philosophy of sustainability," Rogers said. "The humanist element of sustainability." (source: http://www.gsd.harvard.edu/2016/11/richard-rogers-delivers-second-annual-harvard-center-for-green-buildings-and-cities-lecture/)

41 Evolutionary theories(e.g., Appleton, 1975a, 1975b, 1982 and 1987; Kaplan, 1987; Kaplan & Kaplan, 1989); Cultural theories;(Lowenthal 1979, Mirmoghtadaee 2005, Norberg-Schulz 1980, O'Donnell 2008); Visual theory of perception or Gestalt theories of visual organization ((Wertheimer 1923, Arnheim 1974a, Köhler 1947, Koffka 1935))

Accordingly, it can be measured by the level of variations and interpretations offered within the overall coherence of a system, as by contrast of order complexity can be put into evidence easily.

-Visual legibility. The need for legibility and clear understanding of the urban environments has to do with the capacity to map mentally urban structure in order to understand, envision and to orient easily through it. In this sense urban landscape, needs to offer a clear structure which enables a sense of orientation and establishes a harmonious relationship between people and the city.

- Visual stimulation (or mystery). In their relation with the environment, humans need to be urged by the environment to discover and unhidden it. The desire to discover is related to visually hidden elements. In this sense visual contrast between open and hidden perspectives, direct and indirect vistas, partial transparency can stimulate the desire to discover and hence making a more attractive environment.

-Visual control and protection. In relation to the environmental characteristics, humans seek to have control over the built environment in terms of visibility, but also to feel protected and secure. Thus, people prefer an urban form that enables them to observe without being seen. In this regard, urban landscape perception is characterized by open–closed dialectics of space.

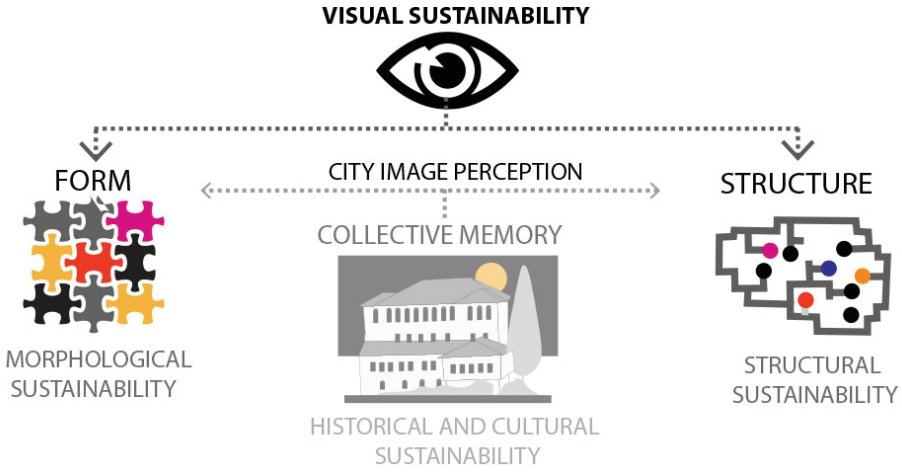
- Historic and symbolic values embodied in urban form. Collective memory bound people to a certain place through the urban artifacts, identifying them in terms of an objects or places that represent a common historical, cultural background and symbolic values that characterize certain cultural groups. In fact, objects or places earns meaning due to significant physical elements, historical events or figures, local rituals, symbols and traditions that are directly linked to the urban artifact as a tangible heritage. By identifying visually what recalls a collective memory which guides the process of remembering, people are more willing to prefer that urban environment.

-Place character. Human preference for a certain place is related to the character of the urban form, not only as a mean of self-recognition but as elements influencing the sense of belonging to a particular cultural group, and the feeling of proud about it. Place character serves also to distinguish a certain urban landscape from another, strengthening uniqueness. In this sense, the peculiarities and characterizing design elements or spatial elements of a certain urban landscape are those which constitute its character.

These general attributes that determine a sustainable urban landscape by guarantee human psychological well-being can be translated further into a series of objective attributes of the urban environment that accomplish humans need. Both of these criteria allow us to defined and measure visual sustainability. Nevertheless, it is important to further articulate and categorize the general attributes of the urban environment in order to understand specific parameters of evaluation of the urban landscape and orient further analyses of urban design theories. In this view, the visual perception of the urban landscape is read in the:

1. Morphological aspect, by analyzing exploring urban form and its aesthetic quality through the perceptual process that is linked to the innate capacity of the human mind to organize and compose visual elements into simple figures.
2. Structural aspects of the perceptual process dictated by evolutionary (or biological) reasons reveal a dynamic interaction with urban landscape, which can be understood by considering a structural idea of the city as a whole made up of serial dynamic vision of urban landscape.

Both of these aspects are also linked to a historical and cultural image of the city since the city as an artifact is the material testimony of collective memory and place character. (Tab. 6)
These three components constitute the dimensions of visual sustainability in relation to the historic urban landscape assessment. Each of them includes human's parameters of perception and environmental general parameters that responds to these needs. Below, we will try to better understand these three dimensions of urban visual sustainability, with the intent to prepare the ground on which visual theories of design can lead to the definition of concrete parameters, tools and instruments to analyses and evaluate the city image.



Tab. 6 Components of visual sustainability deriving from various aspects of the historical urban landscape visual perception such as: form perception, structural image of urban space, cultural and historical image of urban landscape (source: author's)

1.4.2 The concept of visual sustainability

A visually pleasing experience is the one that provides a stimulant urban structure, a pleasurable symbolic and cultural association and an aesthetical image of the urban landscape. In this sense, visual sustainability is seen as the ability to sustain and experience urban landscape over a long time in a positive psychological mood, because of the visual unity and harmony of the city image and the positive feeling of well-being transmitted, the attachment to the place and the continuous stimulant experiences that its particular spatial qualities offer to the sight. Human beings are affected psychologically by the characteristics of the urban environment because of perception processes that happen in their mind. Perceived images in fact, (through which are filtered the character of urban form) influences our senses, emotions, our attitude towards the environment and our general well-being.
In order to explore both human psychological aspects and physical urban landscape attributes of visual sustainability and get to define it in a more exhaustive way, first, it's important to retrace the different aspects of city image perception, since it has a multifaceted nature and cannot be defined rigidly. Hereby, we will try to understand two aspects of analyzing the city image in relation to the nature of the perceived processes suggested by the previously discussed Environmental psychology theories.

Morphological aspect
The Morphological aspect of the city image refers the study of the urban form. Mor-

phological studies, in this case, are useful to understand the aesthetic quality of the city image as the way various component of the visual frame such as architectural objects or urban space are set together to manifest a coherent urban form, vital urban patterns and pleasing visual images of the urban fabric as a whole. The city image is directly related to a mental perceptual process of form organization, as it depends on our picture of the world, and the way the physical environment is interpreted through it. With this regard, visual theories of perception help us to understand the way the urban form is figured out through aggregation, organization and simplification process in mind, and to extrapolate spatial patterns characterizing urban environment, which result particularly appealing to the view. Hence, the gestalt theory of visual organization which considers aesthetic awareness as an intuitive mental process on one hand, and on the other hand, theories of urban design related to urban landscape quality, mutually contribute to the objective definition of urban patterns that describe the way the various components of the city are combined together to constitute urban form as a whole. In fact, through Gestalt theory of visual perception it's possible to understand the relationship between the elements of the visual array and argue about:

1. The principles of relationship between the single entities;
2. Their organization as a whole.

Base on this whole-part relationship within the city structure, different theories of architecture and urban design needs to be addressed in order to define objectively the harmonic relationships between the single elements and the whole image of the city which constitutes the visual aesthetical quality of the perceived image.
Despite, the pure aesthetical aspect of urban form, culture plays also an important role in urban landscape preference. In fact, the cultural image concern of the social and cultural connection people have with a place, or build up about it; the projected character of a place, a genius locus (Norberg-Schulz 1980). As a cultural expression in which are embodied local values, the meaning of place, beliefs, a ritual which constitute a sense of place and defines the character of the city image, it becomes a primary element to put into evidence when studying urban form. In fact, a strong character of urban form or " architecture of the city" as used by Aldo Rossi (1982), enable the creation of a sense of place (genius loci) and collective memory which on the other hand , plays an important role in storing stimulus information and contributing in the preferential chooses.

Structural aspects
The structural quality of the mental image of the city has to do with the level of organization of the city in terms of coherence, legibility and orientation, complexity and exploration stimulus as well as alternation of visual control over the space and the possibility to provide protection. First of all, being influenced by biological factors such as the innate ability to survive, people need to create a brief idea or an organization concept of their environment in order to easily read and be familiar with it, have control over it, but at the same time, maintain a certain level of curiosity, to further explore it and be surprised. Accordingly, the psychological image that they preserve, is not associated with visual aesthetical attributes, rather than to structural and organizational patterns. It can be considered as a concept or more explicitly, a structuration idea in mind, which is the result of a synthesis of various dominant elements, or visual characterizing element of the city image. This mental image is

what occurs behind the eye and has to do with the way physical reality is conceived and mapped in people's mind, the idea of what it transmits. In this sense, the mental image is not a direct representation of what is seen, but an interpretation, simplification, and schematization of the physical reality.Kennet Boulding (1961) suggested in fact, the direct connection of mental images with memory and imagination, which helps to codify and order the endlessly complex world of human experience (Downing 1992, p. 441). Gestalt rules suggested that the fragmented images of the city retained in memory contribute in building an abstraction of reality. The level of abstraction which tends to be a concept or an idea determines the degree of legibility of the city on one hand, and on the other, the hidden image (or the part to be explored), enabled in certain borders and rules of urban structure, which create a safer framework for exploration.

The structural image of the city represents a mental interpretative mode of associated things, collecting elements which for some reason belong together in a network. It represents a collection of organized things or combination single entities intimately connected in many scales that constitute a wholeness, due to constitutive rule that governs the relationship between them, and the way they influence each other.

This structural relation between parts and their relation to the whole has to do mostly with a high level of abstraction, reducing the form to an idea, concept, or pattern that puts the single parts together, without considering a concrete shape. Abstraction, in this case, can be built upon a structured idea which can facilitate people navigation through space. The clarity of the spatial organization of the city is very important for people at the psychological level because it creates a safety feeling exploring the city and provides a clear mental map of the spatial character of the city orienting them to a variety of positive experiences and spaces that echo the psychic dimensions of interiority.

Consequently, urban environment can be perceived as a positive, preferable and stimulating space. With this regard, in urban design field, Kevin Lynch (1960) was one of the first architects who deal with urban perception of the physical environment sustaining that "[…] the generalized mental picture of the exterior physical world that is held by an individual. The image is both the product of immediate sensation and of the memory of past experience, and it is used to interpret information and to guide action" (1960,p.4). In this sense Lynch sees mental images as "organized structures of recognition and relationship" (Lynch 1976, p.112-113). Based on this definition, the structural quality of the city image can be defined in relation to the degree of order and orientation offered by the urban structure. Moreover, as highlighted by the evolutionary theories, humans seem emotionally involved, prefer and feel better in an environment that remains them unconsciously their first habitat. With this regard, the presence of organic settings, from the social-psychological perspective is an important component of the people quality of life, impacting them positively by reducing the level of stress and affecting positively their health and well-being. In addition, the structural quality of the city is determined also on the idea of organic contrasting spaces that offer an alternation between visibility and protection.

Referring to the structural aspects of the city image perception, theories of urban design that deal with legibility, orientation etc. of the city responding to the above mentioned human needs, will be further articulated in terms of objective parameters that impact the positive structural image of the city.

In conclusion, the study of urban morphology and structural aspects of the urban landscape by considering Environmental Psychology theories can lead to a deeper understanding of visual sustainable urban patterns and structural relations between

them that constitute wholeness. Structural aspects of the city image perception that respond to the previously mentioned human needs, will be further articulated in terms of objective parameters based on a theoretical background on visual aspects of the urban landscape. Lastly, based on the objective parameter of a visual aesthetical historical city image, we aim to undestand and represent the positive experience of urban landscape perception. Hence, their proper use cab have an important role in stimulating human senses and influencing human's well-being.

CHAPTER 2
THEORETICAL BACKGROUND.
PART A. VISUAL PERCEPTION IN URBAN DESIGN THEORY

Brief: *Part A of Chapter 2 attempt to understand and discuss different urban design theories concerning visual aspects of urban form perception, with the aim to def ne an adequate method of analyses that explains the synthesis of the historical urban landscape. As suggested by Cuthbert (2006), an visually aesthetic and plWeasing experience is one that provides pleasurable sensory experiences related to the sight, a pleasing perceptual structure, in terms of mental map and pleasurable symbolic associations related to the cultural hints. Based on this, design constants that costitute the historic city image will be analysed considering three main theories and approaches: 1. Visual complexity theories analysed starting from a "Townscape" approach iniciated by Camillo Sitte to the method of analyses proposed by his followers and in particular by Gordon Cullen, up to Christoper Alexander's theory of Wholeness and Center and his attemt to analyse and def ne structural and the geometrical features in things which transmit visually a quality of life; 2. Kevin Lynch approach to def ne the legibility and imageablity of the city by identif ng primarly structural elements. 3. These theories are supported also by the Aldo Rossi and Christian Norberg-Schulz urban theories as the urban features proposed in those theories represent the physical characteristics of the historical city which build up the physical dimention of the genius loci, collective memory and place attachment. Base on this, a wide range of urban landscape features will be mentioned costituting the bases for different historic urban landscape analyses.*

2.1 THE AESTHETIC QUALITY OF THE HISTORIC URBAN LANDSCAPE

"Man can live without science, he can live without bread, but without beauty he could no longer live, because there would no longer be anything to do to the world. The whole secret is here, the whole of history is here." [42]

Fëdor Dostoevskij

He who owned the beauty of an ancient city, is unlikely to deny the strong inf uence that the outdoor environment causes on the human soul.

Camillo Sitte.

2.1.1 Introduction

A pleasing experience related to the city perception is one of the most important qualities of the urban environment that impact people, referring to the positive effects that image can have on human soul and well-being. But, what makes a city so appealing and appreciated from the visual perspective? Why traditional cities or historical cities in most of the cases result more pleasing to the view than modern ones?

Since antiquity, in fact, this element of appealing and appreciation of the city was considered as crucial in the treatises principles. Aristoteles for instance, when argues about the principles of construction of the city sustained that the city should be built in a way to guarantee and transmit safety and happiness. This atmosphere is evident in the traditional cities, in which monuments, residential buildings, squares and roads make up together a harmonious ensemble conceived as a whole. Thus, one of the main characteristics of its image as a whole which forms an ensemble, is

42 quoting from the novel, "Demons"

that the single entities, or it's small components are interrelated with each other at different scales constituting a formal urban cont inuity. This mean a coherent urban image, not only horizontally, as a formal continuity of architecture and space that lead to the construction of the urban landscape, but also vertically from small scale to the large scale of the city, considering also a temporal dimension which has to do the continuity and persistence over time of the traditional architecture of the city as an expression and representation of local culture, identity and character.

Referring to the traditional cities, Camillo Sitte states that (1889, 1945) they embody and transmit a sense of nostalgia that remind us of happy times[43]. On a contrary to modern cities, which seem to be more open to external influences, traditional cities, being substantially closed, were the pure expression of the local culture and tradition, hence we perceive them closer to our inner self. Moreover, Sitte in his influential book "The Art of Building Cities" (1889, 1945) argues that this feeling of nostalgia is perceived due to the harmony of the city image and to the fact that they seem to be built with a major regard to art. This art of building discussed by Sitte was not seen only in architectural terms, but was extends to the idea of the city as an arrangement of its single parts with regard to their reciprocal interrelation and moreover we might add, the relation with the natural environment. In this regard, traditional cities seem to have something that recalls the natural environment (e.g. an organic spatial development, a sensitive communication with the earth, a harmonious landscape configuration and an intimate spatial dimension)[44] that makes people feel well, as in their primitive habitat.

Similarly, Bruno Zevi (1957) states that urban experience originates from architecture (considering it as an object to inhabit) and is an extension of architectural spatial experience. When a man builds a wall, he creates at once two spaces: internal space (creating architecture) and external space (contributing in creating the character of the urban landscape) . In this sense architecture is not seen only as an art object per se, but as an element contributing in the spatial and visual configuration of the urban space, constituting the form and image of the urban scene and in wider perspective describing the character of the urban landscape. Aldo Van Eyke[45], described this extension of house to the city and vice versa through the metaphor of the leaf and the tree (Fig. 23) as identified with each other. Furthermore, the image of the city, if conceived as a work of architecture as in the traditional cities, will reflect a coherent and visual harmony of its image, as its parts are interrelated to each other similar to an architecture object in an ensemble, and at the same time contribute in perceiving the image of the urban landscape as a complete whole.

Returning to the traditional cities and their pleasing visual experience related to the urban landscape, the interest on them turned especially with the advent of modern planning, first in terms of picturesque and then in contrast with the repetition and standardization of building imposed by modern planning. In fact, they reflect an organic structure, a repetition without falling into monotony of buildings which is

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43 Camillo Sitte in "City Planning according to Artistic Principles", (1889, 1945, p.141) describes this sense of nostalgia: "Enchanting recollections of travel form part of our most pleasant reveries. Magnificent town views, monuments and public squares, beautiful vistas all parade before our musing eyes, and we savor again the delights of those sublime and graceful things in whose presence we were once so happy".

44 See Zevi, Architecture as Space, p. 30

45 Aldo van Eyck, original text of 1961, presented at the Team 10 meeting (Abbaye de Royaumont, September 1962); the handwritten diagram was prepared for Domus, May 1965. [Aldo van Eyck) Collected articles and other writings, 1947-1998, Vincent Ligtelijn and Francis Strauven, eds., (Amsterdam: SUN, 2008), 443] original text of 1961, presented at the Team 10 meeting (Abbaye de Royaumont, September 1962); the handwritten diagram was prepared for Domus, May 1965. [Aldo van Eyck, Collected articles and other writings, 1947-1998, Vincent Ligtelijn and Francis Strauven, eds., (Amsterdam: SUN, 2008), 443]

Fig. 23 Identif cation of leaf with the tree (source: Aldo van Eyck, Tree is Leaf and Leaf is Tree, 1962)

closer to human psychological needs. Moreover, recent needs to intervene in the residual areas posed in continuity with historical cities in view of a sustainable compact urban form, has raised the necessity to look back to the traditional cities, understand the synthesis of their form and propose it in a new contemporary key, in oder to be guarantee a harmonious continuity of its image as a whole.

In architectural criticism, the popular traditional architecture or historical cities have been historically considered as “a minor architecture” or urban ensembles as “minor settlements”, with a negative accent and contempt, because of being built spontaneously, without an architect who imposes himself in the building or urban conception. Only in the beginning of the XIX century, the term “minor architecture” starts assuming a positive connotation regarding its visual quality as Benedetto Croce in his essay “Folk Poetry and art poetry” (1929, 1952) confronted popular architecture to architecture as “prose to poetry”, contrasting and setting it apart from ordinary constructions which do not awake any emotion related to the visual quality. Moreover, he used the terms “vibrant”, “lively” to define the character of vitality and exiting rhythm in folk poetry. Accordingly, the minor architecture and minor settlements assumed a positive connotation as similarly to the folk poetry they were able to transmit life and dynamicity.

Later, this perceptual quality of life of the traditional settlements was stressed also by an Italian modern architect, Luigi Figini (1949, 1950), which analyzing the natural Mediterranean architecture of Ibiza and Ischia, noticed their lively character, the morality, the logic and the employment of a particular style that fits with the natural landscape. “*A lesson of morality and logic (simplicity, sincerity, modesty, humility, adherence to necessity, renunciation of the superf uous adaptation to human scale, adaptation to local and environmental conditions). A lesson on employment of “intermediary” elements between open air and indoor living such as loggias, terraces, porticoes, pergolas, patios, walled gardens, etc. A lesson of style (anti-decoration, love of smooth surface, and for elementary solutions, the site and framing of buildings in the landscape*”[46]. Apparently, Figini selected and put into evidence single architectural elements which according to him are repeatable over and over and characterize the Mediterranean architecture, but indeed, he identified and employed patterns of relationships, since these elements are seen as intermediary between the internal and external space and are continuously repeated in the urban structure, which creates order out of the complexity of this organic cities.

This patterns of relationship at urban scale, incorporating the “quality of life” (as visual vitality or attribute of vibrancy and livability) of the urban environment which was put into evidence by Croce referring to the popular architecture and further noticed in the

46 Luigi Figini, “Architettura naturale a Ibiza,” Comunità 8, May–June 1950, pp. 40–43

Mediterranean traditional settlements, if developed further, could be turned into an instrument contrary to the mechanical and rigid modernistic urban design approach subordinated by the advanced technology, which has led to an extreme rationalization and buildings in serial production, in favor of a more humanistic landscape approach that is based on the positive effects of visual quality.
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Mediterranean traditional settlements, if developed further, could be turned into an instrument contrary to the mechanical and rigid modernistic urban design approach subordinated by the advanced technology, which has led to an extreme rationalization and buildings in serial production, in favor of a more humanistic landscape approach that is based on the positive effects of visual quality.
Despite these first isolated attempts to draw broadly interest on traditional architecture and to consider it as teaching resource for modern architecture, the first important, influential event was the Bernard Rudofsky’s “Architecture without Architects” exhibition at MoMA, in 1964 and the landscape illustration book “Architecture without Architects”(Rudofsky 1964). In this occasion, Rudofsky openly declared his interest on “primitive”, or the so called popular, rural, anonymous, non-pedigreed architecture and urban settlements formed as a result of their aggregation with an accent to the urban landscape (fig. 24). Moreover, Pietro Belluschi in the occurrence of the exhibition defined them as a common or collective art, that does not emerge from an isolated group of intellectuals or specialist but rather from the spontaneous and continuing activity of the community with a common heritage,

Fig. 24 A view of Vatheia, in the Peloponnesus. The silhouette of the city is the result of the composition of towers’ architecture. (source: Rudofsky 1964, p.62)

acting under community experience (Rudofsky 1964). As a result, these ensembles present a perfect expression of the cultural level of the community which makes the best use of context constrains and potentials responding to social needs and reflecting an ecological regard to urban development. In fact, even their growth and transformation over time is incremental and organic and embodies the genetic code of the existing pieces. This unitary morphological code of historical cities was denoted also by Marco Romano (1993) refering to European cities, by emphasising the role of “collective themes” in the perception of an aesthetic quality, including both the system of buildings and the sequences of public space or squares. In fact, the beauty of the European historic city according to Romano (1993) is related to the beauty of the facade of it’s houses, it’s public builidings and the way they are interconnected forming coherent spatial visual sequences.
With the advent of modernity, the visually pleasing quality of urban environments set out through the coherence was seen with a negative accent at the point to

have been largely refused. The break with the past in fact had to do not only with classicism in architecture or the rejection of architectural styles, but also with the denial of every past tradition. This approach was extended as well in new intervention close to historical cities, in marginal areas, occupied partially by historical builings and having the potential of the same urban and architectural character but still remained uncomplete due to significant historical changes. Wheras on one side, these interventions respond to the new society's demand and to the technological achivements of the time, they were almost regardless about the visual impact on the historical city which is one of the key factors of the sustainability of the historical urban landscape and needs to be safeguarded.

Therefore, this exhibition intended to point up exactly the aesthetic values of the traditional / popular / vernacular ensembles, which suggested an integrated approach in urban design, since architectural objects do not work independently as separate entities, but are conceived as parts which contribute in the construction of the city as a major work of art.

A similar initiative of bringing into evidence the values of the traditional architecture was undertaken also in Italy by architect Giuseppe Pagano who organized together with Guarniero Daniel, an exhibition on "rural architecture" made up of photographic materials, as part of Milano Triennale in 1936. The materials provided for this exhibition were mostly part of his own photographic documentation of Italian rural architecture[47] seen as an ensemble of buildings (fig. 25) and in part of other coeval architects such as Roberto Pane[48] which has best represented Capri (fig.26) traditional architecture. However, on a contrary to Rudovsky who pointed out mainly the purely formal aesthetic values of the traditional architecture and urban settlements, Pagano putted the accent to the simplicity, honesty, clarity and formal logic, which he considers as parameters of beauty. This exhibition can be considered as an attempt to in deep investigation on geometry of buildings, the common vocabulary and the formal logic that puts together the various composing elements of traditional architecture both in static and dynamic visions.

Until then, in Italy, the official academic culture has almost ignored these qualities embodied in the wide repertory of the rural architecture and traditional ensambles. After this exhibition, the most significant critics on the indifference to 'minor' architecture were declared by Bruno Zevi. Revisiting popular architecture in his "*Controstoria dell'architecttura moderna. Dialetti architettonici*", Bruno Zevi (1996) in addition, highlighted their expressive voltage as well as vitality: "*…medieval towns are "organic, alive, modulated by the needs of users, capable to expand; free from any formalistic taboo as well as symmetry, alignment, and perspective's rules*" (Zevi 1993, p.29). In this definition, Zevi tried to objectively define the aesthetic qualities of the historical urban landscape by using concepts such as **symmetry, alignment and capacilty of organic growth**.

In fact, analysing the architecture of traditional historic centres Zevi noted that the apparent formal simplicity, instead of being regular and ordered as in the "classical" architecture, was blend by the surprise and adventure of an apparent disorder: from this marriage relies the unique character, the identity of every single street, and altogether the symphonic complex as a whole. In his view, aesthetical proprieties

47 Giuseppe Pagano, ''Documenti di architettura rurale,'' Casabella 8,no. 95 (1935): 18–25.

48 Roberto Pane, is a Neapolitan scholar in traditional architecture research. He was one of the few to have continued systematically G. Pagano studies of rural architecture and in this occasion has participated in the exhibition organized by him representing Caprese architecture. With this regard he has an extensive bibliography written on this subject: Pane, Roberto. Capri. 1st ed. Napoli: A. Gallina, 1982; Pane, Roberto and Raymond Rosenthal. Sorrento E La Costa. 1st ed. Napoli: Edizione scientifiche italiane, 1955; etc.

Fig. 25 a) View of Martina Franca (Taranto, Italy) with steep-roofed trulli in the foreground. b)View of a typical hamlet of trulli in the countryside surrounding Martina Franca; c), d) Views of expressions of pure geometry in Boscotrecase, at the Vesuvius river fault; (source: photos by Giuseppe Pagano in Giuseppe Pagano, "Documenti di architettura rurale," Casabella 8,no. 95 (1935): pp.18–25)

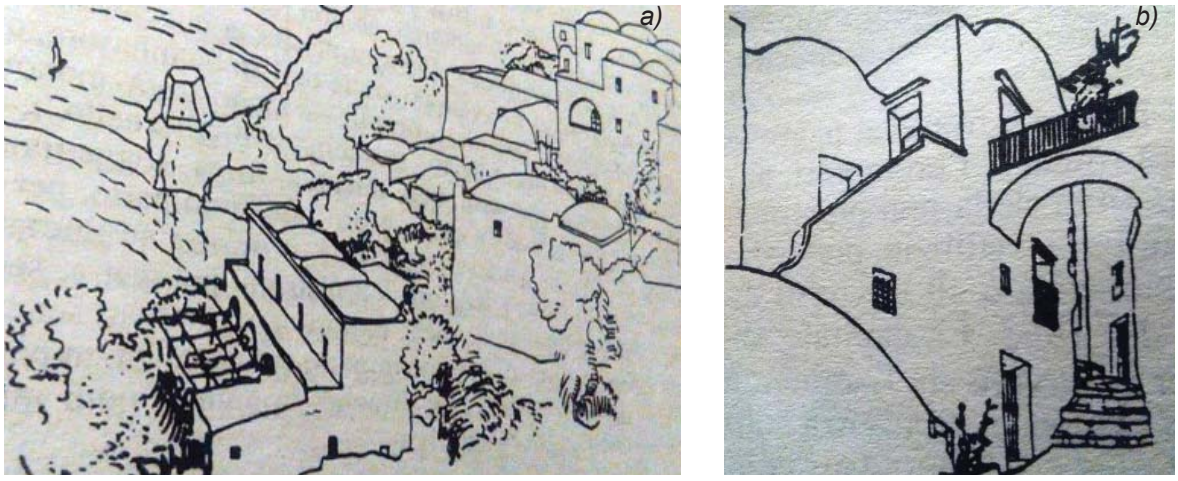

Fig. 26 Roberto Pane sketches: a) houses with vaulted ceiling in slope terrain; b) view from the road Positano, Italy (source: Zevi 1996, pp. 32, 46)

of the urban landscape were not only related to the architecture and its rules of composition, but also to the positivity of urban space and the dynamics of visions which constitute repeatable patterns that form an idea of wholeness. Zevi considers this organic composition of architecture as "*an act of poetry*" (Zevi 1996). In fact, his metaphor of a symphonic composition, perfectly describes not only the large scale urban composition as a whole because of a general compositional line but also the variety of elements in the composition that contribute in its vitality and visual aesthetic quality of the city image. Through this attributes of stability, harmony and coherence of the image, due to the urban compositional as a whole can contribute in achieving human happiness. This was mean by Zevi (1950)considering it as the main mission of architecture.

Nowadays, one of the main problems of historical cities when comes to new interventions in marginal areas, in terms of sustainability, is their visual quality and the way they interact with the existing historical part in order to safeguard the historic city image as a whole. This means that new interventions need to present also, similar to the historic centre in its totality, a visual coherent architecture and urban structure in relation with the historical part, which mean to care on the visual perception quality as a whole, to extend the human dimension character to the margins and to be based on spiritual and psychological needs in view of current community demands. Following a logic of architecture in urban scale which characterizes traditional cities, the new residual areas can guarantee an intercalary coherence and continuity of the historical city image which is closer to the human psychological needs as people feel the city as a big house and need to feel physiological comfort. This concept of dialectic of architecture as a container and as an element contributing in building urban space or urban landscape is seen as a starting point to extend the morphological logic of the historic city in its margins.
On a contrary, modern planning, working separately mainly in functional terms, do not provide a continuity of space and image of the city, as well as certain variation within a general compositional idea, neglecting human's visual psychological needs. This totally different approach (usually merely technical and functional), has created visual separateness (as parts cannot be organized together in a visual and structural whole) in contrast to traditional cities that guaranteed at the same time variability and continuity of urban imagery.
This detachment as in our context[49], has become evident in new developments close to traditional settlements which have not established a visual dialogue with the traditional cities, disturbing the historic landscape. Moreover, new developments present a chaotic image, due to the scarce visual interaction between the single entities composing the build environment, and the lack of visual correspondences with the historic city. In fact, it's impossible for the human mind to put together in a "good form"[50] elements that do not have any correspondence. As the result, the overall image of these cities seem to be distressing the view.
Herein, its important to understand the historic city visual complexity in relation to the aesthetical quality and to define based on observed constants a series of parameters that contribute in the definition of its easthetical quality and can be further usd as tools in the design of objects in the residual area.

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49 Referring to Albanian historical centers (es. Gjirokastra, Berat, Vuno, Dhërmi, etc.), which due to inappropriate interventions in residual areas close to the historical city, risk their historical image as a whole, and their traditional values as declared historic centers.

50 Term used in Gestalt principles of visual organization to define human's tendency to order elements into one simple recognizable form.

2.1.2 Visual complexity and aesthetics of historic city.

The attempt to explain the aesthetic features of the historic city is based on understanding its visual complexity whcih means the way its components and single entities are related to each other constituting a whole. Vitruvius defined the visual harmonic composition of urban parts which fit with each other due to numeric relationship as eurythmia (Vitruvius 2005). On his bases, L.B.Alberti reinforced the idea of harmony and concord of all the parts to form a suitable whole based on the mutual relation between them and the relation as a whole, at the point that " *nothing could be added or taken away or altered except for the worse*" (Alberti 1986, p.131). During the Enlightenment century, with the increase of complexity of the cities and conceiving them as a natural phenomenon imitating nature, Marc-Antoine Laugier[51] proposed a picturesque idea of aesthetic in urban design, related to its visual perception. In fact, he described an anti-perspective character of urban space, with a variety of sequences comparing it to a forest, but insisting in his character as a whole. In fact, the ideal city according to Laugier is considered as "*…a whole... divided into an inf nite number of beautiful, entirely different details so that one hardly ever meets the same objects again, and, wandering from one end to the other, one comes in every quarter across something new, unique, startling, so that there is order and yet a sort of confusion, and everything is in alignment without being monotonous, and a multitude of regular parts brings about a certain impression of*

51 A well-known French theoretician from the 18th century

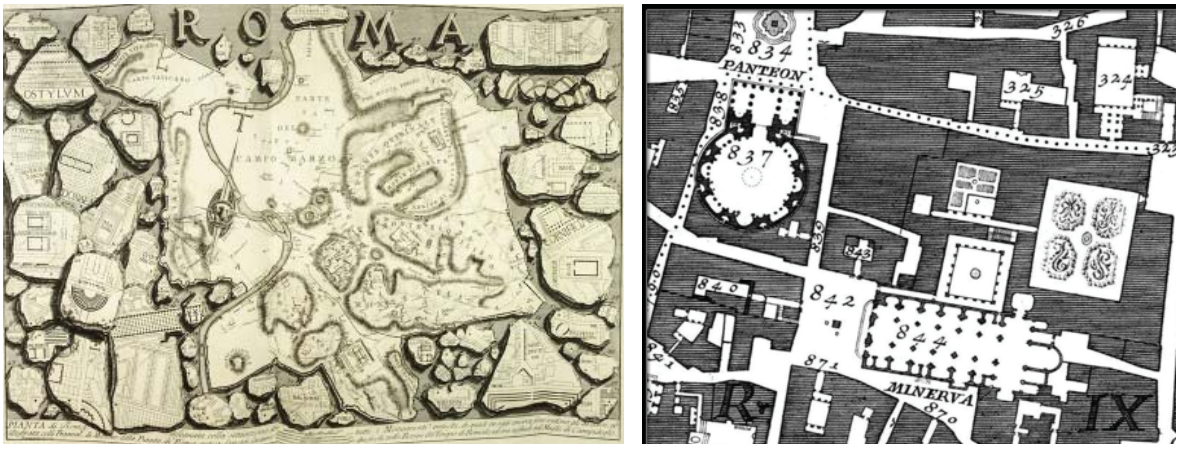


Fig. 27 G.B. Piranesi, Plate II of Antichità romane; Fig. 28 Giambattista Nolli's map of Rome (1748). Pierre Patte, Composite map of rival schemes for the 1748 competition for the Place Louis XV, 1765

irregularity and disorder which suits great cities so well." (Laugier 1977, p.129)[52]
This enthusiasm of imitating the nature, in particular the forest as a metaphor, is materialized in the urban space conception as an alteration of regularity and variety in order to avoid visual monotony, and to offer stimulus. At a first glance, this can be interpreted as a fragmentation of the urban space into different sequences characterized by strong contrast and surprise. Thus the city can be conceived as a composition of different fragments. Accordingly, the design of the city is seen as similar to that of the natural landscape. In this regard Laugier sustains: "*Whoever knows how to design a park well will have no difficulty in tracing the plan for the*

52 Note, however that the text cites takes up ideas Laugier had earlier advanced in his "Essai sur l'Architecture", Paris 1735, pp 258-265, "I*t is no easy to design a city in which a magnif cent ensemble would be divided in an inf nity of beautiful details, all different from each other; in which there would be order, although also a sort of confusion….*"

building of the city according to its given area and situation. There must be squares, crossroads, and streets. There must be regularity and fantasy, relationships and oppositions and casual, unexpected elements that vary the scene; great order in the details, confusion, uproar, and tumult in the whole" (Laugier 1765 pp.312-313). Following this definition, Laugier considering the forest as a model or a metaphor, introduced a literal fragmentation design approach within the city based on the juxtaposition of different fragments. This was recalled also by Piranesi, and put into evidence in his imaginary reconstruction of the Campo Marzio plan in Rome or Plate II of Antichita romane (fig. 27) made of pieces of Forma Urbis. Piranisi aimed to bring to evidence the historical values of Rome in a period of crisis by using this new way of representation of the city evolutionary complexity, **by revealing hidden relationships between the different fragments in time**. By doing so, he highlighted the importance of the different fragments and went further in representing his own vision of Rome by inventing new buildings. Nonetheless, his method resulted as an accumulation of fragments made of important historical monuments and new invented buildings which could barely form a structure as a whole, even though the intent was to urge the viewer to imagine the recomposed whole. In fact, Giambattista Nolli, his master, previously in 1748, recovering the fragment of Forma Urbis has used them **to reveal an idea of entirely of Rome** (fig.28), **where monuments were connected in a continuous spatial system as its can be revealed in his plan representation, that triggers an idea of city as a whole.**
Later, Laugier theory of fragmentation inspired by the nature were modeled and came

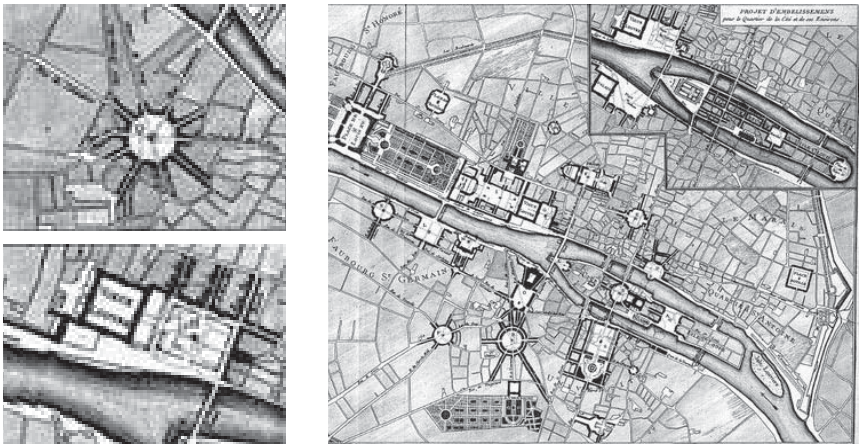


Fig. 29 The city as the sum of positive spaces, Pierre Patte, Proposed general plan of Paris, 1765

into practice best in the Plan Patte for Paris (fig. 29, in which were bought together a series of picturesque squares and axes designed for the embellishment of Paris. They are conceived as fragmented picturesque parts without a clear structure, even though the aim was to revitalize the medieval city by applying a system of disembowelments based on squares as focal points and axes that connect them forming a continuous system. Still, in both examples the intent was to put together in a certain level characteristic elements that describe the urban form as it can be perceived. This new spatial layer seems to be dominant and to describe a "positive" space within the city which transmit the continuity of the image of the city, even though links are lucking and the system is still fragmented.
According to Tafuri (1969), Laugier intent was to hide the existing structure of the city, by considering it in a background level, avoiding to interpret the city as a structure and instead emphasizing new picturesque spaces. Despite the attempt

to introduce nature in the city, the final result was an anti-organic city, which works as fragmented picturesque parts, not a whole landscape, as this parts still are not part of the system. However, these considerations are important if we consider the attempt to reveal the idea of the city as a whole (even in time), with the intent to provide hints for future design interventions.
These concepts of fragmentation and decomposition as a whole were revived further in the theorization of Francesco Milizia which although considered the city as an organic structure, aimed **to find unity in the variety** (Tafuri 1976) of urban episodes, or a coexistence and harmony between different parts. "*The city's plan must be so arranged that the magnif cence of the whole will be subdivided into an inf nity of beautiful details, each so different from the other that one never encounters the same objects, and that, covering it from one end to the other, one always f nds something new, something singular and surprising, in each quarter. Order must reign, but amidst a kind of confusion . . . and this multitude of regular parts must create, in the whole, a certain sense of irregularity and chaos, of the sort that so bef ts great cities"* (Milizia 1785 p. 29)
Due to the visual experience approach, in which collaborate the sight, memory and acknowledgement, the city is seen as a tale, made of different sequences and space experiences through which are reconstruct in mind different images of the city. Although the concept of the city as a body in terms of (harmonic proportions between parts) is overpassed, Milizia still considers unity and the interrelation between parts as measure of beauty (Pavia 1982), recalling in this case the image of the forest (similarly to Laugier) but seeking a different kind of order, which is seen in relation to the new dynamics of the growing city as an organized complexity.

All the above mentions treatise points out two main aspects of aesthetical quality of the city image which recall the idea of a complex whole in which parts are interconnected visually to make it possible:

1. The harmonic relation between the buildings or urban spaces in terms of proportions, numeric relationship between parts, the use of divine geometry which determines the reciprocal position of parts.
2. The correspondence and harmony of an image made of different elements (whether fragments or separate entities) as an outline, overall shape or figure as a whole. This can be achieved by considering the city as a metaphor (for instance: the city as an imitation of the nature or the city as a forest). The metaphor in this case allows to view the city as a whole and to find a general concept that connects all the fragments or entities in a coherent whole, although they can result as very contrasting to each other.

Still these considerations are only partially elaborated in terms of concrete parameters. In the immediate post-war period as a necessity to emphasize the importance of the historical urban landscape character and tradition in contrast to the alternative imposed uniformity of the Modern Movement (De Wolfe 1949) and to try to defined objectively the visual quality of the historic city, emerged a townscape philosophy applied in the urban studies.

In a period when the historical landscape tradition seem to have died under the modern planning guidelines, this philosophy of urban landscape design was bought back to the attention by the work of Camillo Sitte, (1979) City planning according to

artistic principles (1889, 1945) who studied the landscape of historic cities with the aim to provide urban design principles valid for contemporary practices. Sitte was the first who expanded the horizon of aesthetics of urban form, which previously even in the treatise principles has been exclusive domain of architecture. Beyond acknowledging the contribution of beautiful architectures in the urban environment, his innovation was to recognize the idea of urban ensemble as an art form and to deduce some principles that could be applied in modern planning in order to achieve visual quality of traditional ensembles. **The design unity that characterizes traditional ensembles is the key element of visual appealing. Unity happens at different scale: elements composing the urban structure are interrelated visually and together are contributing in reviling an overall image as a whole.** In particular, in his study, Sitte was focused mostly in the small scale urban elements trying to understand the complexity of the city by analyzing its core parts and the way that are connected to the urban fabric. By analyzing the most successful medieval plazas spatial characteristics, he put into evidence the principles that rule their form and creates a whole with the buildings that limit this space. The building on the other hand, was not conceived as a sculptural architectural object, but its façade contributes in the definition of the inside urban square and should be conceive in relation to the logic of public space formation. In this regard, **urbanism** for Sitte was considered **as a science of relationships** (Kostof 1991) and was determined by what people visually perceive walking in the streets. Thus, it is the space which has the primary role in design, rather than the single building architecture.

Hereby, he advocated an organic continuity of space through enclaved squares, curving and irregular streets, rounded corners and unexpected little planted oasis (Kostof 1991) which could provide variety of vistas and significant artistic effects, appealing to human senses both aesthetically and psychologically, in contrast to regular geometries, designed to respond purely to functional requirements (Sitte 1889, 1945). He did so by representing separately a variety of medieval squares in relation to significant buildings or objects that compose them and suggested that architecture composition of every single object should be conceived in relation to the visual perception of the building and to its role in the formation of spatial landscape. Thus it had to be unified in relation to the urban environment image as a whole by the use of simple volumes, axial sequences, certain dimensional proportions between the parts, expedients for the main monument to be position, etc. Hence, concentrating both on this primarily elements of the urban environment (in particular to the medieval square) and their interrelations in view of the small scale of the plaza, he considers this as elements contributing to give continuity to the urban environment and creating an architectural whole at urban scale. The principles of unity and coherence that connect buildings around a public space can be seen as an extension of an architectural oriented approach in urban design, which aim is to create significant internal space (public plazas). Significant monuments approaching public plazas are considered as centralities which orient and attract attention, but create also a dynamic dimension of the space. Sitte illustrated it graphically by shading the ordinary blocks of buildings and putting into evidence the most significant building (usually the cathedral). This representation clearly evidences the relation between the void (the public space) and the built mass. In addition, this figure ground technique that respond to one of the gestalt visual laws, in this particular case points out also the relation of the void with the dominant building (which is further putted into evidence).

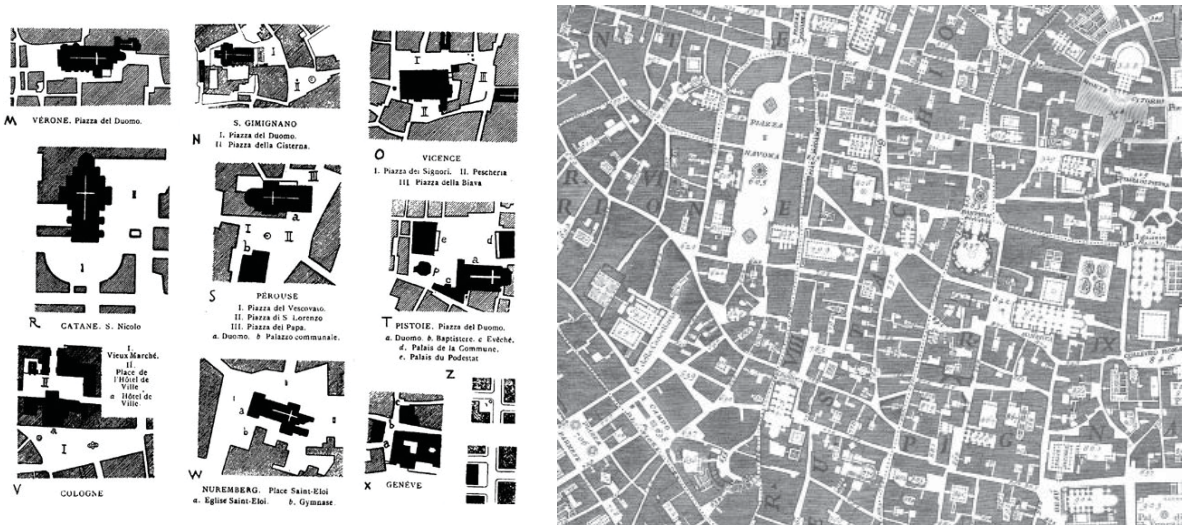


Fig.30 Confrontation between Camilo Sitte, study of plazas, Source: Collins and Collins, 1965;
Fig.31 Giambattista Nolli's map of Rome (1748)

This dialectical relationship between significant buildings and urban space, has been best illustrated in the earlier Giovani Battista Nolli's plan for Rome of 1748. The hidden quality of the urban structure, in this case, was revealed through an urban pattern diagram which links together the most important buildings of Rome and space in a continuity, reflecting a strong contextual interconnection and an overlap of public-private realms, resulting both enclose and open.

While Sitte method of representation was based on the juxtaposition and comparative evaluation of different squares and cities he had visited, the innovative map of Nolli represent the synthesis of the urban space of Rome, by an act of interpreting through the diagram a persistent but hidden character of the urban structure. Nevertheless, both of them used the technique of figure-ground representation (Fig. 30, 31).

Sitte method can provide some more principles regarding to formation of public plazas and urban image formation, similarly to the suggestions of the "Architecture without architects" exhibition by Bernard Rudovsky. His merit is that he extended the architectural concept to the urban space, but still restricted it to the limits of the plaza, considering them as fragmented focal points and entering into a deeper analysis in that scale. In contrast, Nolli map insist in a larger scale concept of space formation that overlook at the city as a whole, avoiding to find principles and rules at the small scale and instead illustrating a sense of order and unity given within the variety of elements and solutions offer by the city.

In order to achieve this multiscale relationship between parts, Nolli used basically the figure-ground technique by opposing space (void) and mass (solid) in a very reductive and easily understandable way. This gestalt approach in fact, make it easier to read figures and shapes. Within the map frame, is possible to explore the character of the small scale urban space, as well as to see how it contributes to overall image of the whole. The open representation of the significant buildings plans makes it easier to perceive a sense of continuity of the space, reduces the complexity of the city to single element that reconnects the idea of a whole.

Accordingly, the perceived result is an integrated spatial continuity of important public buildings and their immediate closely space with the network of external public space connecting them. Through an interpretative act of selection related to their role on public realm, significant buildings were considered as mass that limit the public space or as void that contribute in the extension of urban landscape inside the building. This act of selection and abstraction which is natural to the human mind

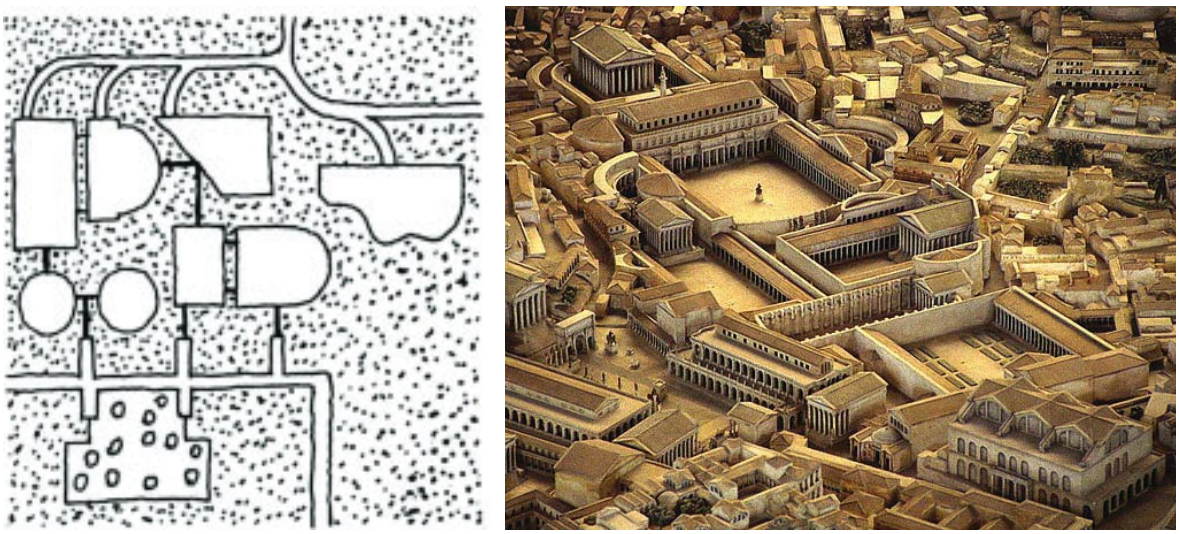


Fig. 32The city-machine: the functional construction of interconnected parts.(Kostof 1991, p.15)
Fig. 33 The Imperial Roman Forum made of the same morphological logic (source: from a scale model kept at the Museum of Roman Civilization in the EUR)

is necessary to analyze complexities of texture in order to put into evidence the relevant elements contributing to the urban image. But in order to achieve this, it is necessary to made an intercalary analysis. In this sense Sitte and Nolli can be seen as complementary methods of representation since we can better understand how the small scale system of relationship between parts is reflected in the overall image of the city.

Sitte's studies were continued and deepen by other author's such as Paul Zucker (1959) in "Town and Square", which introduces other typologies of public squares enriching and further proposing new investigation and design tool with regard to the visible quality of urban square as the dominant element of civic identity. Similar to Sitte, Zucker proposes principles of space formation derived by the study and clasification of relevant examples of squares[53] which although does not have any particular shape, still transmits a positive sense of space.
This study reflects on one side the necessity to analyze, systemize and categorize public space with their own architectural significance (which was partially done also by Sitte), but at the same time when defining group squares, points out the concept of sequences of urban rooms (probably derived by the baroque research on space), that considers this rooms as closely linked in a chain, which is related to human continual perception. In addition, Zucker (1959) introduce the concept of interpenetration, which lead to an overlapping system of relationships between parts and a horizontal combination of the spatial unities. In contrast to a mechanistic or functional connection between the single unities (fig.32) Zucker argues a visual unity between the singles urban rooms as they should be part of the same morphological logic (fig.33).
This concept of continuity related to various spatial entities (or urban rooms as conceived by Zucker) was further developed by Gordon Cullen(1971), in his seminal book "Concise Townscape" , in terms of ***sequential narration of space***. Following the traditional artistic approach in city design, he pointed out a series of physical and visual elements characterizing the artistic quality of the urban scene addressing human-oriented sensitive aspects related to their aesthetics satisfaction.

53 Zucker (1959) in "Town and Square" proposed five types of squares: 1. The closed square, 2. The dominate square which leads to an important building or space; 3. The nuclear square, with a strong element in the center; 4. Grouped space, a sequence of urban rooms linked together; 5. Amorphous space

In his studies, urban landscape vision exceeds the existing concept of visually pleasing static frame through which was perceived the city, by considering human perception as a dynamic experience, in movement, which lead to a “serial vision” or space sequences. Following this new perspective, where movement becomes important for the image perception multiplying the points of view, he defines, draws and analyses a series of urban scenes of different cities experienced personally and named them: such as the enclaves, outdoor rooms, silhouettes as well as space characteristics of the sequences such as ambiguity, visual graduations, gradients, mystery and different contrasting patterns: open space - intimacy, continuity - apparent interruption which reveal the essence of the city beyond the individuality of the single parts. In these examples, the architectural spatial composition achieved by grouping of buildings creates a continuous and coherent whole which is perceived along the walking. Views become at the same time stimulant to the sight to be explored as they offer a variety of vistas characterized by different spatial configurations.

In the urban structure as a whole, the various episodes he denoted were determined by singularities and peculiarities of place related to a particular object, a particular spatial configuration, a particular point of attraction etc., which simulate and please the view step by step. These single episodes constitute the urban landscape character. Nevertheless, being connected to each other in a formal continuity as urban patterns they contribute to the formation of the image of the city as a whole. Accordingly, from the human perspective “*the whole city becomes a plastic experience, a journey through pressures and vacuums, a sequence of exposures and enclosures, of contrast and relief*”(Cullen 1971,p.10). In fact, the visual variety is achieved by the sum of different patterns and the singularity of the urban episodes,

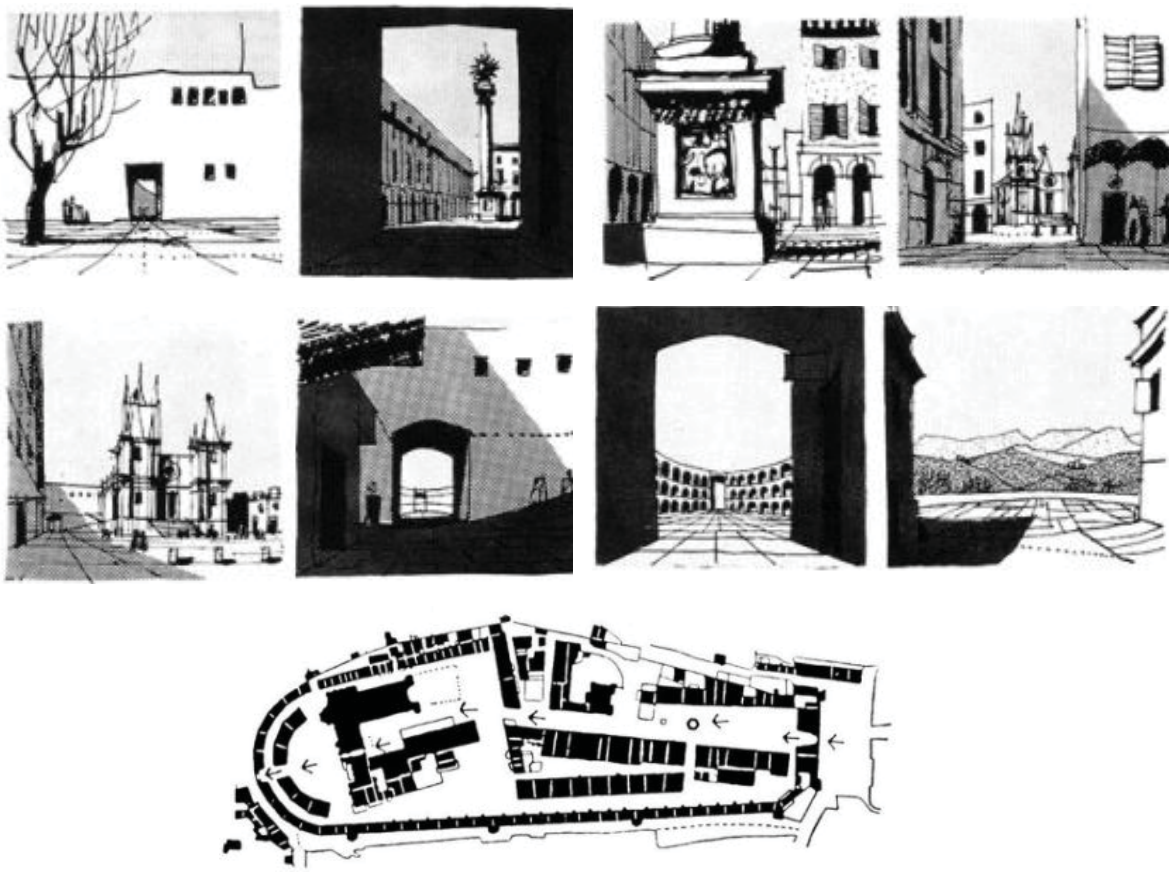
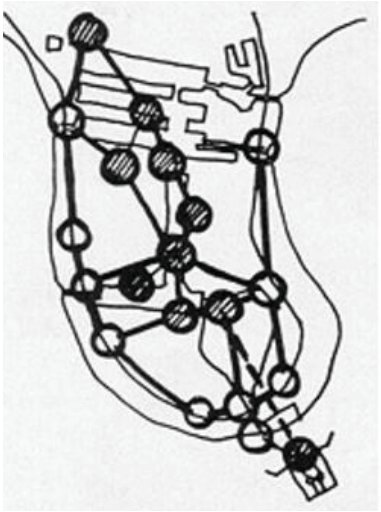


Fig. 34 Gordon Cullen (1971) representation of the townscape through perspective serial visions.

which are linked in a sort of continuous promenade within the urban space, with the intend to evocate aesthetical feelings (fig.34).
These perceived images of human experience were used by Cullen as tools to read and interpret the spatial dimension of the city. On one hand, buildings are grouped to create an architectural composition at the urban level, on the other hand they define a space in which to penetrate and which vision is designate by human perception.



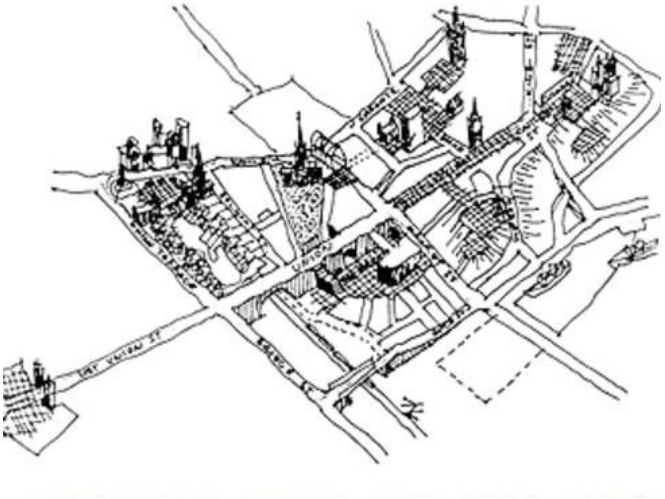


Fig. 35 Network for Isle of Dogs identifying places critical to Cullen's proposed strategy (Price 1994, p.28); Fig. 36 Aberdeen Study showing overall structure as a coherent example (Price 1994, p.29).

Moreover, the use of perspective drawings in architecture and urban design characterized by the use of light and shadow (an interpretation of figure ground technique) as singular graphical technique of representation of the single episodes posed as sequences, Cullen has created an original lexicon and syntaxes of urban perspectives not only for reading and analyzing the urban landscape, but also as a tool for designers. His wide range of drawings and textual narration of the urban scene, represent the character and possible variation of each typical space configuration.
The most interesting attempts for concrete proposal (fig. 35,36) clearly highlight the importance of the single episodes which contribute in the formation of the uniqueness of place, as well as the necessity to include them in a network or make them part of a chain which can provide and guarantee coherence and continuity of the overall structure.
However, although his study is very rich in terms of spatial episodes' description that contribute in creating an urban landscape, it needs to be articulated in terms of repeatable concepts that translated into design principles. Although a synthesis of the urban form is missing, his studies are significant from the theoretical perspective for many reasons"
1. He approaches the city defining principles of visual continuity between the various episodes of the urban scene, by proposing a system of relationship or an urban chain which dominates the image of the city compared to the single parts.
2. In addition, the synthetic graphical illustrations of the single episodes assumed great importance as they represent significant visual urban design concepts related to human perception and wellbeing.
3. Moreover, the techniques of representation of the city image is an attempt to synthetize conceptual images or urban patterns that can be repeated and used as tool in urban design.
Finally, although he did not provide specific codes or models which can be developed or taken as reference in urban design, but merely gave suggestions by illustrat-

ing graphically and analyzing lots of examples, his work was very influential as it represent an attempt to synthetize cities visual complexity.

Since the second half of the 20th century, encouraged also by the "Architecture without architects" exhibition and the research on rural architecture, the spontaneous and heterogeneous urban morphologies characterizing historical cities has been the widely objecting of study and inspiration for alternative modern urban thinkers focused on visual urban design theories and practice.

Christopher Alexander was one of the first modern theoreticians who tried to understand the principles of the city structure in relation to the visual quality of the urban landscape. In this regard, he intuitively realized that there were some structural laws in artifacts such as buildings or urban landscapes (actually, it can be extended to every physical entity) that attribute them a "*quality of life*" which makes them more pleasing to the view than other (Alexander 2002a). Based on this cognitive approach, Alexander tried to objectively define this aesthetics visual quality of artifacts that characterizes living structures and constituted the source of the coherence that is embodied in this objects. In fact, according to Alexander (Alexander 2002b), human building activity creates a physical order in the world. This order is reflected in the visual quality of the built environment. Thus, the most pleasing buildings or urban environments present *"a high degree of life"* and a deep quality of order, which means a particular kind of geometry or a structure that creates a quality of life in the object, which consequently makes it more pleasing to human sight. In fact, he appreciated traditional cities, having a high degree of life embodied in their urban structure.
Mechanistic structures are usually characterized by a high level of organization usually very hierarchical, and specialized, at the point to create separation, as individual parts are usually contained either in a hierarchical logic or totally disjointed. This kind of structure which remained us of modern cities organization resemble an atomic, molecular or crystal model of organization, where the composing elements are usually stable because of a defined interaction between parts. In this regard, modern cities have limited flexibility and possibility to be transformed over time by maintaining their character as a whole. Otherwise, traditional cities organic structure resembles more to an organism or biological species being self-developed and reproduced in their parts but at the same time preserving their character as a whole. This assertion is quite similar to the definition of Leon Battista Alberti on beauty as concinnitas or "*the harmony and concord of all the parts achieved in such a manner that nothing could be added or taken away or altered except for the worse*" (Alberti, 1485). The high level of interaction between the parts made them in fact, part of the whole since every single entity influence the image as a whole. Thus, concinnitas, similarly to the structure was seen as a mechanism of harmonization of the whole.
Consequently, the urban structures that embody the visual quality of life (which moves us emotionally) cannot be represented as a mechanical composition of parts. This mechanistic view of order, makes us miss an essential visual quality, revealing very little about the deep order we perceive and feel intuitively in life-evoking geometry. Therefore, they are not able to provide good urbanism.
Ch. Alexander (1965) in his seminal paper published in 1964, "*The city is not a tree"* used two mental structures to describe the complexity of urban morphology by analyzing the city as a structure made of sets: one based on a high level of organization and rigid hierarchical relationship between parts which was described as

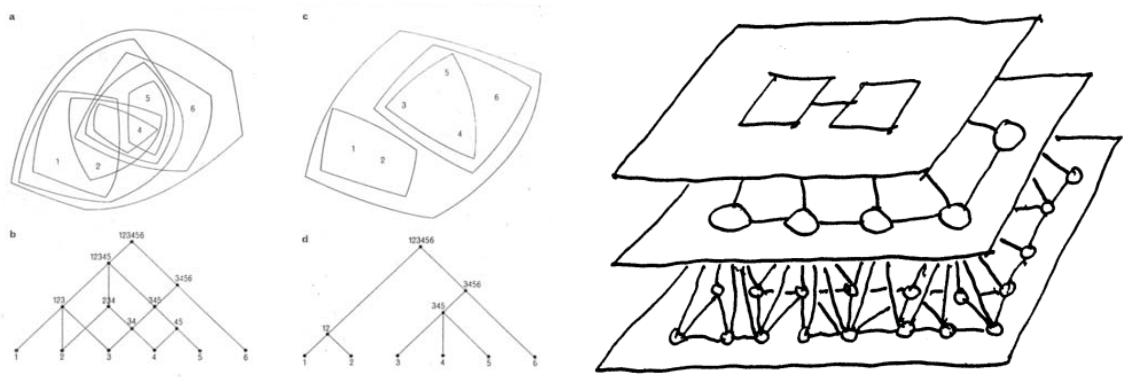


Fig.37 a)Tree structure (Alexander 1965); b) Semi lattice structure (Alexander 1965); Fig. 38 Distribution of inter-connected elements across several scales. Drawing by Nikos A. Salingaros

tree structure (fig.37a) and the other presenting a high level of interaction between the single parts which was called semi-lattice structure (fig. 37b). These different structures that represent different models of generation of the city have great influence in the city image, and the "degree of life" it transmits. The metaphor of the tree structure describes the zoning restrictive approach in modern planning with a high level of hierarchical organization among the urban parts.

In contrast, semi lattice, as in mathematics, constitutes an open structure, where the single parts can have multiple interconnections at different scales, by creating overlapped systems of a relationship between the parts, which enable an organic growth, piece by piece or transformation of the urban fabric, guaranteeing a continuous whole. The semi-lattice structure, in fact, holds an adaptability quality and is able to support heterogeneity, variations and a variety of combinations which attributes a vital character to the traditional urban environment.

Following this, later, Nikos A. Salingaros detailed the organizational laws of urban structure in the "*Theory of the Urban Web"* (Salingaros 1998) proposing a diversification of nodes and an ordered hierarchy of connections at different levels of scale (Fig. 38). He considered the structural order as the expression of wholeness that contributes to the positive emotional state of observers (Salingaros, Mehaffy 2006,p.42). His considerations based on three levels of order: small scale order, large scale order and "the small scale is connected to the large scale" can be easily reconnected to the historic urban landscape as a structure in which the small scale is given by architecture and single urban entities and the large scale is the urban landscape as a whole. In this sense, urban landscape characteristics that reconnect to an idea of wholeness needs to be analyzed in these two levels and the interaction between them.

The complexity of the city as a system of overlapped relationships between the parts obtaining much more than the single parts as defined by Ch. Alexander has been widely proposed and interpreted in urbanism theory (Jacobs 1961, Batty 2013, Salingaros 2005). In parallel, complexity science has provided two main tools to understand this phenomenon and interpret it:

1. the complex network (Newman et al. 2006) or the semi-lattice which enables us to better understand the beauty of a living geometry through a series of proprieties characterizing wholeness as defined in Ch. Alexander's theories, and

2. the fractal[54] geometry (Mandelbrot 1983)[55] since fractals perception seem to evoke

54 fractal from the Latin adjective fractus. The corresponding Latin verb frangere means "to break:" to create irregular fragments.(Mandelbrot 1983)

55 Mandelbrot in " *The fractal geometry of nature*" (1983) noticed the similarity of the patters of nature with fractal structure: "*…the patterns of Nature are so irregular and fragmented, that, compared with Euclid-a term*

a sense of beauty, having a positive aesthetic related to human perception at the psychological level and influencing his general well-being (Jiang, Sui May 2013).

Christopher Alexander's Theory of "wholeness" and "centers"

Understanding organized complexity of the traditional urban landscape can help to bring new insights to the objective aesthetic quality that exists in natural cities as organic complex structures, in contrast to planned cities that ignore the role of complexity in the city image.

In regard to the organized complexities, which reflect visual aesthetical qualities, Ch. Alexander introduced the theory of "wholeness" and "centers" which provides a method in analyzing and describing objectively the beauty of a complex structures. Based on this theory, the beauty of a living structure is related to an idea that its parts are working as a whole, and it contains many wholes within. This means that an object, a building or a build environment is not perceived as an isolated fragment but is part of a wider context, a world which includes the garden, trees, streets, natural landscape and territory, and so on, at different levels of scale. "*The whole is unbroken and undivided, and its parts work in a holistic way*" (Alexander 2002b).

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used in this work to denote all of standard geometry- Nature exhibits not simply a higher degree but an altogether different level of complexity. …Responding to this challenge, I conceived and developed a new geometry of nature and implemented its use in a number of diverse f elds. It describes many of the irregular and fragmented patterns around us, and leads to full-f edged theories, by identifying a family of shapes I call fractals". The emergence of fractal geometry was very useful to describe and to be able to generate complex systems such as the semi-lattice which present an aesthetical visual quality. Fractal repetition and scaling as well as the visual complexity that they create, evoke a sense of beauty related to human perception at the psychological level.

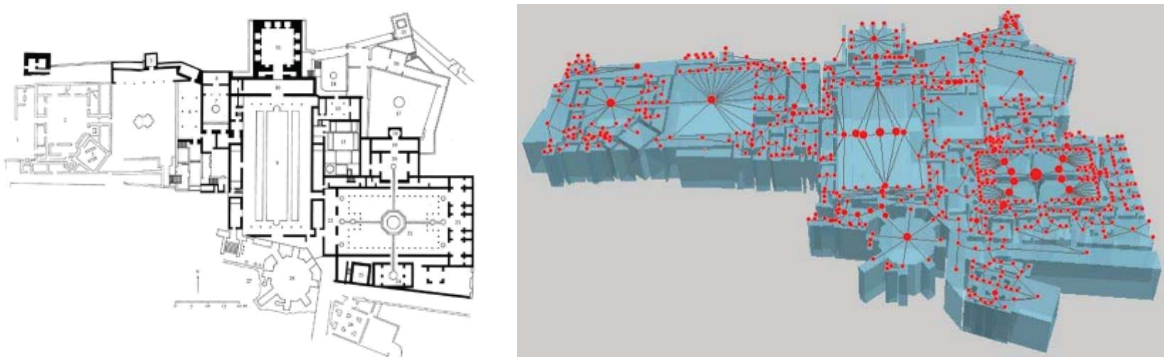


Fig. 39 The degree of life computed for the plan of Alhambra, Spain (Jiang 2015), which according to Alexander(2002a) and Salingaros has very high degree of life.

In this sense, Alexander considers an extended concept of wholeness (either in natural or in man-made things) as "*the source of the coherence, which exists in any part of the world"*(Alexander 2002a) a sort of harmony between things on earth. In fact, wholeness is seen as closely related to other living qualities like beauty, eloquence, good health, well-being and—most integrally—vitality and life, which characterize livings structures and represent the necessary criteria for quality in buildings or sustainable urban environment and place well-being.

According to Alexander (Alexander 2002b), the wholeness of a physical reality is represented through the complex order of a semi-lattice structure. The quality of life embodied in the semi-lattice structures can be measured through the variety of positive spatial patterns visually perceived and felt by humans. Nevertheless, this quality is dominated by the structure, which defines its overall character. In his work, Alexander tries to understand how the different components of the structure belong together so to form a well-made, virtuous whole. Moreover, he tries to understand the way these entities interact, the process of interaction and parameters through

which become possible to evaluate their living quality.
Living structures are complex network made up of numerous centers, at different levels, which because of their position, shape, dimension, visual strength in relation to the context exhibit centeredness along with their area of influence. They represent focal points within the visual composition. The existence of a center depends not only on its proper position and configuration but is also influenced by an outer external factor which can play an important role in strengthening the center. (Koffka 1935) In this sense can be understood the importance of wholeness. With regard to any degree of perception, the wholeness is a system of different scale centers (a center contains smaller centers and is contained within larger centers) connected and overlapped with the other entities and supporting each other.
The real effect of the thing, its features such as the quality of life corresponding to the order of nature, the real human events which happen and the feeling people have about living there, depend on the strength of the centers which comes from wholeness. The living structure depends on its living centers, their multilevel decomposition into smaller centers, the density of living centers and their vital interaction (Fig. 39).
Different authors (Alexander 2002a, Salingaros 2000a) have proposed a series of objective principles or constants describing both structural and geometrical rules that define living structures characterized by wholeness. Structural rules, that constitute a pattern language, explain the relationship between humans and the built environment, providing practical suitable solutions that connect people to a healthy environment, which can be found frequently and are repeatable, while the

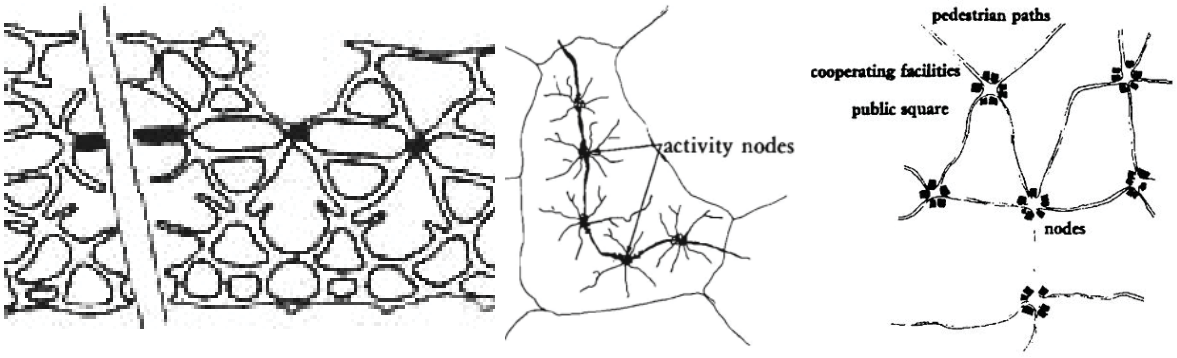


Fig. 40 Town pattern, Activity nodes at different scales (Alexander, Ishikawa et al. 1977)

geometrical patterns, serve to constitute the visual form of the built environment that respond to a certain pattern language. Similarly to Cullen's Concise townscape (1971) in which are described a set of spatial patterns of traditional cities, each made up of different geometry and architectural configuration – Christopher Alexander in Pattern Language (1977), proposes a pattern language that explains the organized complexity of the city by displaying the structural relations between elements that are related to the form (without giving a precise shape), but are more flexible and adaptable to different situation. Hence, they can be repeatable and usable in urban design.

Urban pattern as a tool to transmit the quality of the traditional urban landscape

The study of a pattern language derives from the need to understand living environments quality, to control their form and to create tools to transmit the visual quality of the urban landscape helping the design process to generate complex

structures, which indeed are coherent and present a hidden order. A pattern is a law that describes the way a system of relationships within the structure works.
Referring to the traditional urban landscape, the pattern is the archetypical system of relationship in space characterizing certain urban landscapes by describing a positive effect and well-being due to environmental perception. "*Consciously or unconsciously we seek order out of chaos. We tend to look for patterns which seem to make sense in the knowledge that we have about our world, as well as being aesthetically satisfying in the relationship of each part to the whole"* (Bell 1999). In fact, patterns are an afford to understand and represent environmental wholeness, which is a synonymous of a living structure, embodying life quality.
This notion of pattern in building architecture originates from the work of Christopher Alexander , 'A pattern language' (1977) and 'The timeless way of building' (1979)
"*Each pattern describes a problem which occurs over and over again in our environment, and then describes the core of the solution to that problem, in such a way that you can use this solution a mil¬lion times over, without ever doing it the same way twice*" (Alexander, Ishikawa et al. 1977) pg. x
According to Alexander (1964) patterns are key to the process of creating form. They offer a way of thinking about the problem in space, usually related to the context and suggest a logical relationship between aspects of the environment and the way people experience or react to them. This system of relationships is the archetype of possible solutions, which can guarantee fitness between the single components interrelated and a well-fitting overall ensemble. Even so, the pattern is not intended as a rule, or a solution to a particular environment problem, rather than being a suggestion and providing ideas on how to address certain aspects of the urban environment, in order to create a living structure, which affects and sustains a sense of human and environmental well-being. Patterns describe a system of relationship that creates life. It contains information about its the characteristics of life. Thus, life can be manifested through patterns. As Grabow (1983, p.66-67) explains with a positive connotation, revising Alexander's, "A pattern language", a pattern describes a particular quality of space that one can actually see as well as feel.

In his book " A pattern language", Ch. Alexanders (Alexander, Ishikawa et al. 1977) first proposed concrete examples of buildings and places that evoke a sense of order, harmony, and comfort, but also stimulates exploration. He identifies intuitively a system of relationship of physical qualities related to human perception and the positive visual well–being and argued that this might be engaged in future buildings or urban space design. This system of relationships were represented graphically in an abstract way through a series of simple but suggestive diagrams (Fig. 40), that describe the solution to practical problems. These patterns can be created separately, still, though, they are part of a structure, which similarly to a language is created by the network of connection among individual patterns (Alexander 1979), pg. 308. Thus, patterns can be represented graphically as interconnected nodes of a complex structure. The laws by which the patterns (nodes) are connected are as important as the same pattern. "*Words without connection rules can not constitute a language*" (Salingaros 2000b).
These structural relationships between patterns happen at many scales, creating continuous overlapping and visual continuity and congruence. In this complexity and overlapping elements, what matters are the sequence of patterns and their continuity at different scales. In the design process, the right sequence of patterns means fit, which creates order in the ensemble. Traditional urban ensembles guarantee a

coherent image due to the presence of patterns at different scales. Nevertheless, their quality in relation to the visual perception is related to a series of morphological qualities which Ch. Alexander first and then N. Salingaros and others tried to define by considering the city at different levels as a structural whole.

Morphological proprieties sustaining the visual quality of the traditional urban structure

The common properties of geometric (form) or structural patterns that sustain wholeness are tools that can help to define the visual harmony and coherence of the whole and guide designers to achieve and increase coherence. Various authors (Alexander, 2002; Mehaffy & Salingaros, 2015; (Salingaros 2013) have largely explored measurable geometric properties that influence the creation of living structures. Ch. Alexander in his attempt to decode the physical idea of life in living structures, was the first to identify a set of geometrical proprieties characterizing all things which have life or objects which present a wholeness quality. "…can we find any recurrent geometrical structural feature whose presence in things correlates with their degree of life?"(Alexander 2002a). The geometrical features he defined are: Levels of scale; Strong centers; Boundaries; Alternating repetition; Positive space; Good shape; Local symmetry; Deep interlock and ambiguity; Contrast; Gradients; Roughness; Echoes; The void, Simplicity and inner calm; Not separate-ness- connectives. Each of them does not work separately but can help to strengthen the character of the others (Alexander 2002a) (fig.41).
These features can be found in the historic urban landscape and referring to concrete case study can become patters or constants to be used as tool in the design of objects and areas. Hence, new designed buildings will become important elements to reconnect the image of the city as a whole and guarantee visual integrity of the historic urban landscape.

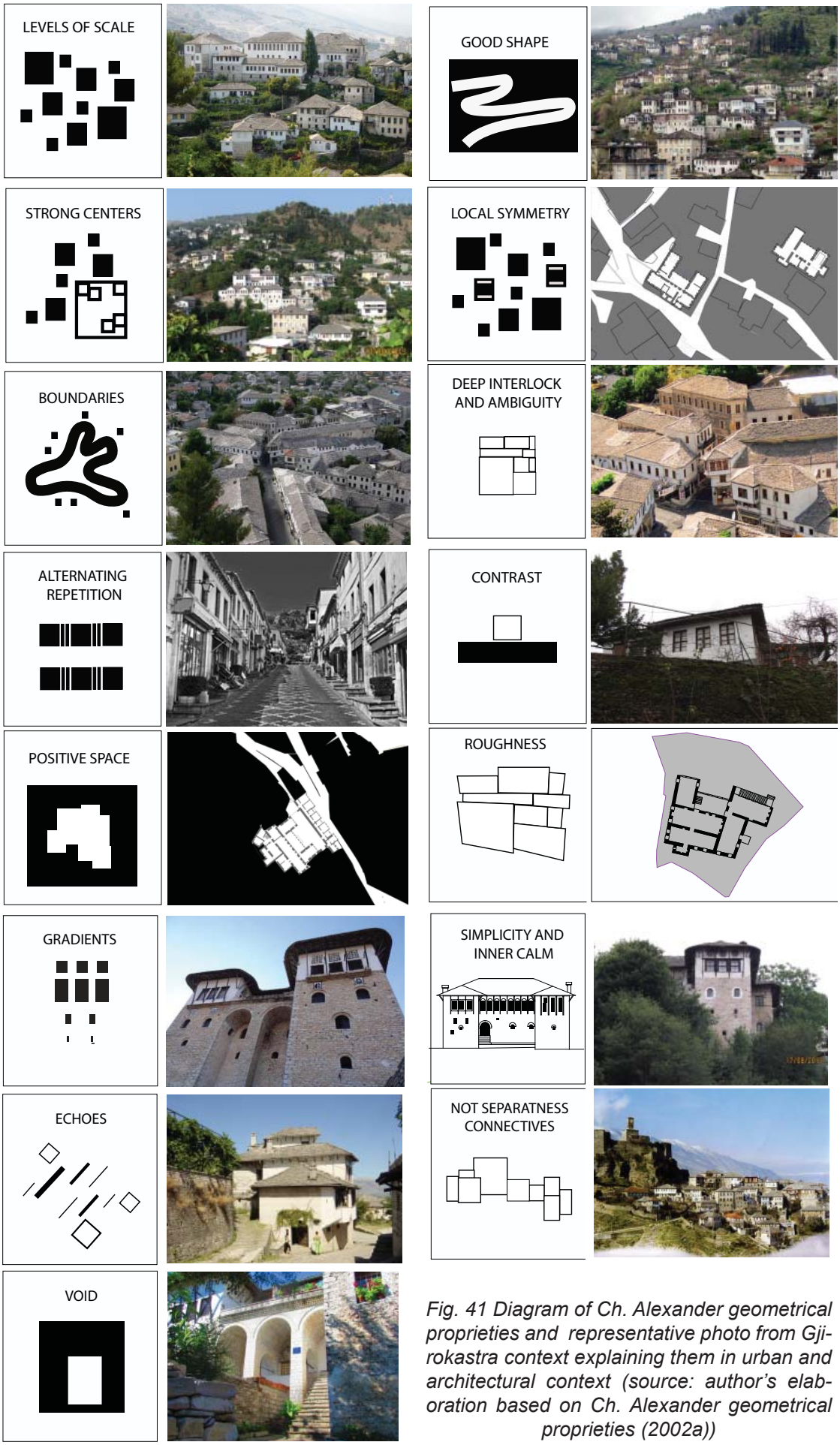


Fig. 41 Diagram of Ch. Alexander geometrical proprieties and representative photo from Gjirokastra context explaining them in urban and architectural context (source: author's elaboration based on Ch. Alexander geometrical proprieties (2002a))

2.1.2 LEGIBILITY AND IMAGEABILITY OF THE HISTORIC CITY IMAGE.

"…if the environment is visibly organized and sharply identif ed, then the citizen can inform it with his own meanings and connections. Then it will become a true place, remarkable and unmistakable." (Lynch 1981, p.92)

2.2.1 Introduction

According to Evolutionary theories (Kaplan, Kaplan 1989, Appleton 1984), the design of our physical environment, apart from pure aesthetic principles, should be dictated by our biology or the biological factors that influence our attitudes towards preferring certain landscapes instead of others. In this sense, we can assume that humans are unconsciously oriented to prefer certain environments, which affect they state of mind and in a larger extend their well-being. Therefore, the visual quality of townscape is related to the cognition of urban form and the way people picture the city mentally.

Kevin Lynch was one of the first interested in the way the physical and spatial dimention of the city is perceived by observers and is built in their mind. To him, observers were defined as persons who "*has had long associations with parts of the city and its images is soaked in memories and meanings*" (Lynch 1960 ,p.1). Thus, the mental image of the city is defined as a process in mind that stresses memory, learning, and imagery related to the degree of understanding the city by experiencing it through visual perception. Based on an anthropological-visual approach, a mental image of the city is built on dominant visible elements of the urban form and their interrelations.

According to Lynch's seminal theoretical book "*The image of the city"*(1960), in which he developed an analytic framework to assess city perception, a strong mental image depends on the capacity of the environment to transmit visually its spatial organization so that people can map it mentally. In this sense, the clarity and legibility of the cityscape developed in mind, even though is not necessary, directly reconnected to an aesthetical quality of the landscape, can contribute in the human mental pleasure by influencing people senses positively.

Hereby, an organized urban structure which enables easy cognition and facilitates orientation limiting stress can contribute to a harmonious interaction between the man and urban environment. However, this is not enough and as Gombrich (1984) asserts, the order is easy to perceive and remember, but it risks to become boring. In addition, resuming the evolutionary environmental psychology thesis, individuals tend to feel comfortable and secure in organized spatial patterns, which they can easily control but have also an innate need for exploration and mystery (Kaplan 1983). Rapoport and Kantor's (1967) also showed that humans prefer structured, but yet ambiguous and complex visual environments, rather than entirely monotonous or chaotic ones. In this sense, the order is necessary, but as well discontinuity and continuous variations that can excite the mind and make them fit the environment.

Based on this, the quality of the mental image of the city (as defined previously) is related on one hand to the degree of legibility as a synonym of coherence, clarity, and order, and on the other hand on imageability, or the capacity of an image to attract visual attention, to be fixed in mind and to stimulate exploration.

Based on this, below we will discuss the concepts of legibility and imageability as components of good urban forms that can be reflected directly into a good mental image of the city. Therfore, in historical cities which present this quality we need

to identify constant elements that embody it and to use these principles in order to guarantee continuity of the visual quality of the city and an image of the city as a whole.

2.2.2 Legible and imageable city image

The term legibility related to the urban environment is defined as “the ease with which its parts can be recognized and can be organized into a coherent pattern”(Lynch 1960, p.2). According to Lynch, the urban environment is legible, if its parts and the whole are understood in relation to one another. In this sense, he extended his conception of legibility from territorial to urban detail, by considering legibility and coherence as a whole at different scales. However, this concept is related more to the clarity of urban patterns that facilitates people orientation, while what determines mostly the mental image of the city according to Lynch is “*imageability*”, which he defined as “the quality in a physical object, which gives it a high probability of evoking a strong image in any given observer” (Lynch 1981, p.9). Thus, it is the visual and physical quality of a certain object that makes it visible, recognizable and distinguished to others. Concerning formal aspect of the mental image, imageability is related only to the cognitive prominence and distinctiveness of certain objects, without considering their capacity to evoke meaning, which is related more to the cultural component.
Thus, people understand and orient themselves in the urban environment by identifying:
1. primary visible elements; which are related to highly visible physical objects, that evoke a strong image and as a consequence are remarkable. Lynch considers them as structural elements (Ch. Alexander paraphrases them as “Centers”).
2. patterns, which are repetitive systems of the relationship between different elements of the urban environment, having the capacity to create coherence at different scales, in order to transmit a strong mental image of a sensed wholeness, which can reveal dominant aspects of city image defining its formal identity.
One of the most ancient examples that render the image of an urbanized territory, by materializing what was in people’s mind is Bertolina carved map (Fig. 42) . It is so that sets a geometrical abstract representation of the ancient landscape as transformed by human activity (crops, trails, etc.). Dwelling areas, farms, fences, paths and other manmade structures are set as parts of a structured landscape. The single motives are sometimes composed by agglomeration and linked together by lines they form wide geometric compositions (Marreta 2013). It clearly makes legible the city structure, but represents also its synthetic image rendering its strong spatial identity.

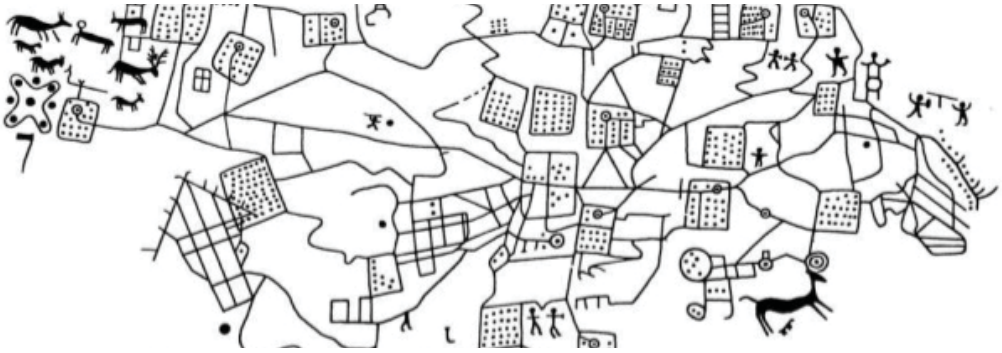


Fig. 42 A simplif ed graphic rendering part of the Bedolina Map, 2,500 BC, a petroglyph at Valcamonica, Italy, in the Italian Alps

Primary visible elements and urban patterns

Fig. 43 Five structural elements of city image, Kevin Lynch (1960)

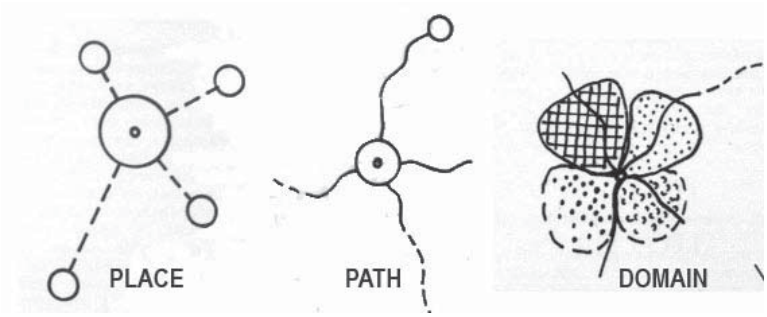


Fig. 44 Structural elements according to Norberg-Schulz (1972): Place, paths, domain

In his research on the legibility and imageability of the city image, Kevin Lynch (1960) suggested the identification and selection of 5 structural elements that constitute the mental image of the city and made the city perception clearly understandable and "imageable".

The structural elements include five components: paths, edges, districts, nodes, and landmarks (Fig. 43). 1. Paths are channels along which the observer moves; 2. Edges are linear elements considered as boundaries such as walls, rivers, edges of development etc.; 3. Districts are sections of the city, identifiable by the common character and considered by the observer as separate and oneness entities;4. Nodes are strategic points in the city. They can be a convergent point between paths, squares, etc.; 5. Landmarks are reference points inside or outside the city. They can be buildings, signs, natural elements, etc. In addition, Lynch considered also the natural elements, that connect the built environment to the natural one. These urban elements heighten imageability, legibility, and clarity of urban space (Nasar 1990). Moreover, referring to the five structural elements defined by Lynch, Beattie (1990, p.113) proposed a combination between them suggesting the formation of urban patterns. In this regard, he sustained that a "comprehensible environment [is] one which has a discernible structure and the structure is based on a network of paths punctuated with orientating devices in the form of nodes and landmarks and discriminated into districts which are clearly defined by boundaries and edges" (1990, p.113).

Later, another theorist Norberg-Schulz (1971, cited in Lang, 1987) complied in a simpler way the structural elements proposed by Lynch by proposing three main categories: places, paths and domains (Fig. 44) : 1. Places are distinctive and significate nodes and landmarks, that serve also as reference points 2. Paths are connecting systems within the urban structure; 3. Domain is an area with e particular character similar to Lynch districts.

Hereupon, the structural elements proposed are characterized by visual hierarchy and have the capacity to stimulated the viewer to create the mental picture of a certain urban environment and orient themselves easily through it, as well as offer more

visual pleasure, emotional security and a heightened potential depth and intensity of human experience. Thus, visual connections are necessary for orientation and in order to provide a coherent image of the urban setting. This means that the single components should be patterned together in order to provide a satisfying overall form.
Referring to the Gestalt laws of visual organization and in particular to the tendency of observers to group elements into complexes or figures, paths and edges can be considered as “elements of continuity” (Lang 1987), that tend to reconnect a whole; districts or domains are defined through the laws of proximity, similarity and the presence of a boundary as a continuous area; and landmarks, nodes or places tend to be perceived as dissimilar elements that disrupt this continuity. As it was previously discussed, people tend to perceive similar units which they easily acknowledge and understand and dissimilar elements to disrupt monotony and simulate exploration.
Accordingly, the theoretical method to assess urban legibility proposed by K. Lynch through the use of 5 structural elements, is extended also to patterns of relationship between these elements. Depending on their reciprocal relation they can strengthen, be indifferent or even conflict a destroy each other. In this sense, it’s not enough for a city to have distinctive elements, but they should be combined and operate in a coherent and legible way with each other. This opens the possibility of an infinity of combination. However, their combinations being closely related to the Gestalt principles of visual perception are quite objective.

Paths
Paths represent streets, road, rivers, streams. They are perceived as lines of communication between two places (landmarks or nodes) and serve also as a significant element of both orientation and order. Generating axes of historical cities, for example, have a dominant impact in human mind.
Paths imaginability is strengthened also by their formal quality: for example, “paths that change the width and become narrow, attract attention” (Lynch, 1960: 50). The spatial configuration of the path plays also an important role in defining their distinctiveness and identity: for example, a distinguished path line or a river course with strong identity becomes significant. Buildings facades that outline the perimeter of the road or the perimeter itself if set a strong identity can have also a significant effect on the street perception. The unity of the facades, or of the spatial configuration they define described by similarity and repetition, but as well, the present of distinctive elements in the facades can enhance attractiveness, contributing in fixing the image of the city and create psychological satisfaction.

Edges
Edges are continuous elements that define and isolate a place, similar to boundaries. They can be represented by different elements of urban environment such as building’s façade, tree lines, walls or paths. In gestalt psychology, edges have a very strong visibility since they distinguish certain areas, separate parts, without being themselves isolated, but on a contrary contribute in the unity of distinguished parts.

Districts
Districts can be identified based on gestalt the laws of proximity, similarity and in same cases of closed form. With this regard, they tend to be perceived as well defined parts of the city. They are clearly recognizable and distinguished among other elements. Sometimes they are identified through the continuity of the formal

characteristics of their components such as buildings, paths, patterns, facades, topography, materials etc. Continuity means the continuation visible quality such as a rhythmical composition, a surface, material, texture or edge continuation. Although they are clearly distinguished, they are also interrelated to each other to constitute an ordered composition as a whole. In fact, continuation facilitates the perception of the physical complex as a whole. This relationship can be materialized in different scales, creating a nested hierarchy of districts and sub-districts and contributing in strengthening the unity of the city image.

Nodes

Nodes are focal points or strategic places in the city characterized by intense activities due to the intersection of paths. Being usually junctions of pathways, points where people need to do a choice of direction, they attract much more observer's attention, stimulating them to focus and capture details. Thus, their physical composition needs to present a deeper physical quality. That's why they are characterized by clarity and simplicity of spatial composition and are usually accompanied by significant visual elements such as landmarks, particular architectural objects or spatial solutions that attract people's attention. By turning to attention points, they contribute in increasing the level of recognition of a place becoming part of the mental image of the city.

Landmarks

Landmarks are elements that disrupt the continuity and order of the urban patterns. Same as in gestalt psychology, the order needs to contain repetition, regularity, and contrast. In this sense, landmarks are elements that build their identity through their uniqueness, being completely distinguished from the background. Landmarks are singularities that emerge due to figure-ground distinctiveness.

According to Lynch (1960) "a sequential series of landmarks" provide a series of clues for the observers. This has the same significance of Cullen's serial vision quality. In fact, Cullen (1961: 26) also sustain that landmarks are focus points (due to contrast) that emerge as distinguished figures from the background due to the simplicity of their form, their size or a particular location. Ch. Alexander describes this as centers in a composition as a whole, and similarly to his theory, other centers can be set around. With this regard landmarks, in some cases apart from being distinguished, can be dominant elements in terms of visible hierarchy or strong centers. However, landmarks do not necessary contain other centers as in Alexander definition. In fact, Lynch was mostly focused on the scale of the city having a plain (one dimensional) idea of the city structure, which facilitated legibility.

In this sense, landmarks are considered also as reference points for observers to orient themselves. Nevertheless, landmarks are not just orientation references, but they are also a visually distinguished element in the built environment that contribute to creating and crystalizing the mental image of the city.

Based on the previously discussed theories of the city image related to the legibility and imageability and considering the combination of the various structural elements it's possible to define a series of principles that facilitate the relationship between humans and the urban environment. The repetitions and harmony of the various salient elements in a physical setting, such as landmarks, panoramic views, nodes, paths are key components for the observer to grasp and create a mental image of the city easily. In addition, the formal aesthetic composition can also contribute in the imageablity of the city. In fact, the aesthetic quality of an object can evoke feelings of interest and pleasure.

Concluding, legibility and imageability are two components of the city image that describe the necessity to easily perceive some distinctive structural elements of the environment and recognize them in an image as a whole. This necessity is both psychological and physical and is based on a human need to understand and explore its environment and to enjoy it. Due to this premises, similary to the historic environment which present this quality, the residual margines need to be posed in continuity, in oder to preserve the image of the city as a whole and enable people to orient themselves and to be pleased by this kind of aesthetic quality which is present in the whole historical area.
In the discussion regarding the structural elements that enable legibility and image-ability of the city, it's important to consider their reciprocal relationships as remarkable patterns. This is again the whole-part relationship emphasized in Gestalt psychology, since these elements cannot work separately but can only contribute together in the organization of the visual field of the city acknowledging it as a whole. In fact, the influence of Gestalt Psychology is evident in the nature of the mental image as the mind tend to organize the amorphous visual stimulus it receives into images of whole forms and patterns. Thus, it is important that the physical form of the city must be a consequence of a good combination between the structural elements, so that to enhance their strength.

With this regard, the principles of design that derive from the combination of the 5 structural elements proposed by K. Lynch will be presented intensely through the figure ground gestalt method, that aims to put them into evidence visualizing the way they work together to provide a satisfying form that represent the mental image of the city. In addition, contrasting patterns that highlight both order and diversity or regularity and disorder are very important to bring in the foreground the influence of the visual quality in the mental image of the city. Therefore, the definition of 5 basic elements underlaying a series of design principles of a legible an imageable urban environment serves as a methodology to analyse the historic urban landscape patterns and to define design principles that guide the quality of the mental image of the city.

2.3 THE HISTORIC URBAN LANDSCAPE THROUGH HUMAN EXPERIENCE

"You take delight not in a city's seven or seventy wonders,
but in the answer it gives to a question of yours. "
Italo Calvino in Invisible Cities

2.3.1 Introduction

The historic city image is a physical expression of culture, history and can be considered as a product of a philosophical, political, and religious view. In this regard, Calcatinge (2013) considered culture in the historical course as a valuable creation process, which through the human activity has led to shaping the image of the city. In this sense, it turns out that the city is perceived as an architectural projection of cultural value and local identity. Considering the essential role of the culture in the formation of urban landscape, Carl Ortwin Sauer in his famous essay entitle "The morphology of the landscape" (Sauer 1925) proposed the term "cultural landscape" which in addition to the natural landscape is shaped and developed by a cultural

group and impress in the work of man. In the urban context, urban cultural landscape constitutes the character of the city as a combination of human work with place characteristics. In this line is also the official definition of the European Convention which defined landscape as "*any part of the territory, as perceived by people, whose character is the result of the actions of natural factors and /or human ones and their interrelationships* "[56] . This definition includes also the cultural dimension of the landscape. Moreover, O'Donnell (2008) marked both the tangible and intangible heritage as elements contributing to the formation of the urban cultural landscape.
Max Sorre (1962) defined this cultural DNA as genre de vie (lifestyle), which includes also the spiritual, material and social aspects as expressions that attribute spirit and character to the urban environment. Affecting urban form, these elements give to the city a symbolic nature and make it recognizable for people, stimulating a sense of belonging to a certain culture. Accordingly, every urban aggregation can come up with its own symbolic meaning in which the inhabitants identify themselves and are identified.
Following this view, the design of many cities since antiquity was based on a cosmological vision. It started with the choice of the site through examining the divine auguries. Rykwert (1976) suggests that people only feel part of a community if there was a correspondence between the cosmos and the built environment which surrounds them. This reconciliation with the cosmos, with nature, between institutions, and within the community render the importance of the cultural context in the urban layout configuration. The restitution of urban landscape as Imago Mundi (Eliade 1961) is the physical expression of the cultural image that is embodied in people mind belonging to a common cultural context.
Amos Rapoport, with the aim to provide a guideline for a more humanistic urban design, in his seminal work "House Form and Culture" (1069), and his later book "Human Aspects of Urban Form" (1977), investigated and brought to the attention of architects and planners this close relationship between built form and "genre de vie" or culture in particular. In fact, people sharing the same values, beliefs, symbols, and view of the world, which have been transmitted to them over time, have created a build form which is an expression of their genre de vie. Based on this, what distinguished the built environments from each other are the nature of rules embodied and encoded in the urban form (Rapoport 1977,p.14) which depend on the cultural context. Thus, being closely identified with a certain cultural context, the image of the built environment as a form of non-verbal communication can visually transmit meaning to people, making them recognize the same environment image which makes them feel more secure because of sharing a common image.
In addition, the cultural image of city is perceived in its totality although it is conceived as an integration of the natural and build environment, under the human intervention oriented by its cultural background. When the urban environment as its perceived results as a whole it becomes synonymous of the urban landscape.
In this line, the noted geographer Joan Nogué argue that landscape is, "*at the same time a physical reality and the representation that we make culturally of it; the external and visible appearance of a certain portion of the land and the individual and social perception that generates; a geographical tangible and its intangible interpretation (...) but they are also historical legacies, continuities, continuances, the overlapping strata of the remains of ancient landscape*s" (Nogué 2007,p.19-20). Thus, seen from the perspective of cultural image urban environment can be defined as urban landscape since it is embodying and represent the human culture.

56 European Landscape Convention, Florence, 20.X.2000, (Art. 1).

Its cultural image, in fact, is a complex psychological representation of the profound meaning that urban landscape reflects back to the people. In this regard, the historic urban landscape presents various aspects that influence visual preferences of certain environments: The city of collective memory; The identification of a genius loci; The character of place: identified through the space and architecture

2.3. 2 The city of collective memory

An historical city usually consists of a series of historical layers which can be perceived visually through its physical testimonies: architecture, monuments, spatial and built configuration and further understood indirectly as an imprint of this cultural image in mind which recalls time by time a renewed sense of the urban environment. It is perceived visually through the physical form of the city which through the aesthetical potential and its historical meaning delights human sense. Usually, the historical and cultural image of a city is made of different historical layers regarding place formation influenced also by the relationship between the natural environment and human needs, which attributes them meaning. In this sense, the urban environment is part of a common understanding of the community. Thus urban space is an image of our common experience in a certain time and is the result of the over layering of different transforming events and actors (Rossi, Eisenman 1982, p.34), which defined urban patterns. Thus time is essential for understanding the evolution of the city and building memories.

Cities are the places of people's memories, either individual or social. Nevertheless, human memories related to the cities are principally social memories (Páez, Basabe et al. 1997). What we recall in a place is rarely the result of our personal experience and more often depend on tradition and cultural transition that is embodied in social groups. In this sense, the history and meaning of a place are principally defined by the "collective memory" (Páez, Basabe et al. 1997). or the shared past of certain social and cultural groups.

Philosopher and sociologist Maurice Halbwachs (1980[1950], p.50-52) argued that memories are influenced by the society and stressed the "social" and "historical" aspects of collective memory, which include information about the world that goes beyond the personal experience connecting people to specific group that share the same social and historical memory. In addition, Halbwachs in view of a more formal approach stated that the formation of collective memory and identity is related to the monuments and topographical features (relation between the build mass and the landscape) as easily stored visual objects.

Similarly, historian Yates (1966) in his book "The art of memory" approached practical techniques related to the capacity to remember and assert that memory depends on the capacity of "places" and "images" to be impressed on memory. Places are locus "easily grasped by the memory, such as a house, an intercolumnar space, a corner, an arch, or the like", and the images or objects are "forms, marks or simulacra of what we wish to remember" (Yates 1966, p.10). On a contrary to sociologists view of collective memory related to social and cultural events, in terms of functions and activities, this method is based mostly on the visual memorization of symbols and images rather than historical and social experiences, as it is more appropriate for the purpose of this study which is related to the visual perception of the urban landscape.

Beside sociological and psychological definitions and approaches on memorizing, in architecture and urban design literature, Aldo Rossi (Rossi, Eisenman 1982) was

the first architectural theorist who introduced the concept of urban memory as a "collective memory" of the city: "*One can say that the city itself is the collective memory of its people, and like memory it is associated with objects and places. The city is the locus of the collective memory*" (Rossi, Eisenman 1982, p. 138). Rossi raised the issue of the city as historical material evidence of human achievements related to the collective memory of people through its buildings, monuments (the word monument comes from the Latin "monere" which means "to remind" or "to warn") and places which he considers as "the soul of the city". Hence, they are the physical expression of events that have taken place in the city and are considered from people as containers of feelings and memories of hosting events.

In this sense, the collective memory is related to architecture and the "locus" in which certain events happens as evoking object. Moreover, Rossi defined the same architecture of the city as an event, highlighting its role on the formation of a memorable image as a whole.

Based on this considerations, he took the structure and the form of the urban artefact as constitutive parts of the architecture of the city. In his view, the evident connection between collective memory and memorable objects and places in the city, and even the architecture of the city, represent a visual historical text of the society life. To him, in fact, cities are a product of culture over time. These memorable remembrance of the past are mostly the monuments (or "permanency's" as defined by Rossi) such as: religious, civic, commercial buildings, symbolic elements or plazas, etc which are particularly appreciated and remembered because of their form, while the general urban texture of the city according to him can change over time, in contrast to the monuments which seem to resist time. A. Riegl (1982, p.21-51) defined them as "*intentionally built monuments*" as on a contrary to the edifices constructed to meet citizen common needs , these buildings represent their ideas, thoughts, beliefs, rituals and their cultural degree in general and were "erected for the specific purpose of keeping single human deeds or events (or a combination thereof) alive in the minds of future generations" (Riegl 1982, p.21). In addition, Quatremere de Quancy considers them as signs that evoke particular events, object or commemorate important persons. Thus, not only because of their formal appearance but also due to their meaning, they become further recognizable and memorable serving as a visual remembrance of their identity. On one hand, being erected by the community which means representing their need to commemorate or to remain future generations certain cultural practices, beliefs, events etc. and on the other hand, being representative of the city and society identity due to their prominent form, they can be considered as crucial elements of the cultural image, contributing to the preservation of cultural identity. In a general view, the collective memory of the city is materialized through its architecture, in particular, specific objects (monuments), places or pattern with major significance in the urban environment. The permanency and stability of their image define a "mental equilibrium" of the community image and social groups, which according to (Halbwachs1987, p.135) contribute to the feeling of internal order and tranquility. Considering the relation between various parts, Rossi assumed an idea of the city as a patchwork or as a collage in which parts which are constantly changing over time (for example the residential patterns). The only permanencies that resists over time and can draw a total image of the environment are monuments or what he called the "primarily elements".

These elements play an important role defining the structure of the city and orienting the evolution and growth of the city in relation to these structural elements. Usually they are also related to the foundation of the city, recalling elements of the past, but

contribute also in the future developments.
In addition, Rossi considering the city as a unified artefact made up by the synthesis of its different parts: monuments, places, significant architecture, recognizes the importance of both singularities and the image as a whole. Following this, he considered the structure of the city, its form as well as the individuality of form of the single artefacts, as articulated elements that build up the cultural image the city. So, form seem to have the potential not only to persist as artefact and evoke memory but also to be articulated as a principal urban element.
However, considering this theory in the case of ottoman cities and Gjirokastra in particular, it comes out that the lack of public monuments and public squares turns the residential buildings and the intimate collective spaces as the only “monuments” that embody the collective image of the city.

2.3.3 The representation of the “Genius loci”

“Genius loci” or the spirit of a place is a phenomenological concept related to the perceived image of a certain environment. In classical roman culture, genius loci were the protective spirit of a particular location or the guardian divinity of a place. Its spiritual qualities were reinforced by local symbols and legends. During the Enlightenment, the spirit of place was conceptualizing in relation to human perception as a distinctiveness character, or a special atmosphere impressed in human’s mind through the visual image. It represented the pervading spirit of a place. In this sense, the quality of place was described by its “atmosphere”.
In the twentieth century, existentialist saw it mostly as a product of the mind, stressing the dialect link between the place and the people. Of course, it depended on the peculiar character of the urban form and the way it was built over time, but was also the product of people which engage their mind, memory, recollection and thought (Sartre 1969).
In seeking the link between people, places and their cultural understanding, the geographer Yi-Fu Tuan and philosopher Lewis Mumford had two distinct, anyhow, complementary views on the way people understand the urban environment. Yi-Fu Tuan view the urban environment as the embodiment of feelings, images and thoughts of people who live, work or deal with that space and sustain that the familiarity with the physical city and its topography influence the intimate connection of people (Tuan 1977,p.175-176). When an individual is connected emotionally to a place, he establishes a psychological and intimate bond with that place. (Holloway, Hubbard 2001, p.75).This connection depends on ‘the elaborate conglomeration of innumerable stages for the performance of private and semi-public dramas’ (Tuan 1977, p.173-174) which constitute the memorized character of the city. While Tuan saw the city in a domestic scale, related to the everyday life, philosopher Mumford saw it on a different dimension: ‘the City is the most concrete, the most lasting, and the most inspiring expression of man’s social genius’ (Mumford 1962) considering as more significant the civic aspect instead of the domestic.
This two dimensions of genius loci has been recently explored by Isaacs (2000) in an urban picturesque approach that follows the conception of townscape tradition. He considered genius loci similarly to G. Cullen, as the “art of relationship” that enable drama in the city putting together all the elements of different scales that create the landscape; buildings, monuments, streets, natural elements etc. For Cullen, the city is itself a dramatic event in the environment (Cullen 1971,p.9).Conzen, on the other hand noted that traditional towns have their own personality due to the particular

combination of urban and natural elements over time (Conzen 1949).He argued that, the different historical layers of the city form a particular cultural landscape which represent the 'objectivation of the spirit' of that society, or the genius loci (Conzen 1966). Conzen considers the concept of genius loci in different dimension in space and time: from the topological influence in the urban morphology, to the building pattern and also to the spatial organization of the single unity, which are layered time after time. The urban landscape is thus a palimpsest of all the traces stratified in time.

This concept was further elaborated by the Norwegian architect Christian Norberg-Schulz. In 1963, he first started investigating the psychology of architecture (Norberg-Schulz, 1963) and, based on Heidegger definition of "dwelling" as our self-mirror, states that our identity is related to architecture and vice–versa. This idea outlines the concept of genius loci in architecture as follows: "Man dwells when he can orient himself within and identify himself with an environment, or when he experiences the environment as meaningful" (Norberg-Schulz 1980, p.5). In this way, architecture acts as the "concretization of existential space" in which the where physical and psychological conditions meet (Norberg-Schulz 1980, p.5). People perceive positively their living environment when it can guarantee orientation and a sense of security. This is directly related to their cultural background. With this regard Norberg-Schulz explored character of places (their level of orientation and identification) and their meanings for people and stressed the idea that place was not just location or a physical setting but there exists a "spirit" which he could not describe analytically or scientifically as it has to do with the intangible sphere. Thus, he proposed a phenomenological method in order to understand and describe his particular relationship of man with the environment describing on one hand the physical characteristics of the site and on the other, human experience. Due to his study, he acknowledges that when men identify himself with the environment, he turns it to a place of his own identity. Only through the character, genius loci can be identified. In this sense, architecture as a human action, is able to create place and to transform a certain urban environment into urban landscape, or urban cultural landscape. With this regard the land artist Robert Smithson referring to a generic human work of art states that "The work is not placed in a place; it is that place" (Flam 1996,p.242). We can then say that architecture is also landscape.

Norberg-Schulz uses the concept of cultural urban landscape to explore the image of the city through its skyline. He considers the skyline and the silhouette of the buildings in contrast to the natural landscape as principal elements denoting the image of a place. With this regard, he promotes the traditional towns as urban forms which embody a deep symbolic understanding of places (Norberg-Schulz 1985,p.33-35, 48). In "Genius Loci: Towards a Phenomenology of Architecture" (Norberg-Schulz 1980) genius loci assumes e more broad meaning including the sum of the physical and symbolic values in nature and the human environment. Thus, architecture, landscape and natural environment are important to reveal the genius loci.

Accordingly, Norberg-Schulz's (1980) has recognized four thematic levels:

1. the cosmological conditions; which depend only on natural conditions and phenomena such as rhythmic changes of light, vegetation etc.;
2. the topography of the territory; which reflects the features of the topological landscape, or relationship between the natural environment and the urban landscape;
3. Objects or buildings in terms of architecture and identity.
4. The symbolic and existential meanings in the cultural landscape, as the result of

human actions.

The first one does not depend on human action. The second one is related to the characteristic urban morphology and the relation with the topographical patterns, view orientation and the integration of the vegetation with the built environment as a constant characterizing urban design.
The third one is related to the perception of a typological visual character of architecture and urban space. The last one is more an intangible image, which has to do with spiritual values, beliefs. Nevertheless, it is also translated and materialized into a spatial organization related to the way of using urban space, human events, rituals etc. In conclusion, Genius Loci is not only the sum of the typical physical components, but is represented also by the complex interplay between humans and the environment.

2.3.4 Place recognition

One of the core mental images that describes the relationship between people and the spatial settings from the cultural perspective is related to the concept of place and its perceptual recognition by its character which is based not only on the physical aspect by also on the significance of the bond between humans and urban environment. Human being are directly responsible for quality of the build environment and the harmony with the urban landscape, since they are the ones who gives spirit to a place, through their cultural background and the way they later experience the urban environment.
Place is what people perceive staring at certain man-made environment, in terms of impressions and values and due to a positive emotional attitude it conferes. If space has to do mainly with the physical layout, place embody also and a strong affective bond due to a cultural and human dimension related to the meaning, sense of continuity and cultural values that are transmitted indirectly. Thus, the recognition of a place depends on not only on the cognition of space but also on affective and behavioral bonds that people develop with places as patterns constructed by the physical form, the activity and meaning (Montgomery 1998). Comparing it to the concept of space, in fact, different authors (Relph, 1976; Tuan, 1977) sustain that place is space endowed with meaning. Similarly, Lowenthal (1979) assert that traditional environment of the “past” as a collective construction, with shared values and experiences is very important for the cultural groups, which are than identified through the form, history and meaning of place. Thus, place is the expression of a cultural image (physical image of a cultural context of urban environment) of the spatial layout of the city as is perceived in people’s mind. Place refers to a certain location in space, but in addition embody cultural and social dimensions of human experience. In this terms, “place”, in contrast to “space”, implies long-lasting emotional ties between people and their physical environment due to the cultural component which strengthen the bond. Accordingly, the presence of a “place” engenders positive and suitable human experience which causes people to like and feel attached to these places.
“There is a central quality which is the root criterion of life and spirit in a man, a town, a building, or a wilderness…. In order to define this quality in buildings and in towns, we must begin by understanding that every place is given its character by certain patterns of events that keep on happening there…. These patterns of events are always interlocked with certain geometric patterns in the space. Indeed, as we

shall see, each building and each town is ultimately made out of these patterns in the space, and out of nothing else: they are the atoms and the molecules from which a building or a town is made" (Alexander 1979).
In parallel, psychologists consider the character of ''place'', as the expression of human face which informs peoples identity. Proshansky (1978,p.147) defined that as '*'those dimensions of self that def ne the individual's personal identity in relation to the physical environment*". In this sense it serves to distinguish different cultural groups and to build a positive self-esteem. This is confirmed also, tracing back to Aristotle's theory of place, place or topos, was related to a physical boundary of a spatial layout "Hence the place of a thing is the innermost motionless boundary of what contains it," (Physics IV 212a20) but also it conjures a human sense of belonging as it's the result of human action. Romans also, referred to place instead of space, to describe not only a certain location, but also a perceived human dimension. In addition, Canter (1977) in The Psychology of Place, considers apart from the physical environment and human perception, the activities occurring in the space and the interrelation between this three dimensions in a unifying concept. Since then, according to various authors (Relph 1976, Stedman 2003) place is composed of mainly three different components that confers them meaning:

1. The physical setting or the space layout;
2. The individual perception as a result of common believing's related to psychological and social processes regarding place which have been stratified over time, and
3. Human activities.

This can be achieved by understanding the urban fabric and identifying the elements that constitute the physical identity of the city. Referring to the historical cities it's possible to define patterns of relationship in various scales:
1. Large scale image: the legibility and narration of urban physical structure; skyline or silhouette characteristics, spatial integrity and continuity of public space; visual integrity and relation with the natural landscape and the coexistence with the natural resources; character of the urban morphology,
2. Small scale image: characteristics of parts. The two organizing elements of the city, the 'district' and 'the public domain', have the most significant impact on the urban identity (Oktay 2002,p.31-41) which represents the way people use and experience the city. Accordingly, if the city has identifiable neighborhoods and recognizable public spaces, it can transmit a strong identity even if the other aspects are neglected. In addition, we can consider also small scale patterns characterizing the urban environment such as prominent architectures, visual symbolical elements, memorable spaces, colors and materials, contact of people with nature.
3. Large-small scale: interrelation or the continuity of patterns.
In conclusion, the various patterns that describe the character of the historical city, can serve as indicator to measure the quality of the city image, in terms of pace attachment. In addition, in view of a sustainable image, they can be turned into tools to be implemented in the design of the residual area.

PART 2 HISTORIC URBAN LANDSCAPE DESIGN CONSTANTS

Brief: This part costitutes an in-deep theoretical background on specif c design constants that describe urban landscape visual quality valid in the case of Gjirokastra. They derive from the preliminary invenstigation and analysis of Gjirokastra urban landscape starting from the general theoretical background which offer a wider perspective on what rules the integrity of the historic city image. The selected parameters will be discussed theoretically and illustrated using examples from art, architecture and urban landscape through various tecniques of representation.

2.4 DESIGN CONSTANTS

2.4.1 The portrait of the city. Massing

Urban form is an aesthetic reality that can be contemplated from outside, distant from the same city. In this conditions, human visual perception cannot operate similarly to photography recording every detail but grasps only some outstanding features of the visual frame (Arnheim 1974). Seen in this perspective, historical cities (small-medium dimention cities), and in particular medieval ones, usually present a precise **outline or build mass** in relation to the landscape or a readable **silhouette in relation to the surrounding territory.** Massing in an urban scale is the perceptual dominant three-dimensional configuration of the city. It emerges in contrast to the natural landscape and **is revealed in its form as a whole set towards a natural background**. It can be described as a skyline is a general description, not entering into the details of the internal form (fig.45).
Even though its image is perceived as a unique element in a figure-ground description, it is constituted by small entities interacting visually with each such as single objects, roofs, trees, walls but also clusters of houses, neighborhoods or particular building typologies. Referring to Gestalt groping rules of visual perception, it is possible to objectively describe certain proprieties of the massing form related to the idea of unity, similarity, good form, positive space, roughness and echoes which characterizes this mass as a whole. In historic cities, the image of the building mass usually results homogeneous, dense, coherent due to reiteration, and continuous as a complete figure, without being disturbed by contrasting elements. Nevertheless, it's possible to identify dominant readable elements, such as natural elements, figures given by the margin contours, landmarks, typical repeatable buildings silhouette or buildings clusters. Historically, this aesthetic feature of the portrait of the city represented in its wholeness has always been objecting of **iconographic illustrations,** paintings, or photographs which put into evidence its visual aesthetic quality and the picturesque character (fig. 46,47). It regards not only closed historical cities surrounded by walls which have a precise contour but also cities which present an open form in relation to the natural setting.
Ludovico Quaroni (1967) in "La torre di Babele" introduces an idea of urban form as a "figure" that represent the perfect "unity of nature and culture". In this sense, the image of the city as a precise shape seen as the figure-ground relation between the building mass and the natural setting can be considered as a parameter to assess the aesthetical quality of the landscape and to take into account when comes to new interventions that intend to safeguard the historic landscape character. According to Oswald Ungers (2011), the quality of the landscape is related to the preserved

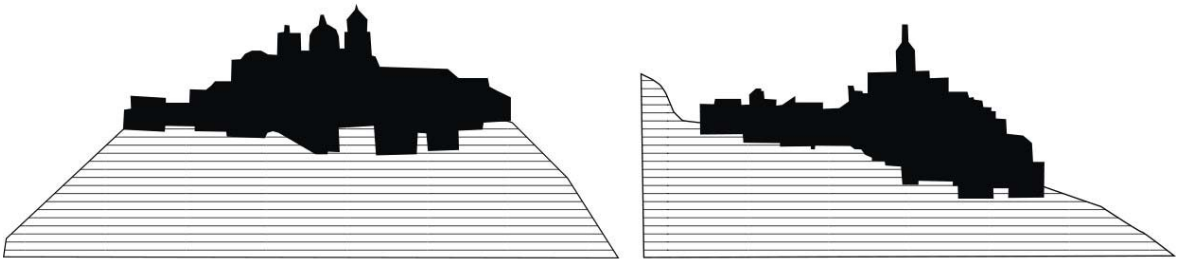


Fig. 45 Nicola, Pariana, Italy, Pietro Perotti cities silhouettes (source: in (Zevi 1996, pg. 69)

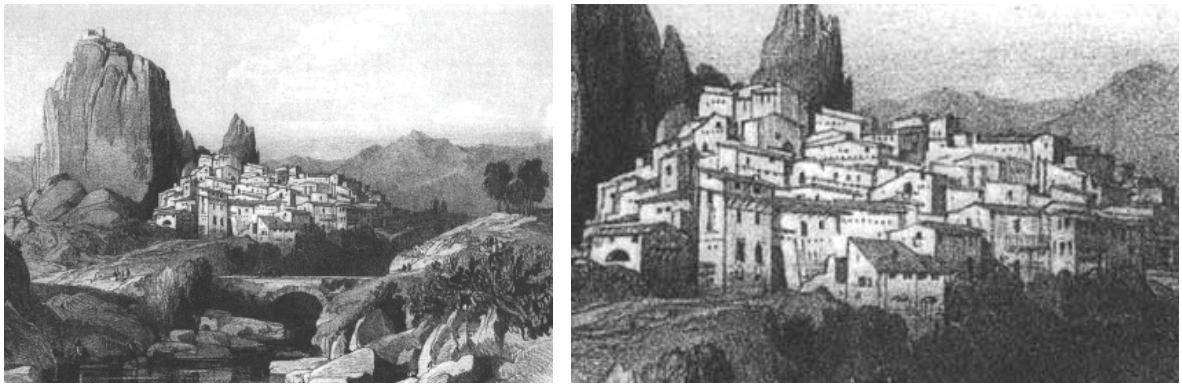


Fig. 46 Edward Lear illustr., Palizzi view, Reggio Calabria, Italy (source: Journals of a landscape painter in Southern Calabria, 1852. Image taken from the 1st edition of the volume (coll. priv.))

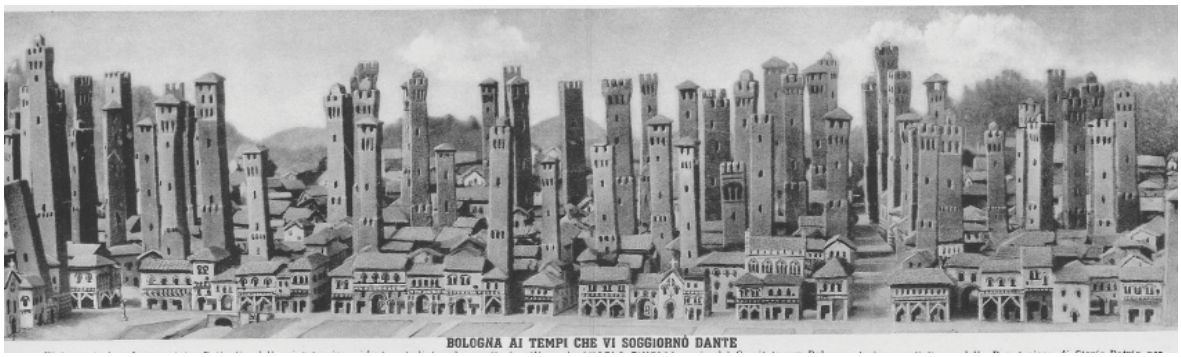


Fig. 47 The landscape of Bologna in the 12th-13th century, illustrated by Angelo Finelli showing the the relation between, the low-rise mass, the towers and the natural setting.

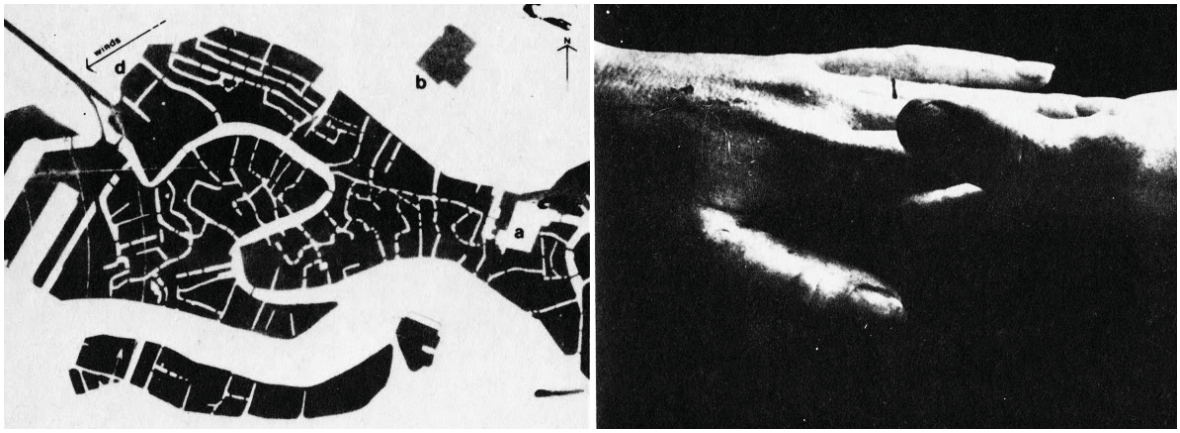


Fig. 48 The divided form of Venice as perceived in f gure-ground plan is imagined as a handshake by O. Ungers (2011)

image as a figure and the metaphor that it represents or to which it can be easily associated (fig.48). In this sense, the preservation of this metaphors as a synthesis of visual mass can guarantee the continuous quality of the preserved image.
In addition, these representations, being more accurate in terms of architecture, illustrate the general shape of the buildings, showing various visual correspondences between the single build masses. In this view, the image of the city can be read as the sum of the building silhouettes, which due to similarity create coherence with each other.
In our case, residual parts around historical areas being very vulnerable to new modern interventions can be the cause of fraction of the historic image, by disturbing its idea of wholeness represented through the building mass, a particular skyline, shape or figure read in contrast to the natural setting. In case they completely disrupt with the forms of the past (whether referring to real shapes or metaphors) and renounce to a model of organic growth of traditional architecture in the urban scale by lacking the symbiosis with the surrounding built and natural context, and being posed in sharp distinction in relation to the form of the city, they can risk to harm the historical landscape. Accordingly, the visual dialog between the build elements that compose the urban environment and the natural setting which characterizes historical cities fails. Hence, the form of the city results as fragmented and lacking the correspondence between parts become difficult to perceive and combine together as a whole.
This issue of lack of dialogue between elements of the built environment was first reported and put into evidence, in 1974 by Pier Paolo Pasolini, in his short movie “La forma della città” (The form of the city) referring to the case of the citadel of Orte, in Italy. In this example, a new modern object build close to the historical city has caused a crack and a disturbance in the vision of the traditional urban form of the city of Orte (fig. 49), in the profile and urban mass perceive from a distance. Through this movie, Pasolini denounced this environmental and visual degeneration which origin according to him was a deep cultural degeneration, what he defined as “development without progress” in modern times. It seems that the absolute harmony and purity of the traditional city and the clear skyline of the physical built mass projected into the landscape has been spoiled by the presence of a strange modern object, which form was totally foreign to the traditional city.
Through this strange presence, at that time, Pasolini poses the problem of city growth and transformation and that of the dialogue between new interventions and the existing urban environment, in particular referring to the image of the city as a whole, in terms of continuity and coherence, which needs to be maintained such. In

Fig. 49 Movie sequence, New developments affecting the traditional urban landscape of Orte (Pasolini, Brunatto 1974)

fact, the main visual problem, in this case, was not the image of the building itself, but a wider attitude and position towards the problem of inorganic growth which in this case creates a gap in the relation between the historical city and the new development. Seen in a wider perspective, this kind of interventions, apathetic to the existing image of the city is not set in visual relation with other elements of the urban environment and moreover do not deny the image as a whole.
In the traditional Italian context, the form of the city as a whole was conceived as closed. Its mass was pointed out of the natural environment set as background, and every building was posed in a relation of continuity to other buildings following an idea of a unity of the city mass. Educated in this context, Pasolini's sensitivity was touched by the disruption of the equilibrium and harmony of forms, initially disturbed by the presence of a new modern house. The more that this demonstrates again the direct link between the urban form (as it is perceived) and human sensitivity, as it touches him psychologically. What Pasolini actually capture was the dramatic moment of friction between the traditional city and the new architectural mass. But, of course, the issue was much deep and wider. At that time, he foresees the problem of extension of traditional cities outside the walls with ordinary buildings and neglecting the dialog with the existing city. This affects not only on the poor image of the new extended parts but harms and violates also the historical image of the traditional city. This modern philosophy of designing the growth of the city, by contrasting its traditional image which have brought to eclipsing it, and moreover, by thinking of buildings as separate entities (architectural objects per se), can influence on the perception of the city as separate fragments which cannot be putted together in one compositional idea that constitute a whole.
In this context, Pasolini highlighted the importance of a limit of the city considering the traditional Italian medieval cities which were surrounded by walls showing a precise idea in the form of the city as they are closed and defined. Nevertheless, this position is valid also for open historical cities which have a very prominent character of the urban form that identifies them as a whole. In this sense, growth or other transformations must be part in a systemic way with the existing character of the urban form, in order to recreate unity in the city image. Moreover, the building mass can be related also to contextual aspects by forming a binomial with the natural setting. Massing has the potential to show the articulation of the urban form in relation to its accommodation with the site, identified the densities and the structuration of the city, and emphasized the importance of landmarks, monuments, and particularly important architectural buildings. It points out hierarchies and flattens similarities showing a clearer shape. It can also strengthen the idea of units to a whole,

Fig. 50 The geographical landscape of the Roman castles in a vintage print.

similar and different, repetitive to uniqueness, and put into evidence the relationship between plan and section geometry, which can be an object of further analyses.
The portrait of the city as an image from a distance represents an abstract synthesis of the urban landscape perceived in a geographic dimension (fig. 50). According to geographer Biasutti (1962), the representation of a geographical landscape is more abstract and selective as it tends to identify the most repeatable elements forming a certain character of an area and to point out few elements selected based on their repetitively or singularity confronted to the whole. This selective interpretation describes the synthesis of the landscape, through its main peculiarities and basic shapes. In addition, Sestini (Sestini 1963,p.9) considered as an important part of the geographic landscape the relation between the various components considering the natural and the anthropic ones in a complex combination of the various subcomponents which are put together in an organic unit. In this sense, the building mass or the portrait of the city set towards the natural background can be considered as a synthesis from different visual perspectives that transmits the character of the landscape.
According to the definition of Scottish Natural Heritage and Countryside Agency in their guidelines, the synthesis of this image can be defined through "*distinct and recognizable patterns of elements that are posed coherently in a particular type of landscape. Particular combinations of geology, geomorphology, soils, vegetation, soil uses, f eld structure and human settlements set the character*"[57].
In fact, urban landscapes differ from each other first due to the elementary components, and secondly due to the topological structure that connects them and constitutes its main features. Sestini, based on the large study of Italian landscapes articulated the landscape concept not only as a picturesque vision, related to aa panoramic view from a single point of the territory, but defines a synthetic view through the comparison of a series of images posed in sequence, by identifying common and reputable elements that form a character. In his view, "*The concept of landscape free from that a determined view, becomes a synthesis of real or possible views ... In these cases, we no longer refer to a single image tied to a given viewpoint but consider a whole sequence of associated images, which repeats certain fundamental elements in a consistent and characteristic coordination. Elements to consider can be the volumes, the lines, the colors, coordinated in space according to a particular arrangement of distribution and proportions; or objects, buildings, and vistas, soil reliefs, the spontaneous or cultivated plants, isolated or clustered houses, etc., even in certain mass and distribution relationships*" (Sestini 1963,p.9).
This definition identifies more peculiar characteristics of the building mass which is related to a more accurate portrait of the city that distinguished within the build mass forms and shapes that can be separated as landmarks or read together due to gestalt principles. This internal coherence between the parts in relation to the whole reveals the character of the urban landscape and the visual quality of the city image. Zevi, in his essay on popular architecture and small settlements, highlighted the thoughts and studies of various authors such (L. Piccinati, E. Detti , E. Guidoni[58]etc. which work constitute the basis to understand the relationship between the medieval structure and the landscape. The visual quality of the city in their though and studies is related to an idea of unity made up by the combination of single masses and is represented in plan, view or section in urban scale through the mass-void relation

57 Scottish Natural Heritage, The Countryside Agency (2002) Landscape Charter Assessment, pg. 9.

58 See: Piccinati, L 1978, Urbanistica Medievale, Dedalo, Bari; Detti, E., Lo studio degli insediamenti minori. Alcune comunità della Lunigiana e della Versilia in "Urbanistica", n.22, 1957; Guidoni, E., 1992, Storia dell'urbanistica. Il Medioevo, Laterza, Bari

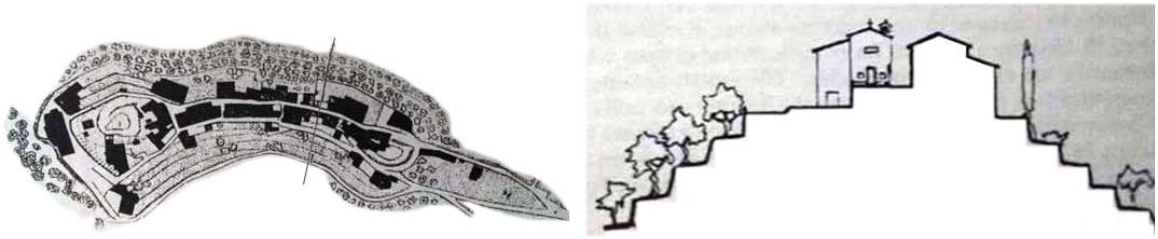


Fig. 51. The landscape of the historic center of Pedona, Italy, (E.Detti) section, plan (source: Zevi 1999, pg. 61)

between buildings, space and the natural setting (fig. 51).

As a result, the portrait of the city expressed through the built mass–natural landscape binominal can be represented through the following methods that visualize its quality in the urban scale.

1. **The building mass can be represented through historical iconographic illustrations, paintings, photographs having a picturesque character.** They not only show clearly the relationship with the geographical, topological features and the natural setting but can also describe a structural character of urban landscape by narration the most significant components that constitute centers of the visual frame, repeatable elements and singularities, and the level of connectives as a whole.

2. **The building mass as a profile, outline or silhouette of the city represented through gestalt figure-ground technique.** This aspect is related first to a geographical dimension putting into evidence the main natural features and landmarks. Secondly, this synthesis set in plan or section as a figure with a good shape can lead to a metaphor or to a conceptual perception of the form of the city.

3. P**lan, facade outline or section drawing in urban scale** (regarding single buildings or neighborhoods) including typical urban sections which put into evidence the density of the build mass and the reciprocal relation between buildings and their sequences in space, open space and greenery, protected views, aspects related to landscape perception and visual orientations, as well as a structural relation between urban components drawn at that specific urban scale.

4. In addition, in order to preserve the form of the city, it's important to further investigate t**he massing profile of the single buildings, b**ased on their typology and visual impact in order to propose constant for new buildings that do not impact negatively the overall profile of the city. In this sense, the city image will be protected by preserving the urban and architectonical mass.

2.4.2 Geometry and proportions.

Since ages, when dealing with architecture, humans often have paid attention to visual aspects of mass composition, by using geometrical and mathematical principles which set the relationship between the single unities and the whole. Since the classical Greece period, the golden section or other optical corrections were largely used to regulate buildings proportions in order to achieve a harmonic image through visual perception. Since then, along with the course of history, another system of proportion that has been developed including anthropometrics, scale, Le Corbusier's modular, etc. These systems carry a similar objective: to provide order and to produce unity in the single building which on the other hand provides visual pleasure. Extended to the context of urban landscape visual perception, geometry and proportion consider the order and visual unity in a larger scale. Thus, it can serve as a tool to provide aesthetical quality of the city image.

Regarding visual aesthetical aspect of architecture, extended also to urban landscape perception, the first theoretical findings related to principles of geometry and proportions are held by Vitruvius in his treatise De Architectura, although it deals mainly with architecture. He believed that architects when designing a building should focus on three main cornerstones, the well-known *f rmitas (strength), utilitas (functionality), and venustas (beauty),* which to Vitruvius were equally important. Beauty in particular, with regard to the abstract form of buildings, according to Vitruvius (Vitruvius 2005) derives from the imitation of nature and its universal laws of proportion and symmetry. Thus, beauty consists in a well-defined proportion of parts based on sacred geometry (the so-called ideal forms). This sense of harmonic proportions is also relating do a reaction of delight [59] to the humans.

Besides this, he uses the term **"eurythmia"** to describe a graceful and agreeable atmosphere of the building as well as a visible coherence and harmony between parts, refining geometrical proportion between parts in order to perceive a pleasing image.

In fact, in his treatise, he defines **eurythmia** or shapeliness as an attractive appearance and a coherent aspect in the composition of the elements and moreover, a beautiful appearance and fitting aspect of the parts once they have been put together (Vitruvius 2005)[60] . Thus, a pleasing object is governed by perceptible harmonic proportions between its parts, which can be supported by geometrical forms and arithmetical ratios (Jones 2000). This conception can be extended also at the urban scale, in the spatial arrangement of the city as the result of the arrangement of single architectures forming a whole.

During the Renaissance, Leone Battista Alberti was the first to revised and further elaborate Vitruvius's treatise and went beyond the medieval idea of ideal beauty as cosmic based on abstract proportions found when contemplating the cosmos. Actually, he structured and articulated in a logical way principles concerning the art of building the city, including aspects that cover from history to architecture and town planning subjects. Recovering Vitruvius's triad, he stresses particularly venustas. In contrast to Vitruvius who make no distinction between utilitas, firmitas and venustas, beauty has great importance for Alberti. In this regard, he believed that the real task

59 The Vitruvian triad firmitas, utilitas, and venustas, was also translated as commodity, firmness, and delight which paraphrases beauty.

60 Vitruvius, Ten Books on Architecture, trans., Ingrid D. Rowland (Cambridge: Cambridge University Press, 1999), Book I, chapter II, line 3; hereafter citation is from this translation, "Eurythmy is beauty and fitness in the adjustments of the members. This is found when the members of a work are of a height suited to their breadth, of a breadth suited to their length, and, in a word, when they all correspond symmetrically".

of an architect was to go beyond function and firmness of a building, aiming to touch humans emotionally and to cause pleasure.

"*Now graceful and pleasant appearance, so it is thought, derives from beauty and ornament alone, since there can be no one, however surly or slow, rough or boorish, who would not be attracted to what is most beautiful, seek the f nest ornament at the expenses of all else, be offended by what is unsightly, shun all that is inelegant or shabby and feel that any shortcomings an object may have in its ornament will detract equally from its grace and from its dignity. Most noble is beauty, therefore, and it must be sought most eagerly by anyone who does not wish what he owns to seem distasteful"* (Alberti 1988,p.155)

He replaced Vitruvius definition of beauty as eurythmia with "graceful and pleasant appearance", delightful for the sight. In addition, he considers beauty to exert influence upon people, not only by endowing to the buildings certain authority but at the point that its grace and dignity may protect the building – and by extension, the city - from enemy invasion.

"*Beauty may even inf uence enemy, by restraining his anger and so preventing the work from being violated*"(Alberti 1988,p.158). With this regard, Jan Bialostocki has written: "*Thus, we learned that beauty and dignity are the best weapon against destruction"* (Białostocki 1964,p.13) and moreover Caspar Pearson (2011) in his compressive studies about Leon Battista Alberti's approach to the urban environment sustain that he was convinced of the psychological impact that architectural form can exert upon people. That's why, when investigation about the principles that influence the historic city image, L.B.Albertie's idea become crucial.

Although he focuses on architecture, he defines a law for the entire built domain, which is valid also for the city, (since "a house is a small city and the city is a large house"(Alberti 1988)) in order to achieve harmony between the single entities (or part) and unity of the whole.

L.B.Alberti defined it as ***ratione concinnitas***[61] or "***the harmony and concord of all the parts achieved in such a manner that nothing could be added or taken away or altered except for the worse***" (Alberti 1986, p.131)[62] .

In this sense, concinnitas is seen as a pattern or a precise rule that composes all the parts defining not only their mutual relation and visual correspondence, but also the relation as a whole. Extending this concept from architecture to the city image, we can logically assets that the city image as a whole is the result of certain proportional correspondences between the single parts. Its result is a perfect form, which structure is seen as a mechanism of harmonization and reconciliation of a complete and suitable whole, through a geometrical and mathematical mechanism of proportion. This meticulous care for the proportions becomes perceptible to the senses of the beholder influencing his psychological wellbeing. The beauty raised through proportions is able in fact, to delight human's senses at the point to reconcile them with a cosmic dimension. This happens as concinnitas is considered as a rule that governs nature and encompasses everything.

Thus, besides Vitruvius concept of venustas as the harmonic proportions between the single parts of the human body (which was considered as a model of order by ancient Greeks), Alberti finds out visual aesthetical qualities in perfect forms or in those that can be read as figures. While Vitruvius, inspired by human proportions sets an anthropomorphic metaphor in architectural design based on the harmonic

61 Reasoned harmony

62 L. B. Alberti, The ten books of architecture, Leonie edn, New York, Dover, 1986, Book VI, Ch, 2, p.131

and accurate relation of the members of the human body[63]. Alberti includes also their relation to the complete whole, referring to the human figure, which laws and proportions are part of the order of nature.
Alberti includes also their relation to the complete whole, referring to the human figure, which laws and proportions are part of the order of nature.
Before Alberti, during the Quattrocento, Francesco di Giorgio Martini, has used in a metaphorical way the anthropomorphist comparison between buildings (in particular to the plan of the church) and the human body in order to achieve religious recognition (fig.52). Only during the Renascence, this comparison starts to earn a different value by describing the proportional relation between parts and the harmony as a whole in accordance with the laws of nature. The symbol of this harmony of form related to the human body has become the Leonardo Da Vinci's drawing of The Vitruvian Man (fig.53), which on one hand, recalls the Vitruvian man in its proportions and, on the other hand, fits exactly into the perfect shape of a square and a circle, which represent the invisible bonds to God. In fact, this artificial harmony created by man intends to imitate the divine harmony found in nature.

"Beauty is a form of sympathy and consonance of the parts within a body, according to def nite number, outline, and position, as dictated by concinnitas, the absolute

63 In Vitruvius Pollio, The Ten Books on Architecture, Morris Hicky Morgan, Ed. Chap. 1, paragraph 4, "Therefore, since nature has designed the human body so that its members are duly proportioned to the frame as a whole, it appears that the ancients had good reason for their rule, that in perfect buildings, the different members must be in exact symmetrical relations to the whole general scheme".

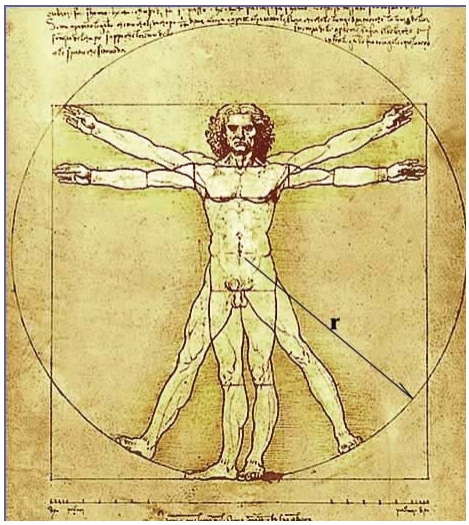


Fig. 52 Francesco di Giorgio Martini, Anthropomorphic illustration, 1489,Florenz, Biblioteca Laurenziana, Codex Ashb. 361.
Fig. 53 Leonardo da Vinci, Vitruvian Man, 1492, pen, ink, watercolor and metal point on paper, 34.3 x 24.5 cm, Gallerie dell' Accademia, Venice.

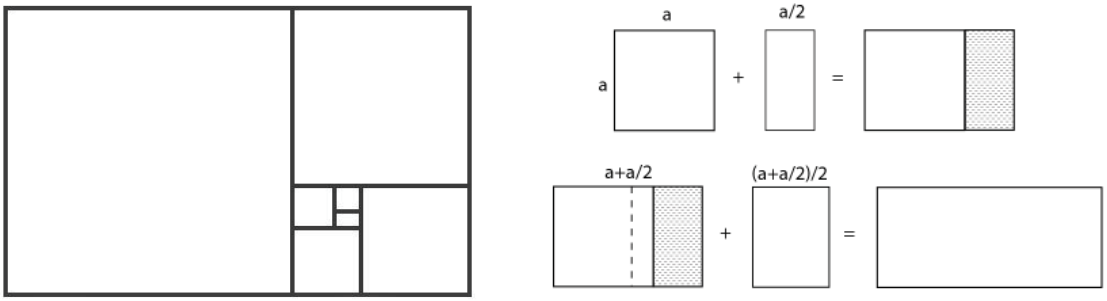


Fig. 54 a) The golden section; b) Proportions according to L.B. Alberti

and fundamental rule in Nature. This is the main object of the art of building, and the source of her dignity, charm, authority, and worth."(Alberti 1988, p.428)

Accordingly, Leon Battista Alberti promoted the use of the golden ratio (fig.54a) also called divine proportion, referring to the human body proportions. In addition, harmony according to Alberti was extended to a concept of continuity in nature. Thus, the city in order to have an aesthetical quality should imitate the rules of nature not only as Vitruvio dictated, in terms of numeric relationship between entities and reciprocal position of parts, but also as an outline or overall shape, at the point that our senses find correspondence and harmony between the elements, and at the same time perceiving them as a whole figure. With Alberti, for the first time, was the city as a whole to give sense and define the quality of architecture. At that time, all this discourse on harmonic relations between parts and the whole was meant to please the eye and move people spiritually for religious purposes.
Regarding the methodology, L.B. Alberti (Alberti 1755, Book IX, Chap. VI) created a system of proportional analyses in architecture based on the short (1:1, 2:3, 3:4), middling (2:4. 4:9, 9:16) and long ratios (1:3, 3:8, 1:4) which derive from musical harmony (fig. 54b).
The presence of proportional ratio in architecture that finds correspondence in urban scale means that the aesthetic of architectural facade is extended to the coherence of urban scale. Volumetric proportion of the buildings and its parts, as well as the proportions of the single design elements that compose it, are structurally connected with that of other buildings. The relation between the single parts, enhance the level of legibility of the whole and the level of order in the large scale. It serves also to

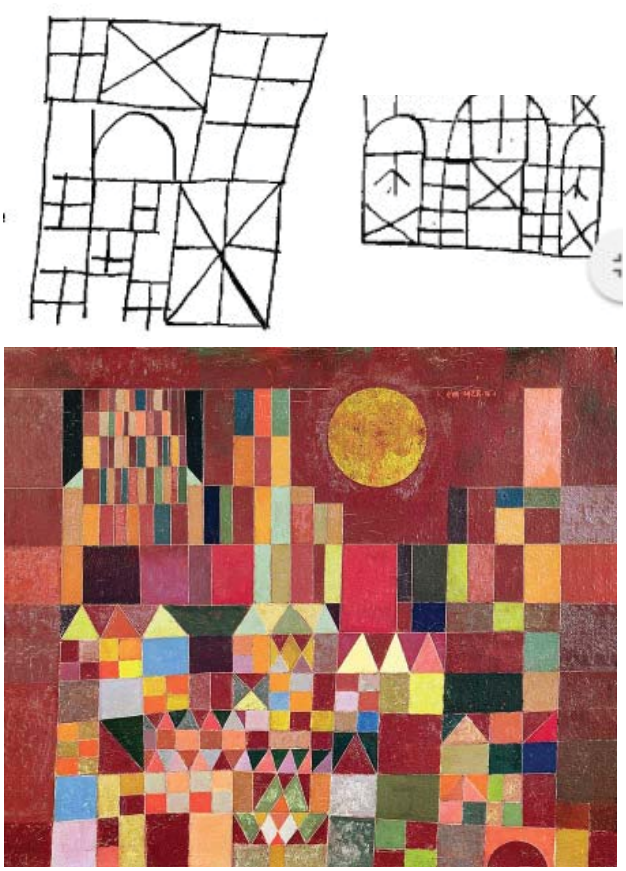


Fig. 55 Paul Klee, Study on structures in elevation (source: Klee, P. and Spiller, J. (1969). The thinking eye. London: Lund Humphries, p.236) and "Castle" landscape painting;
Fig. 56 Landscape of the historic center of Lucchio, Luca, Italy (photo by Marzia Francesconi)

connects the large scale of the city to the small scale of the building, through visual coherence between the units and their relation to the whole visual frame. Relations between specific volumes or various design elements in building's facade that result repetitive due to their reciprocal proportion create coherence on a larger scale.
In traditional cities, geometry and proportion become a crucial principle related to the order and aesthetic quality. Geometrical continuity and order are given by the coupling of structures due to proximity and similarity of single units' proportions which are enhanced also by internal proportions of elements composing the facade. Using the visual logic of the eye, buildings are separated into their constituent elements which on their side create a visual association that made up structural relations.
Painter Paul Klee, in his Landscape compositions (fig.55) intending to create organic wholes, operates through a structural approach in which single parts support each other having proportional and geometrical correspondences. Similarly, in the historic urban landscape, the single units (buildings or their single components) support each other due to geometrical and proportional interaction (fig. 56).
In conclusion, **geometrical and proportional analyses of single architectures, including the dominant visual components appearing in the facade,** are crucial to determining constants of design which can guarantee a visual continuity of the historic landscape, when intervening in residual areas around the historic center.

2.4.3 Levels of scale

The concept of "levels of scale" was introduced by Christopher Alexander (Alexander 2002) as a rule that contribute in constituting an image of the city as a whole based on the repetition of elements in different scales which create a visual "dramatic" effect attracting attention and stimulating the desire to explore and go deep into the image. This is related to the fact that beauty comes from the harmony between the large and the small scale or the way they gradually fit together. The levels of scale have to be marked in order for each scale to be differentiated. Nevertheless, a big passage of scale can create a visual gap or on a contrary, a uniform and constant passage of scale can arrest the desire to explore. According to Ch. Alexander, a gradual passage of scale is the more appropriate in order that the difference between the scales cannot be understood and the passage of scale serves to look inside the image.
Joseph Albers (2009) in his painting series "*Homage to the Square*" (fig.57) explored the perception of image depth through color effect and by the composition of nested squares which change the sizes and scale. The jump from big to small pieces in the first painting is primarily given by color, maintaining uniform the squares scaling. In

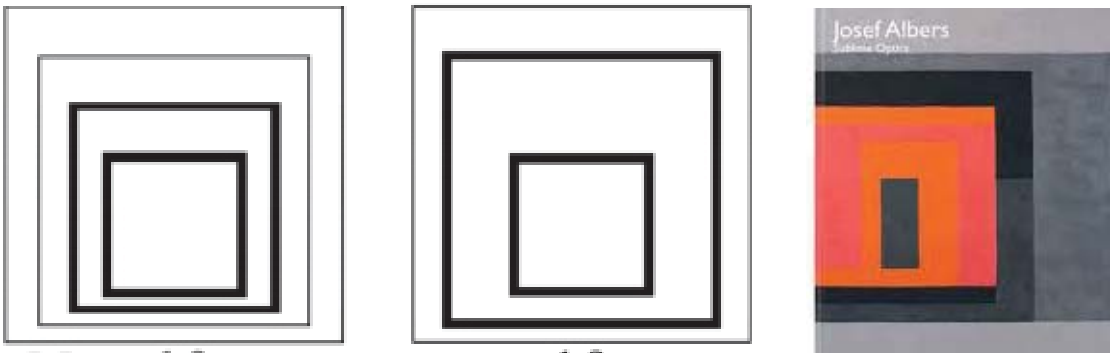


Fig. 57 Josef Albers' nested squares composition types a) uniform geometrical scaling b) a small jump of scale c) Complex scaling composition (source: Albers, J. (2009))

the second image, the three levels of scale are achieved by a small differentiated jump of scale between the three squares connected to the smaller entities through color. In the third image, the geometric structure has many levels and each level present elements that are neither homogenous in size not they display exaggerated jump of scales. The aesthetic considerations regarding these simple compositions are related to the layering order which works in different scales revealed and empowered also by color.

Similarly, if we seek a coherent urban landscape, we must understand the various entities that compose it, forming levels of scale. The building mass, for instance, can be scaled down into various size volumes, volumes can be scaled down in smaller volumes (differentiated by material, color, form, etc.), openings can constitute also a different level of scale and material texture, small-scale hatches can constitute a further level of scale. Their gradient of composition, and moreover their relationship at different scales reveal the idea of unity as a whole.

A large range of levels of scale is established in the below image of a building facade (fig. 58) defined by the large homogenous surface of the street and the minute scale of wood grain on the upper part of the facade. Despite this, what is really important is the distinction and clearness of levels scaled in a way to support each other and to create balance, with smooth jumping of scale, which make the image more attractive for the sight. The modular division of the façade, and the smaller subdivision inside it, related to the wooden slats, the roof made of tiles and the stone masonry are in harmony and present good levels of scale.

Similarly, referring to the large visual frame of the historic urban landscape (as in the case of the city of Berat in fig.59) we can notice the presence of good levels of scale that go from the build mass, the fragmentation to building volumes, the further division into smaller volumes, a jump to the various openings and the presence of small-scale texture and details. This passage is gradual and balances, but still offering the possibility to distinguish and read clearly the various layers. Thus, when

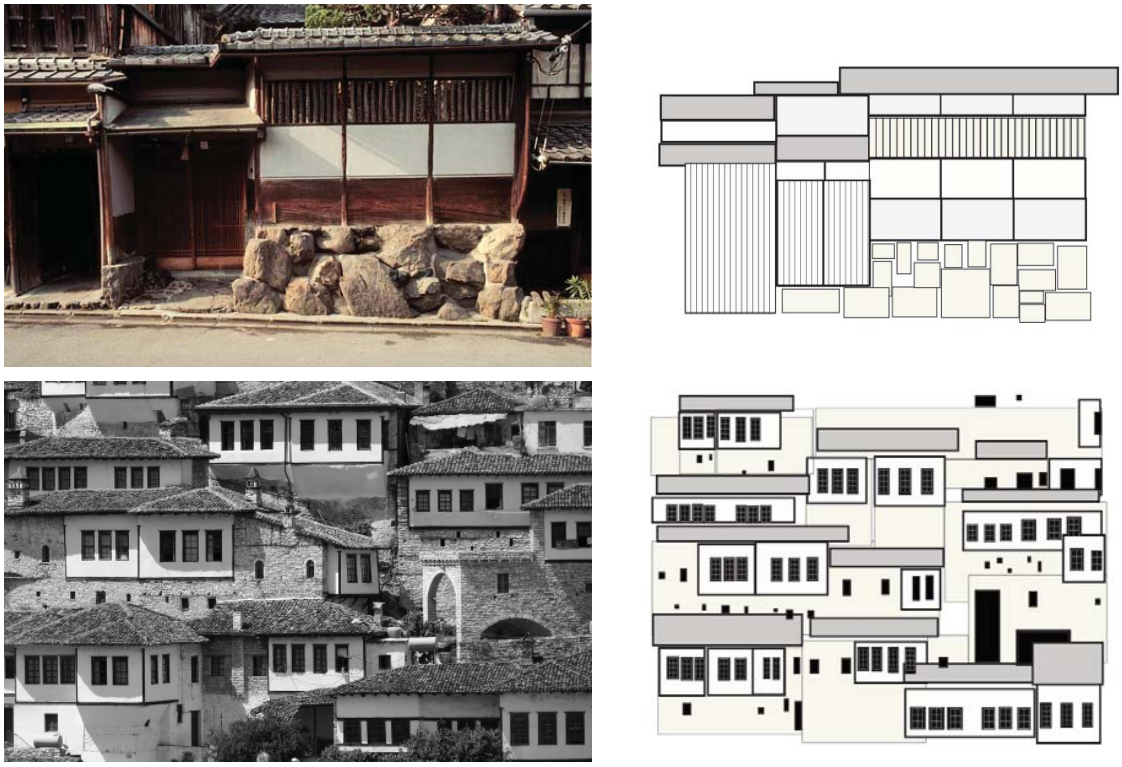


Fig. 58 Building facade that exhibit a high level of scale (photo by Allen Washatko, analyses by the author); Fig. 59 The traditional city of Berat present a high level of scale (source; author's)

analyzing the historic urban landscape in terms of levels of scale, is important to understand the various layers as centers and the relation between them, as a parameter that contributes in the perception of an aesthetical quality.
In this sense, the levels of scale can be understood by structurally understanding the compositional elements of the building's facade and the way they interplay in close by scales. In the whole visual frame, these elements are in proportion with each other and offer a balanced passage of scale.

According to Salingaros (Salingaros, Mehaffy 2006) the hierarchical scales, should be related and work together to form a coherent whole, in a multiplicity relationship, re-elaborating Christopher Alexander idea of a city as a semi-lattice structure. In fact, considering this theory, the hierarchical scales proposed by Salingaros, are seen primarily as echoes and gradual continuation of single entities forming gradients and levels of scale, then a rigid structural hierarchy. A city in which different entities are in the same size or valence is not stimulant for the senses, as well as a city, in which there is no correspondence between entities at different scales result as chaotic (Jian 2012).
Thus, city components need to be assembled at different scales, creating linked components. In some cases, it is represented also by the fractal geometry, which is found in nature. Thus, when analyzing the historic urban landscape in terms of levels of scale, is important to understand the various layers as centers and the relation between them.

2.4.4 Local symmetry

Objects which transmit the beauty of a living whole present usually symmetry. According to gestalt principles elements that are symmetrical to each other tend to be perceived as a unified group (Koffka 1935). Symmetry in fact attracts humans eye constituting a visual center. However, this does not mean that objects need to be perfectly symmetrical. Axial symmetry can result as disturbing sometimes at the point to be rejected visually. Thus, the meaning of symmetry in terms of pleasing sight perception is related to a visual balance of the whole object. Vitruvius attributes to "symmetry" a sense of order in the perceived object, meaning balance between parts to form a coherent whole.
Christoper Alexander states that "perfect symmetry is often a mark of death in things, rather than life" (2002, Book 1, pg.45). In fact, perfectly symmetrical views tend to diminish our interests to explore them. On a contrary, a living whole presents local, small-scale but multiple and organic symmetries which create more dynamics of

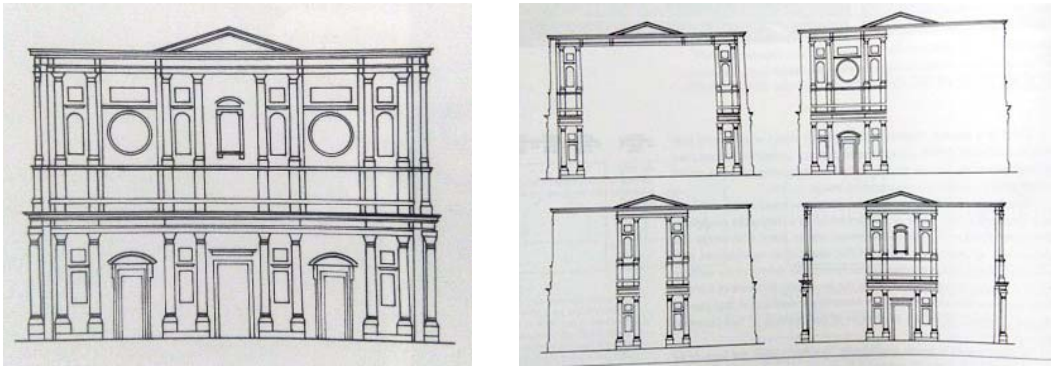


Fig. 60 Multiple overlapped symmetries in the facade design of san Lorenzo Church in Florence by Michelangelo. (source: from Von Miess 2013, pg. 86)

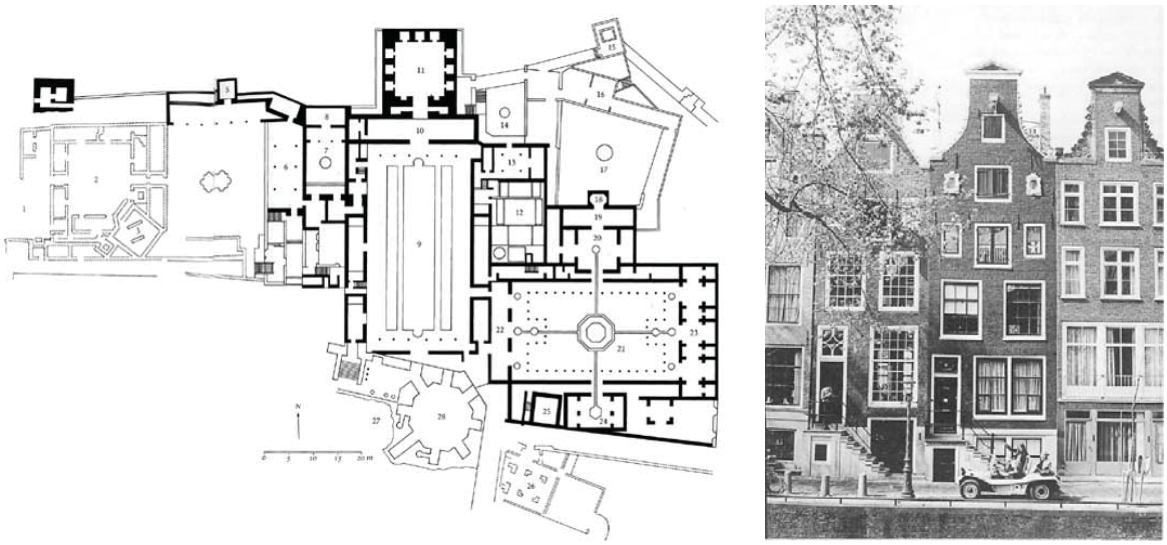


Fig. 61: Multiple local symmetries determine the aesthetical quality of scape in every point. a) The plan of Alhambra; b) Amsterdam canal houses (Source: Alexander 2002. Pg. 187, 192)

view instead of the rigidity and statics of a total symmetry. Local symmetry creates balance and a coherent whole in contrast to the overall symmetry which seems to separate more the object.
The great number of small symmetries creates a bond between them in terms of repetition and a compatibility. In addition, it distributes the visual focus and gives rise to a balanced form in contrast to a very central (or axial) rigidity. This facilitates the reading and the understanding of the visual frame, and serve to create order in its structure. The complex hierarchy of local symmetries has been successfully used by Michelangelo in San Lorenzo facade (fig.60) achieving a balanced and living whole. They present even a higher weight compared to the central symmetry.
In the urban landscape, symmetry at different scales helps to focus the image and further explore it with regard to its centers. Accordingly, a more pleasing composition is achieved through the use of local symmetries (fig.61).
In the historical landscape, local symmetry happens at different levels: buildings or objects, symmetry within the building's façade or another object facade; road symmetry, clusters of buildings configuration etc. In other cases, even in the total lack of asial or central symmetry the view of a free object , building or landscape can present an aesthetic order. In the urban landscape, symmetry at different scales helps to focus the image and further explore it with regard to its centers. Accordingly, a more pleasing composition is achieved through the use of local symmetries.

In the historical landscape, local symmetry can be read at different levels: buildings or objects, symmetry of the elements of the building's façade or other object facade; road symmetry, parital road walls symmetry or clusters of buildings configuration.
In conclusion, the presence of local symetry can be typologicaly and morphologicaly identified by analysing its constant presence in the buildings fasade and road parietal walls.

2.4.5 Gradients (or graded variation)

The gradient is one of the geometrical proprieties which according to Christopher Alexander (Alexander 2002) creates a coherent visual and perceptual frame in complex structures. In urban landscape perception, it usually refers to a repetitive series of elements, either physical or spatial, which gradually change of side, form or orientation.

“Qualities vary, slowly, subtly, gradually, across the extend of each thing. GRADIENTS OCCUR. One quality changes slowly across space, and becomes another”. (Alexander 2002,p.205)

This creates heterogeneity and order at the same time, which attributes to the visual and perceptual frame a character of a “living” structure. In fact, gradation combines elements and creates a pronounced hierarchy between them, articulating form according to a magnitude (for example size, intensity, degrees of intimacy etc.)
Many elements of the traditional architecture are structured in this way, in contrast to modern architecture which is more standardized. The necessity to adapt to changing conditions from the base of the building to the top (such as light, space, indoor conditions etc.) have caused the building to change according to certain gradients *(f g.62).* In addition, the passage from external space to internal space is not always sharp but passes through gradients, which reveals intermediate centers and various space quality. Moreover, gradients create a soft continuity between different figures, materials, and contrasting elements more in general.

In historical cities, the presence of repeatable gradients characterizing buildings impacts the image of the city as a whole. It contributes to the wholeness of the overall arrangement of the city and contributes to integrating the residual area with the historic center. Therefore, this propriety becomes crucial for the safeguard of the historic visual character as a whole when intervening with projects in the residual margins of the historic area.

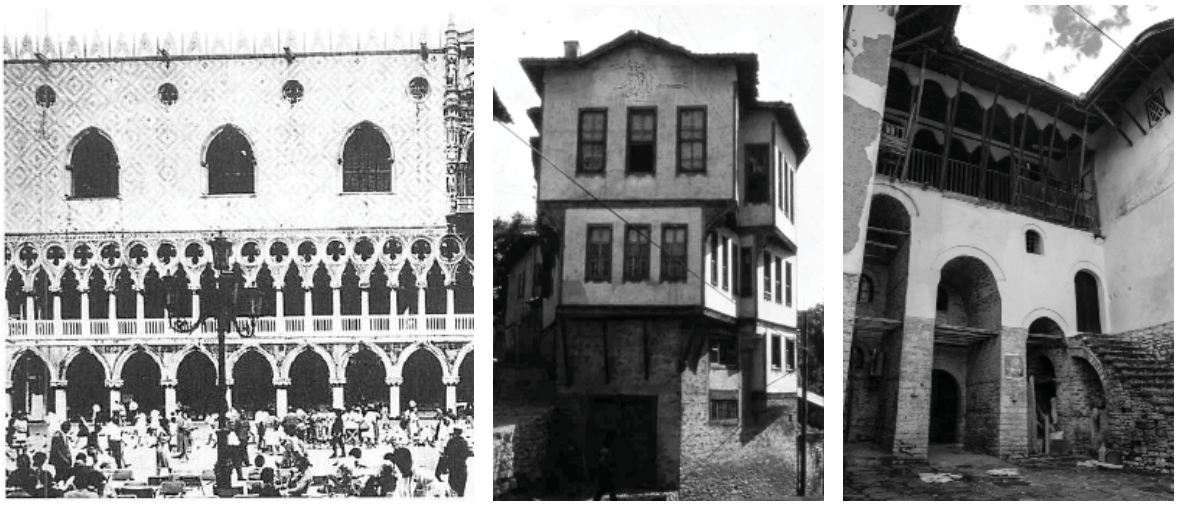


Fig. 62 Gradients in architecture : a) Openings gradation in the facade of the Doge’s Palace Venice (source: Alexander 2002, pg. 209); b) volumes gradations in Safranbolu House, Turkey, (source: http://web.mit.edu/4.611/www/L17.html) c) External-internal spatial gradation in Gjirokastra House. (source: author’s photo)

2.4.6 Positive space

In parallel with the visual aesthetic quality of the built landscape, an important role in the visual quality of urban landscape is attributed also to the spatial perception, its vitality, and harmonization as a whole and to the fact that space becomes an experience that embraces people. For the first time, this idea of complexity and integrity of urban space, which attracts human interest, came up during the Enlightenment century, when the city was considered as a natural phenomenon imitating nature and people walk through end experience it like in a forest. Marc-Antoine Laugier, one of the main theorists of this period, proposed a picturesque idea of aesthetics in the urban design similar to this experience. He described an anti-perspective character of urban space, with a variety of sequences comparing it to a forest, but insisting on his character as a whole. In fact, the ideal urban space according to Laugier is considered as "*…a whole... divided into an inf nite number of beautiful, entirely different details so that one hardly ever meets the same objects again, and, wandering from one end to the other, one comes in every quarter across something new, unique, startling, so that there is order and yet a sort of confusion, and everything is in alignment without being monotonous, and a multitude of regular parts brings about a certain impression of irregularity and disorder which suits great cities so well.*"(Laugier 1977, p.129)

This enthusiasm of imitating the nature, in particular, the forest as a metaphor, is materialized in the urban space conception as an alteration of regularity and variety in order to avoid visual monotony and to offer stimulus. At a first glance, this can be interpreted as a fragmentation of the urban space into different sequences characterized by strong contrast and surprise similar to the natural landscape. In this regard, Laugier sustains: "*Whoever knows how to design a park well will have no difficulty in tracing the plan for the building of the city according to its given area and situation. There must be squares, crossroads, and streets. There must be regularity and fantasy, relationships and oppositions and casual, unexpected elements that vary the scene; great order in the details, confusion, uproar, and tumult in the whole"* (Laugier 1765 pp.312-313)[64]. However, in the end, he insisted on the continuous character of urban space as a whole.

Previously, Giambattista Nolli put into evidence this idea of wholeness by selecting and representing the continuous space between the monuments in the cadastral map of Rome. This detailed and still diagrammatic map triggers an idea of a city as a whole due to the selection and visualization of this complex and vital but still continuous and ordered urban space and its various relations with the monuments. In this sense, urban space is revealed in its positive accent.
This positive interrelation between monuments and urban space was revealed also by the townscape tradition. Camillo Sitte and other supporters of the townscape movement highlighted also the role of the architectural object in the definition of a positive urban space by diminishing their role as urban icons. More than the single buildings, the primary role is attributed to space and to the logic of public space formation as consequence of joined urban facades.

64 Note, however that the text cites takes up ideas Laugier had earlier advanced in his "Essai sur l'Architecture", Paris 1735, pp 258-265, "It is no easy to design a city in which a magnificent ensemble would be divided in an infinity of beautiful details, all different from each other; in which there would be order, although also a sort of confusion…."

For Camilo Sitte and the scholars of the townscape tradition, the aesthetical quality of the city depends on what is visually preserved by people by walking through the urban space. The urban landscape of medieval cities results appealing to human senses, due to the organic continuity of space which provides a variety of vistas and at the same time a sense of order. The positive space created, reflects an idea of

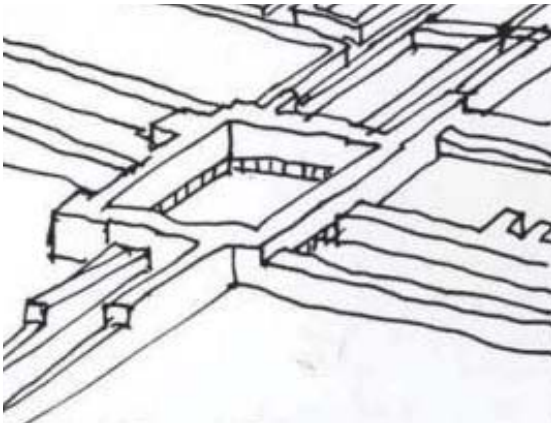


Fig. 63 Urban structure concept (Krier 1979 ,p.17)
Fig. 63 Bath, England Circus (1754-1775), Architect J. Wood Sen and Jun

a whole which is made up of coherent perspective sequences which time to time undergo some variations and transformations which attribute life while ensuring the visual unity. This visual unity is given primarily by highlighting the relation between space and centralities or significant buildings and the relation between the voids and the building mass similar to gestalt image background representation.

Rob Krier in “Urban Space”(1979) and Paul Zucker (1959) in “Town and Square” created a systematic catalogue of public spaces, categorizing them according to geometry, accessibility, visual hierarchy and openness criteria, with the intent to delineate a series of common principles orienting the design of a positive urban space such as: the presence of enclose public space, spaces for contemplation, harmonic proportions with the surrounding buildings; monuments on which to focus located in particular positions.
Of small urban space they analyzed the single elements that defines squares or the road space such as facades, the geometry of the plan, the section in relation of the road, and considered this as a bases for the understanding of the quality of geometrically complex systems or large scale composite plans (fig. bath) as a more articulated model of space. In this view, Zucker (1959) introduces the concept of spatial interpenetration, which leads to an overlapping system of relationships between parts and a horizontal combination of the spatial unities. In contrast to a mechanistic or functional connection between the single unities (Zucker argues a visual unity between the singles urban rooms as they should be part of the same morphological logic (rooms connection) (fig. 63,64).
Christopher Alexander (2002) generalized the concept of positive space avoiding a scale definition and defining it as a continuous and unified space seen, a center in relation to the background and having inside different centers interconnected to each other in order to provide continues visual interest. Centers in his definition can be considered as a variety of elements present in the visual frame that create interesting vistas. Christopher Alexander (Alexander, Ishikawa et al. 1977) will synthesize this concept referring to urban landscape by representing it through an urban pattern (fig.65 a,b) which can be used as a tool in design. In this regard, he suggested a mutual relation between the indoor and outdoor space which leads

to an integral architectural conception of the city. For Alexander, both the positive and negative space (or void and full) are positive spaces or substantial spaces that contribute to the formation of a whole. Hereby, he extended the concept of positive

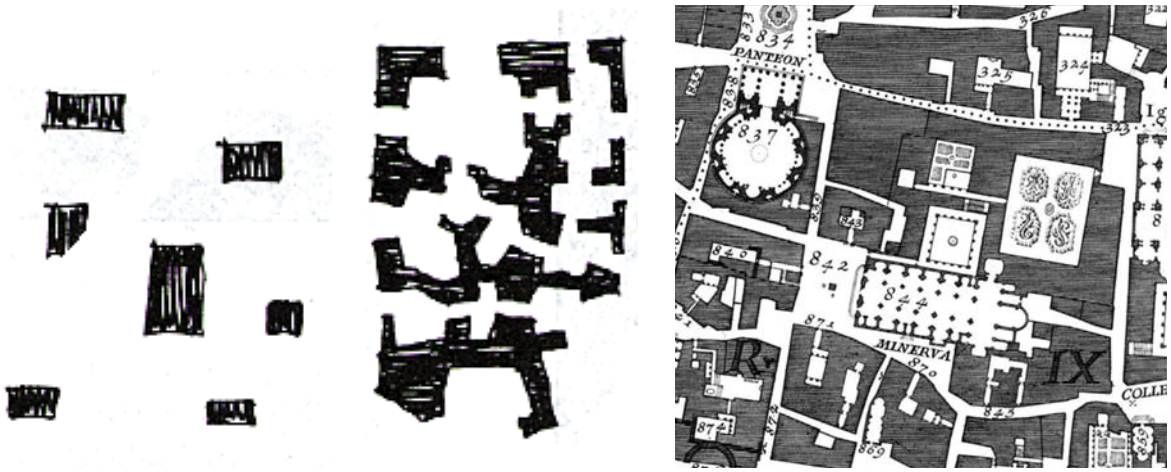


Fig. 65 a), b) Comparison of pattern of buildings that create negative and positive outer space (Alexander, Ishikawa et al. 1977, p.518); Fig. 66 Positive space in the detailed Nolli Plan of Rome (1748).

space by considering as such also the building mass and used a pattern illustration to define the kind of relationship between void and space that can guarantee congruence at different scales, expressing the wholeness that exists in nature.
His representation recalls the positive space of Nolli's map of Rome (fig.66), where space, instead of buildings comes into the first plan, by constituting a network which puts into evidence the centralities of Rome. The dialectical relationship between significant buildings or centers and the continuous network of urban space reflects a strong contextual interconnection and an overlap of public-private realms, resulting from both enclose and open.
Beside the planar representation, the art of relationship between elements constituting positive urban space can be given also by the representation of the narration of urban landscape (Cullen 1971), as a dynamic experience, in movement through a series of connected episodes. Each of them is identified through its peculiarities and points of attraction and reconnected to an image as a whole by the use of a series of visual elements that address human-oriented sensitive aspects related to their aesthetics satisfaction such as enclaves, outdoor rooms, changing silhouettes or change of levels, and visual depth, spaces characteristics related to the sensation of ambiguity, visual graduations, mystery and different contrasting patterns such us open space - intimacy, continuity - apparent interruption which reveal the essence of the city beyond the individuality of the single parts.

Fig. 67 Perspective of urban episodes describing positive spatial patterns (Cullen 1971, pg.164-167):) a) repetition of roof forms create a geometrical diminuendo that accent mystery and avoids monotony; b) enclosure of road space through various elements; c) unity and variability of the road system.

Gordon Cullen (1971) represented these characteristics by the use of perspective drawings representation of single episodes posed as sequences (fig.67) which serve not only to describe the existing urban landscape but constitute the synthetic of the urban form given by positive reputable patterns that appeal to human perception. In addition, this technique of representation of the city image is an attempt to synthesize conceptual images or urban patterns that can be repeated and used as a tool in urban design.

2.4.7 Void

The deepest “centers” have in their heard a void, an emptiness in which life is concentrated and in which the image is calmed. It represents a still spot in the visual frame and is equally important to the other part which shows more complexity. It creates contrast and enables the needed level of simplicity and complexity at the same time. This gap, or empty space according to Alexander (2002a) is mostly a psychological need, to calm the image, stimulate reflection, create order but at the same time drives interest and stimulate the desire to explore the complexity around. Similarly, to a musical piece which is deeply felt because of the presence of pauses, the image of an architecture and moreover that of the city made up of various architectures is profoundly perceived and felt due to the presence of significant visual or perceived voids. This propriety is common in religious buildings as it serves to create concentration and to deeply feel the importance of space. In Leon Battista Alberti church of Sant’ Andrea in Mantova (fig.68), the deep void of the façade which continues along the central nave serves to forget and reabsorb the side details of

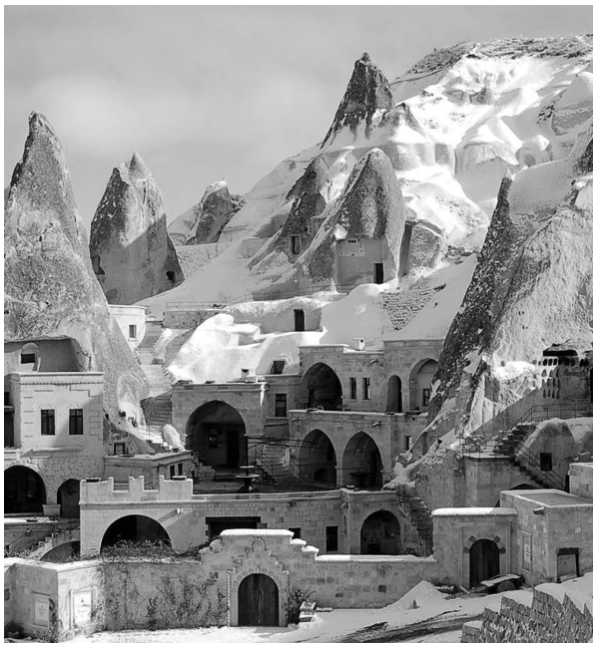


Fig. 68 The central void in the facade of Basilica S. Andrea in Mantova, Italy. (source: Paolo Monti’s 1972 photograph); Fig. 69 The buildings voids in the urban landscape of Goreme Valley, Cappadocia, Turkey (source: http://www.art-et-loisirs.com/detail-122-Le_splendide_FAIRY_CHIMNEY_INN_h%C3%B4tel_de_G%C3%B6reme,_au_c%C5%93ur_de_la_Cappadoce_en_Turquie.html)

the façade and to concentrate on the meaning of the central void which recalls through the arch of Titus ancient’s authority

Similarly, referring to architecture in general and its role in defining urban landscape image perception, usually, it presents various small openings or details in the façade through with is organized its visual complexity. However, this is not sufficient as the

whole cannot be achieved only by the diffusion of details. Some emerging elements in contrast to the intensively build parts are needed, in order to balance regions of intense details. Thus, the void presents itself as a simple, empty, or large spaces that contrast the complexity and serve as spaces that create balance and quite the visual field. The repetition in various architectures of this emptiness, which is read through visual similarity, serves to individuate centers that calm the image and creates contrasting spots with the general complexity of the urban landscape.
The example of Goreme Valley of Cappadocia, in Turkey (fig.69) points out the role of the void associated with a certain architectural typology in the definition of urban landscape image as a whole. In fact, due to similarity, the void is coupled and read as contrasting elements that contribute to create order, coherence and stimulate the further exploration of visual details in urban landscape frame.
Thus, it can be considered as a parameter to evaluate the quality of the historic urban landscape and as a tool to use in the design of the new buildings in order to contribute in the definition of an integral image of the historic urban landscape as a whole.

2.4.8 Color and texture

Color and texture play an important role in the perception of the historic urban landscape. Parts of the same color, texture, and material according to gestalt principles are perceived as coupled together, although they belong to different

Fig. 70 a) The role of color in the integral image of the historic city: Ostuni, Italy. (source: https://en.wikipedia.org/wiki/Ostuni); b) Inappropriate color intervention in the historic center of Castenella, Italy (source: website, Osservatorio Fasanol)

buildings. Visual interconnection, in this case, is achieved through the use of similar colors and texture. Color enables the integrating of figurative values of the external image of an urban ensemble. For this reason, color and textures in historic cities cannot be considered as mere architectural decorative elements, but they represent one of the ground conditions that guarantee the integrity of the city image, at the point to define an urban color and texture characteristic as the summation of exposed

external objects and surfaces perceived in urban public space.
Color and texture have, with no doubt, a determinant weight on the visual unity of the historic cities (fig. 70.a). In this logic, the wrong use of a color (in façade, roof tile, or fixtures) or the use of unappropriated color can alter the image of the cities (fig. 70 b). Geometry, dimension, and form of textures such as roof tiles, masonry etc., play an important role in the integration of new interventions with the historic image of the city.
The architects of the twentieth century, those who work in the years '30-'40, mainly in Rome, were the first to operate with wisdom on this subject, by placing their buildings in the preexistence traditional color, generally without creating violent discord with the context (Morlacchi 2013).
In Italy were drafted the first plans of color as part of landscape plans of historic cities. It is in Turin with John Brino that was born in 1978 the first real Plan of Color, drawn up by Germano Tagliasacchi and Riccardo Zane¬a, followed by numerous plans for the Italian cities such as Pozzuoli, Giulianova, Bergamo, Prato, Ponza, Trieste, Portofino, Cremona, Caserta, etc
These color plans aimed at protecting the image of the city by extending it to the entire historical city and offering the inhabitants the certainly not to make mistakes. By defining a palette of colors to use and a series of guidelines regarding materials and textures, they guarantee to recover the beauty of the built urban environment and safeguard and enhance the image of the historic city.
The definition of color and texture guidelines is based on careful reading of the historical character of the buildings and settlements and their transformations over time in relation to color, material and texture logic and on the study of the various existing tonalities.

2.4.9 Desing principles of K. Lynch's primarly visible urban elements.

Based on the above discussed theories of historic city image related to the legibility and imageability and considering the combination of the various structural elements of the city, it's possible to define a series of principles that facilitate the relationship between humans and the urban environment and urge positive feelings of interes. The repetition and harmony in a physical setting of the various salient elements such as landmarks, panoramic views, nodes, paths are key components for the observer to grasp and create a mental image of the city easily. In addition, the formal aesthetic composition can also contribute in the imageablity of the city. In fact, the aesthetic quality of an object can evoke feelings of interest and pleasure.
In this regard, based on the structural elements influencing the historic city image of Gjirokastra, it's possible to define a series of significant principles of design that can facilitate legibility, orientation and image ability.

1. The design of paths (Fig. 71)
Paths should be well-structured presenting a strong organization in identitary segments that create sequences of paths and segmental variations. The path should present salient elements such as characteristic nodes or landmarks, panoramic points, rhythmical elements that can contribute in the narration of space. This focal points can become attractive areas for the sight and can be considered as signs that reinforce the legibility and facilitate navigation through the city. A particular topographic configuration, orientation form or slope followed by a path can also

become an identitary element that can distinguish various paths. Paths hierarchy is also very important to distinguish a primary structure which can be easily fixed in mind. Paths intersections are vital points or nodes since they present points of change in direction, character and can have a particular character due to the type of intersection in terms of angles, density etc.

2. The design of edge (Fig. 72)
The edges as strong physical and visual separation line between two meeting regions should show the differentiated and distinctive characteristics of the regions. In the case of build regions this character can be is expressed by contrasting composition of the urban façade (height of the buildings (continuous or rhythmically composed in high, buildings entrance character etc.) the combination of landscape elements, ground level architectural character (openness, barriers, portico, etc.). The composition of these elements in such a way to create continuity, but also to emphasize certain focal point where visual changes happened.

3. The design of districts (or neighbourhoods) (Fig. 73)
Districts are almost heterogeneous sections in the city, with an identifying formal character, in which the observer is invited to enter in and explore. Thus, the proper design of districts asks for the creation of various visual characters and various identity regions which in the overall framework can become part of a whole. The distinction between regions is not a mere functional aspect but can be usually dictated by the topographic condition, the slope, its density determined by the distance from the center, a common thematic area etc.

4. The design of nodes (Fig. 74): The design of nodes in the urban environment, despite their small dimension compared to the city, plays an important role in buildings up the mental image of the city. Thus, nodes should present firstly a clear spatial hierarchy between them and secondly need to differentiate in terms of identity. Usually, this is given by a particular spatial configuration, usually more open and simplified in terms of space form, the use of landmarks or visually important architectural objects, which not only attracts visual attention but contribute in fixing in mind a particular architectural configuration, the presence of particular viewpoints.

5. The design of landmarks (Fig. 75): Landmarks, due to their peculiar form, high visibility and ability to be seen from a distance, can be considered as visual memorable objects or locations which as consequence can help to orient people within the urban environment. However, their location in relation to other objects is important, as they can help in defining a surrounding region, express the identity of their location (the nature of the built pattern, of public space, topographic character and form etc.). In addition, landmarks are placed in key locations usually associated with decision points, nodes or areas where there is a change of visual direction or setting.

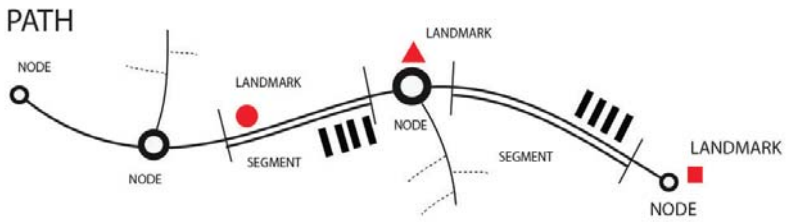


Fig. 71, Paths

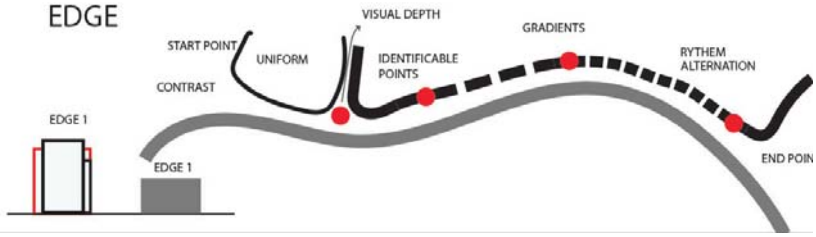


Fig. 72, Edge

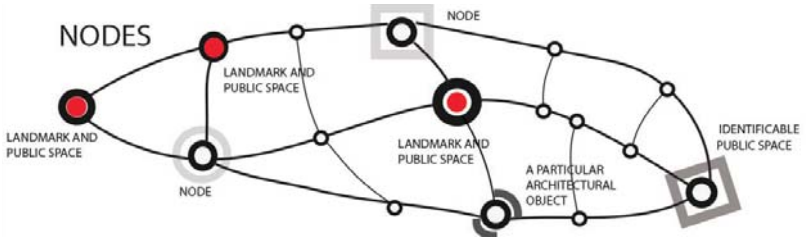


Fig. 73, Nodes

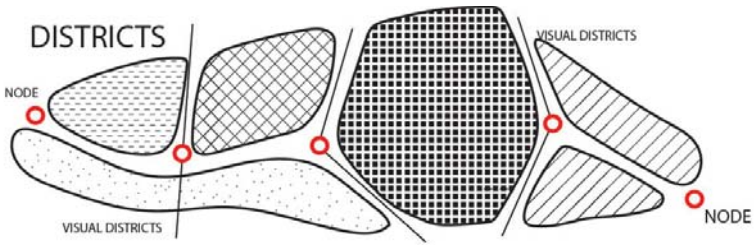


Fig. 74 Districts

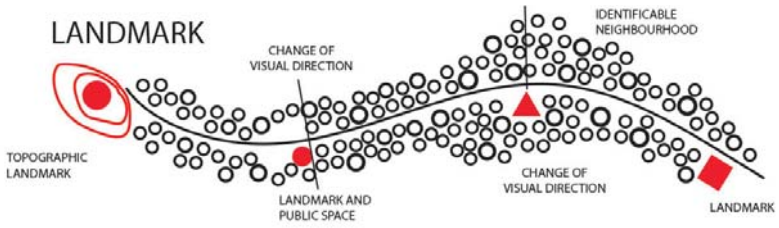


Fig. 75, Landmarks

Fig. 71, 72, 73, 74, 75 K.Lynch principles in urban landscape design: paths , edges, nodes, districts, landmarks (source: graphical interpretations by the author)

2.4.10 Conclusive remarks

Referring to the traditional theories of townscape and urban design, there are some features of the historic city that present an aesthetic quality which stand closer to the human soul. These perceived features are defined by considering the city as an organized complex system made of single entities interrelated with each other to form a structural whole. In fact, the above-described constants of urban landscape design are morphological proprieties that sustaining structural – wholeness (or aesthetical quality. These structural laws are selected from the general framework of possible features, considering the case study of Gjirokastra. Thus, they are seen as tools to transmit the visual quality of the traditional urban landscape in the residual area around the historic center.

These constants are applicable in other case studies. Therefore, the theoretical background findings can be used as a methodology of analyses in other historic cities. However, the chosen case study although does not include the wide range of design features, being a very rich landscape, it includes and discusses most of them.

In the case of Gjirokastra, the assesment of the historic urban landscape quality is defined and safeguard through the compatible use of the following criteria: Massing; Geometry and proportions, Levels of scale, Local symmetry, Gradients, Positive space, Void, Color and texture and K. Lynch's primarily visible urban elements features.

CHAPTER 3: CASE STUDY.
THE HISTORIC CITY OF GJIROKASTRA.

Brief: *This chapter gives an overview of the historical city image of Gjirokastra, starting from a general framework on Ottoman cities in the Balkans, and analyzing common compositional and visual characterizing elements as well as def ning elements of distinctiveness. In this view, Gjirokastra, as one of the most preserved cases will be explored by putting into evidence its phases of formation and historical development, the main structural parts of the city, urban morphology the evolution over time and the main architectural typologies around which is build the historical city image.*
Following the urban formation related to the ottoman period, development and transformation of the city after the fall of the ottoman empire up to nowadays transformation, in particular, regarding the buffer zone as the main cause of urban visual decay, will be critically discussed. In view of the main objective of this research to safeguard the historical city image, will be examined the current legislative framework on constraints and allowed interventions in the historical area with the aim to understand its possibilities and limits to guide the future development of the fragile margins of the city in harmony with the historic urban landscape seen as a whole.

3.1 OTTOMAN URBAN FABRIC IN THE BALKANS

The historic town of Gjirokastra in southern Albania dates back to the medieval Ottoman period, representing an almost new founded ottoman city of this period and one of the best preserved Ottoman cities in the Balkans.
During the Middle Ages, from the 14th century up until the early 20th century, the Ottoman empire expanded in the Balkans and exercised its rules over the territory. This was reflected also in the urban expansion of Islamic cities and in the imposition of Islamic rules in Balkan existing cities, which in some cases as in Gjirokastra played an important role in defining the character of the urban structure. Even so, the Ottoman Empire, being religiously, linguistically and ethnically very a diversified area, was much more tolerant in terms of adaptation of certain rules to the local context. Referring to the city structure, although the spatial layout of Ottoman cities seems similar: an apparently anarchical urban structure, with a narrow twisting network of street, often cul-de-sucs, the existence of central bazaars, the presence of mosques and the dominance of minarets in the urban landscape, the distinction between them may be deciphered through the analyses of the most important component of the city that is the housing unit.
In this regard, on a multiples studies on the traditional ottoman houses it emerges that in Balkan area (Bosnia, Bulgaria, Macedonia, Thessaly, in particular the housing architecture of Sarajevo, Plovdiv, Ohrid, Kastoria, or Ambelakia) and also in Northen Anatolia (Bursa, Safranbolu, Amasya, Tokat, Kütahya, Afyon, or Kula) housing typology is characterized by hajat or sofa(Jayyusi, Holod et al. 2008). Part of Albania escaped partially this influence as in most of the areas were used both cardak and hajat as in the case of Shkodra, Kruja, Berat, and especially in Gjirokastra where the çardak was set on a tower, while in Arab-Ottoman world dominates the courtyard typology, which is quite different. That's why traditionally a division has been made between the "Turko-Balkan" part which includes the area from the ancient Bithynia to Serbia, in which the Byzantine dominance persisted for a long time and "Arabo-Ot-

Fig. 76 Ottoman Balkan cities as a subgroup of the " Turko-Balkan" (Source: from author based on (Jayyusi, Holod et al. 2008) writings)

toman" that includes the central and southern part of Anatolia where the Byzantine substratum was early covered over by the Arab and Seljuq conquests(Jayyusi, Holod et al. 2008). In this primary division, the ottoman Balkans are a subgroup of the "Turko-Balkan".

When the Ottomans conquered the Balkans, there were numerous existing cities and there was almost no need to found new ones. Thus, urban form in most of the cases is partially inherited from the past and rarely constructed ex-novo. Nevertheless, in both cases, Ottoman town in the Balkans followed certain rules, especially with regard to the religious orders. In the case of transformation of existing cities, they seemed occasionally reluctant to intervene in drastic ways in the existing urban fabric and usually a quasi-new settlement developed outside the medieval walled towns competing for the existing city center (Hartmuth 2012). However, even in existing cities a series of rules were imposed.

1. The separation between public and private realm. The main road system was maintained and new exclusively residential neighborhoods (mëhalla) were added around the city center (or the bazaar area), in the prosecution of the main axes. In some cases, cities were extended also outside the walls.

2. Converting churches into mosques and installation of hammams, which were considered as the only re-creative buildings in ottoman cities. Usually, each neighborhood has its own mosque and the main mosque is usually located in the central area close to the bazaar.

3. City configuration consisted mostly of an existing ancient fortress out of which was first build a market area: a bazaar (or çarsi) and residential neighborhoods. In some cases, the bazaar area is surrounded by caravanserais (han), which in some cases is also integrated. This configuration has been very common in Ottoman Balkan cities (fig. 76-80) for example in Sarajevo (Bosnia and Herzegovina), Plodiv, (Bulgaria), Ioannina (Greece), Peja and Gjakove (Kosovo),

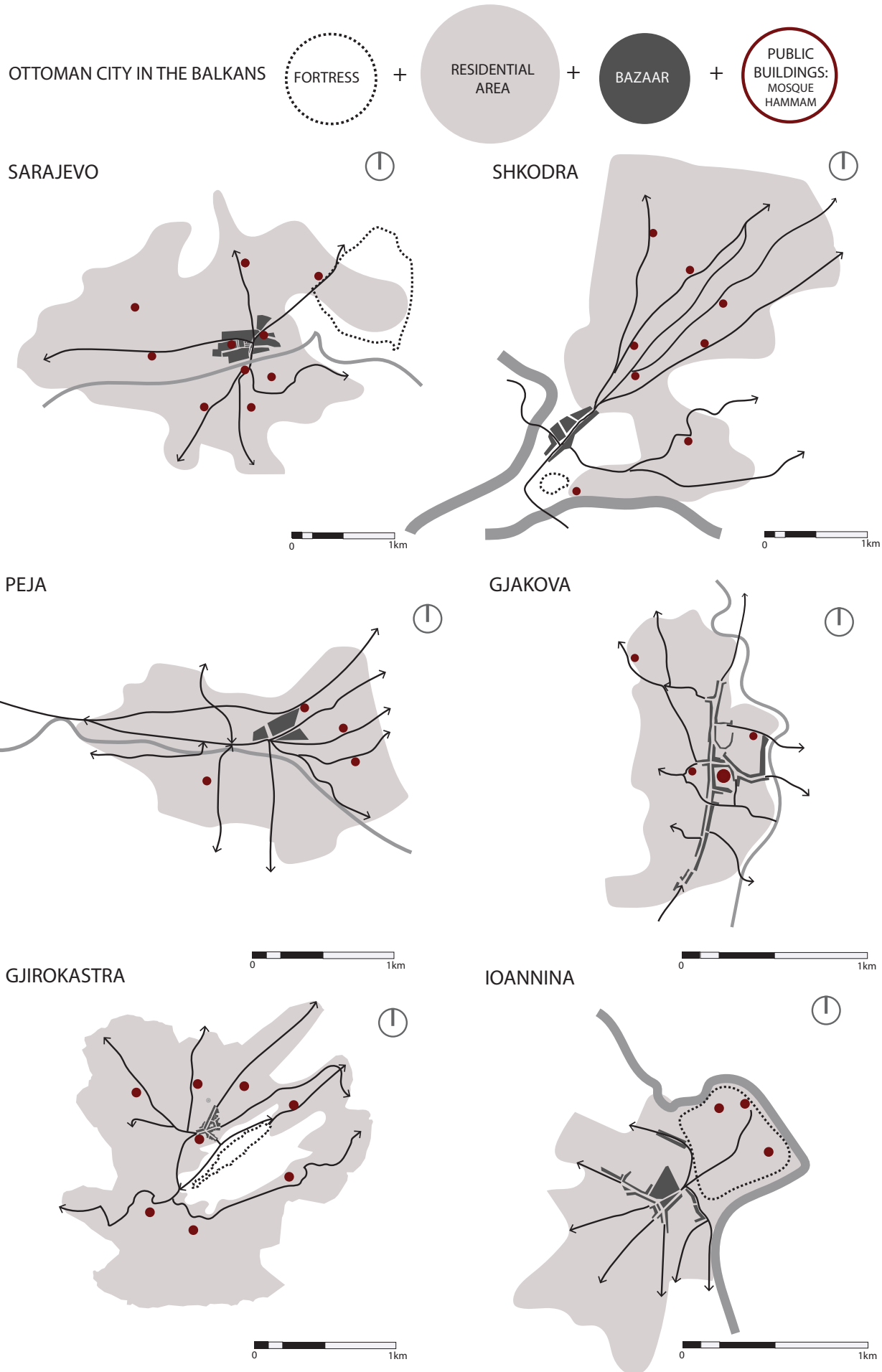


Fig. 77 Ottoman city components and conf guration. Balkans case study (Source: author's)

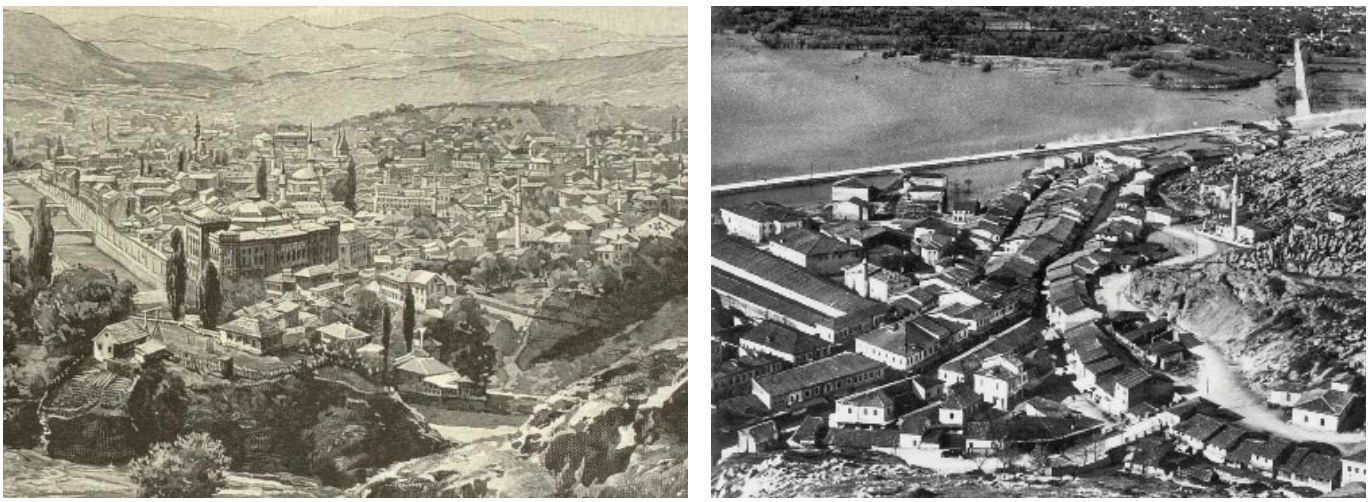


Fig. 78 **a)** *Sarajevo ottoman city (source: https://upload.wikimedia.org/wikipedia/commons/4/43/Sarajevo_Historic_View.jpg) ; b) Shkodra bazaar (source: Kiel 1990)*

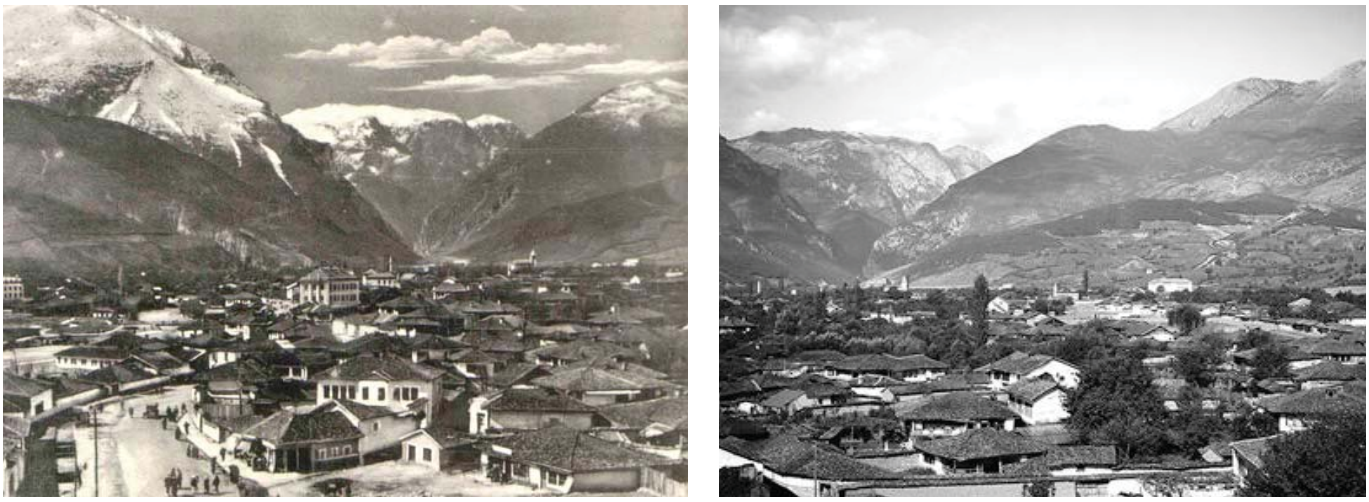


Fig. 79 a) View of Pe*ja 1920 (source: http://www.albanianhistory.net/1930_Bisaku-Kurti-Gashi/index.html) ; b) The ottoman city of Gjakova, postcard (source: La biennale di Venezi 14th International Architecture Exhibition , Republic of kosovo Pavilion 2014 on http://www.kosovoarchitecture.org/postcard.html)*

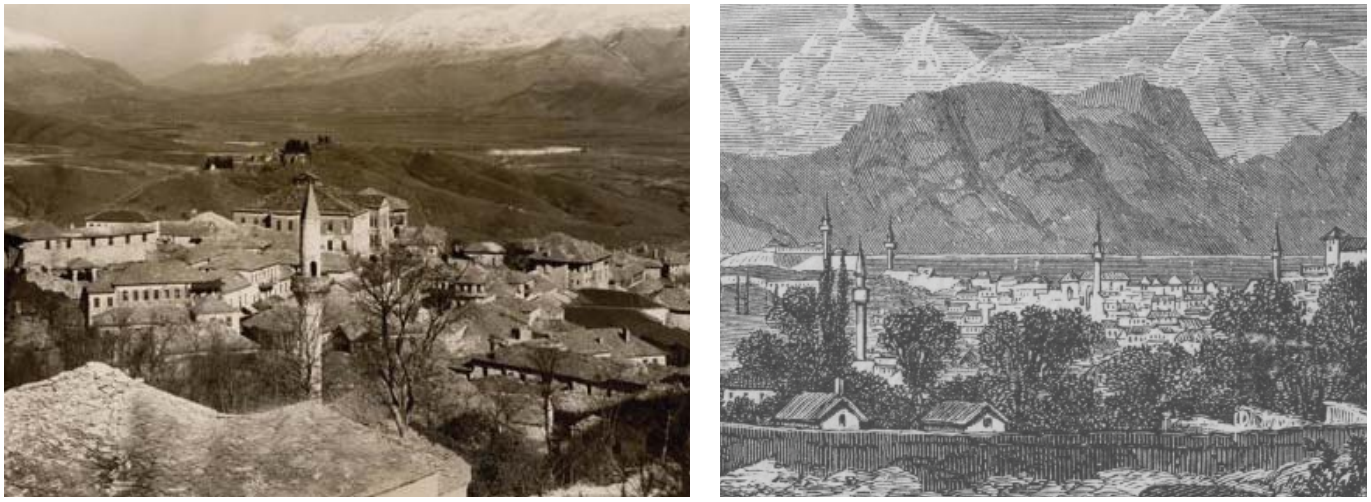


Fig. 80 a) View of Hazmurat *neighborhood* in Gjirokastra (source: hhttp://www.forumishqiptar.com/threads/868*14-Mir%C3%AB-se-vini-n%C3%AB-sofr%C3%ABn-e-Gjirokastr%C3%ABs%21/page9) ; b) The ottoman city of Ioannina, illustration (source: https://www.oldbookillustrations.com/wp-content/high-res/1885-1891/ioannina-768.jpg)*

Ohrid, (Macedonia), etc. In Albania as well, Michael Kiel (1990) in his book "Ottoman Architecture in Albania 1385 – 1913" has provided an inventory of similar structures built at that time such as the cities of Shkodër, Gjirokastër, Elbasan, Kruja, Berat, Gjirokastra and other small scale villages.

4. Substituting old houses with new ottoman houses or buildings new ones. This operation on a large scale contributed on the creation of a typical "Turkish" landscape,

Fig. 81 Comparison between ottoman houses as determinant component of the ottoman city image. Gjirokastra (Albania), Jajce (Bosnia) and Ancara (Turchey). Gjirokastra house has a prominent vertical extension and is usually surrounded by green yards (source: from author), Jajce houses present alpine roofs and reduced gardens due to the climatic conditions (source: From Kurt Hielscher in Maurice Cerasi, The formation of ottoman house types: Comparative study in teraction with neighboring cultures, in Muqarnas: An Annual on the Visual Culture of the Islamic World, Volume 15, edited by Gülru Necipoğlu , Leiden – Brill, 1998, pg. 128); Safranbolu, Turchey architecture characterized by the mphasis of building geometry and volumes frame through wooden element that contrast building surface (Source: https://www.antalyadanturlar.com/tr/blog-item/bati-karadenizin-incisi-safranbolu)

similar to that of Bursa or Istanbul. New houses following the main roads are occasionally characterized by the presence of corbelling (or çikma), which strongly identify these cities. However, ottoman houses in different regions assumes different configuration which distinguishes also the visual landscape of these cities (fig. 81)

Ottoman new urban fabrics

Extended rules relate to the urban model of the ottoman Empire were applied to new urban fabrics as in the case of Gjirokastra. The model of the new ottoman city in the Balkans was usually organized around the main mosque which is close to the market (bazaar or çarshi) and the inn. Commercial activities were limited to this area and houses were totally separate from the public realm. Residential urban fabric is distributed almost without a hierarchy and present usually a series of main streets (one to five) with an irregular layout and lacking alignment of buildings facades or plot walls, a series of tortuous secondary streets (or in some cases made even of stairs) and numerous cul-de-sacs, which in contrast to Arab cities where were dictated by religious rules, are a necessity to respond to particular functional urban situations, related to the houses access.

1. Open city

New ottoman cities in the Balkans following the creation of the Empire, are absent

of surrounding walls. They represent a model of an open city, which flows following a natural configuration according to the geography of the territory, interpenetrating nature and creating a very strong relationship with the natural landscape. This lack of constraints, except the orography of the terrain, open the possibility for the city to expand freely the residential area (mëhallë). Due to the lack of borders, the ottoman urban fabric, is dispersed having the ability to stand without a precise

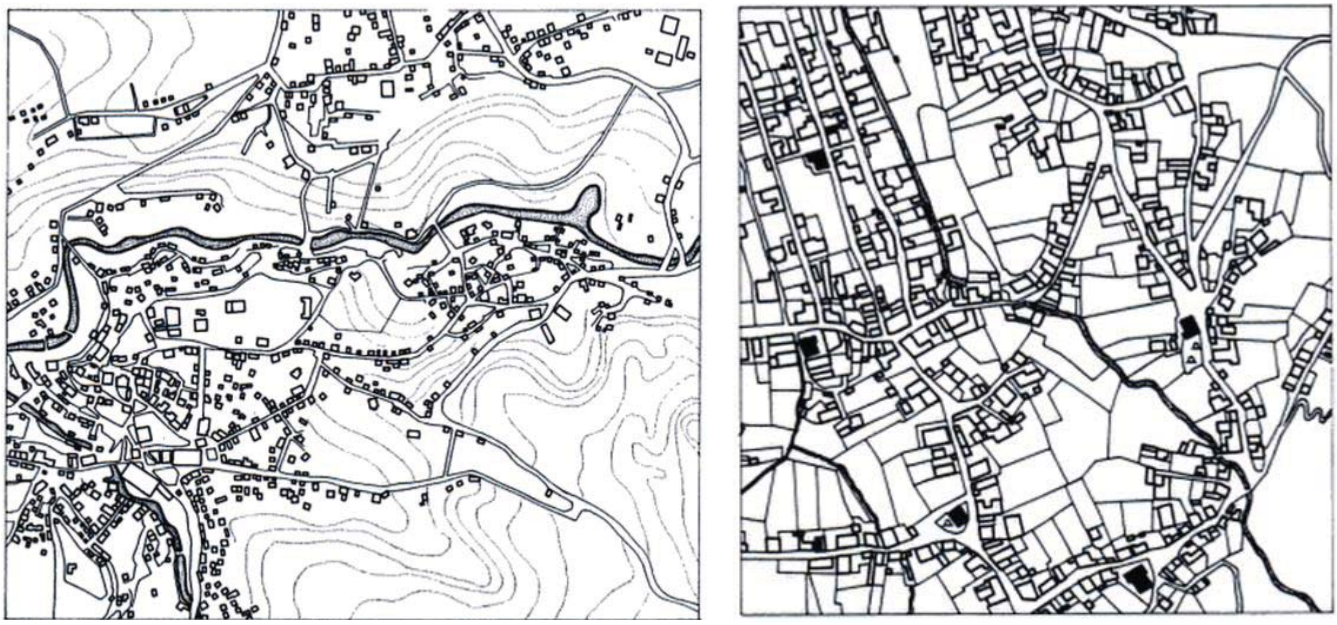


Fig. 82 Low density residential ottoman urban tissue in Safransoulu and Sarajevo. Organic patterns of free growth residential areas (source: Maurice Cerasi, The formation of ottoman house types: Comparative study interaction with neighboring cultures, in Muqarnas: An Annual on the Visual Culture of the Islamic World, Volume 15, edited by Gülru Necipoğlu , Leiden – Brill, 1998, pg. 117)

form, but following only the constrains of the geography of the territory. The main roads are spread from the city center (or the bazaar area) with an irregular layout towards the outer part. They constitute the backbones of the residential area and play an important role in the neighborhoods configuration. The neighborhoods result very autonomous, being also very homogenous in term social and religious groups (Daskalov, R. and Marinov, T. 2013) , because they are served by local roads that spread radially from the center.

Therefore, a dichotomy is usually evident between the central area of the bazaar and mosque, which is mostly compact and the distended residential area around, which is less dense due to the importance given to the contact of the house with nature and the presence of large yards. A characteristic of Ottoman town morphology in fact, is the low density of house units and the presence of medium scale gardens (Cerasi 1998) (fig. 82). In this sense, the ottoman city created a new interesting dimension that links the built environment with nature.

Although at first sight, the configuration of the residential area seems anarchic because of the internal system of roads configuration and the irregular outline of blocks, the plot division follows certain rules such as plots perpendicular to the main axes; following the slope of the terrain. In fact, the city is structured by a terraced system that follows the isotope lines.

In the ottoman city, although the plots are regular and perpendicular to the main roads, houses are not always aligned to the street. Houses are usually conceived as isolated, free-standing units laying in the ground, enclosed by walled gardens and rarely following laws of aggregation.

This creates great flexibility, in particular referring to the possibility of rotation and better orientation to the view and exposition of the upper part of the house which is the actually the living part. They do not create a perimeter towards the road, but in some cases they are alighted by a side other than the main façade to the road, contributing on the formation of a particular rhythm of the urban front. Accordingly, they do not even contribute on the formation of public space as in western cities and implies an extensive exploitation of land (Cerasi 1998). In turn, the open urban pattern allow the house, lacking adaptation to the road constraints, to be composed by geometrical rooms.

As a conclusion, the relationship of house type to urban structure and urban culture is obviously very important in Ottoman town although it is understood differently compared to western urban model in which house type and urban morphology fit perfectly. In the case of ottoman towns, the lost relationship of the house type with the urban fabric, it's open pattern and the separation of neighborhoods diminished the interdependence between typology and morphology, so that the house appease to have its own form and significance (Cerasi 1998) and to become the most prominent urban element that influences the character of the city image.

2. The city as a collection of homogenous areas

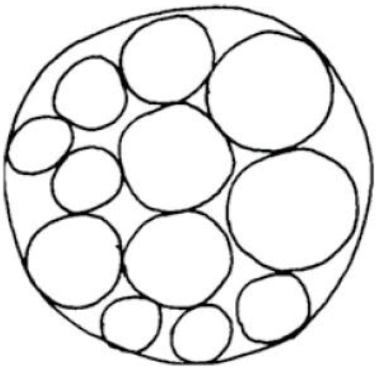


Fig. 83 The Muslim city as a collection of homogenous areas (Source: Rapoport 1977)

The residential mass in ottoman cities although apparently seem to be organically distributed starting from the central area, is organized in separate neighborhoods which usually have their own features. The historic development of the city, the terrain configuration, and the social character of the neighborhood constitute the main factors that have influenced the identification and distinction of this areas as separate parts. According to Rapoport (1977) , Muslim cities are considered as a collection of homogenous and integrated neighborhood (Fig. 83) which create the image of the city as a whole.

3. Integration with greenery

The ottoman culture placed high value on gardens and nature (Jelavich 2009). Usually every house has its own garden which in many cases is used for personal food production but serve also as intermidate space to access the house. Houses located in the main roads usually have non directly visible garden and the entrace to the courtyard is posed in the side garden, not directly exposed in the front façade which is aligned with the road. Gardens inside the plot are characterizing by a terracing system which is accentuated and more present in slope terrains. On contrary, the green is reduced in central areas having a more urban character. In addition, the ottoman culture considered important also the presence of rivers and running water (Jelavich 2009).Ottoman cities were usually located close to rivers or in slope terrain where creeks were almost always present.

This relationship with nature, in different aspects, which do is not typical European medieval cities have impressed travelers.

One famous traveler, in his regard, stated: "*A Turkish city has a charm of his own whatever the situation, and looked at from what point you please. True to the pastoral instincts of his ancestors, the Turk ever seeks to absorb the prosaic town into poetry*

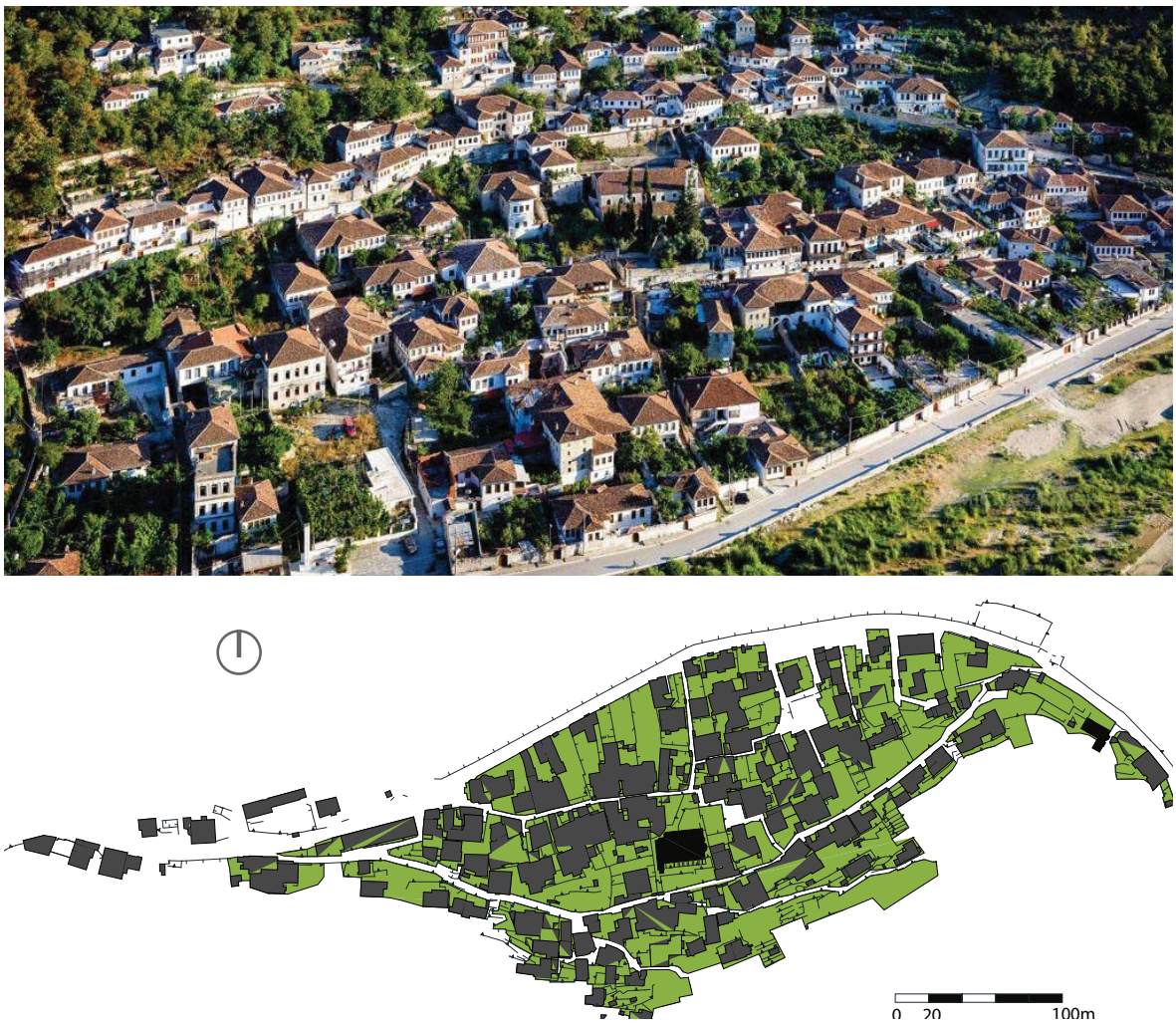


Fig. 84 Integration of buildings and garden plot in the ottoman city of Berat, Albania. Photo and plan map (Source: from author)

of nature; he multiplied spires to atone for roofs, and wherever he builds a house he plants a tree" (Mackenzie, Irby 1866,p.5).
Therefore, greenery similar to build materials becomes an important component of ottoman city (fig. 84), influencing its overall image, which result less compact and more integrated with nature. Nowadays, this feature is crucial when discussing sustainable development of these historic cities and the possibility to safeguard the visual image of the city, by preserving also the tradition of urban farming which has transmitted a rural character to the ottoman city, resulting more sustainable in terms of environment sensitivity and preservation of social and cultural features.

4. Integration with the topography and the natural landscape

Ottoman cities in Albania, as in the case of Gjirokastra, present also singularities related on one side to the local context as part of Epirus region, and on the other side on a wider regional cultural context that is that of the Mediterranean city. In fact, the integration with the topography and panoramic views, which is not typical in the ottoman cities in the Balkans constitutes important landscape features in the case of Gjirokastra and can be found also in other Albanian settlements, not necessary ottoman ones (es. Old Qeparo village, Dhërmi village in southern Albania) and in other Epirus villages (es. Syrrako, Vitsa, Papigo, Monodentri (Greece), etc.) (fig.85). These historic centers are formed in relation to the topography of the territory, setting in important panoramic point, salient buildings such as the castle, the church

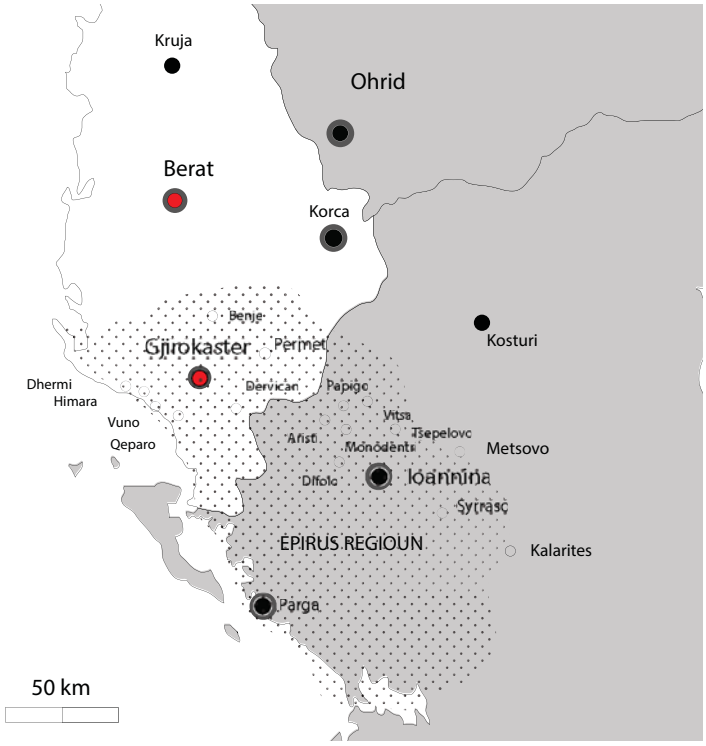


Fig. 85 Map of Epirous Region Historic cities (Source: from author)

etc. as landmarks and orienting the houses, as the main objects that constitute the image of the city towards the view. Accordingly, they are gradually scaled exposing mainly the upper floor to the view. In addition, in case of distanced escalation between buildings, the greenery set in between the houses façade is integrated with the visible part of the façade. In case of very steep terrain, buildings are generally very close to each other, forming a more compact build mass, which contrast with the natural landscape on the border. (fig.86)

In conclusion, the historic ottoman cities in Albania and in particular Gjirokastra, although at first sight seem as an anarchic and chaotic aggregations around the bazaar, actually presents an evident visual unity as the various elements of the city seen from the distance have pose strong visual relationships between them. Compared to other ottoman cities in the Balkans in which the image of the city is marked by the presence of mosques minarets, Albanian historic cities are mostly perceived as housing ensembles, closely connected to the topography of the territory and natural landscape. This characteristic is typical in cities and villages of Epirus Region, in which Gjirokastra is part, and is also common in Mediterranean historic cities.

Visual unity in Balkans ottoman cities, which are usually set in flat terrain, is legible by absorbing different visual perspectives moving through the city, while in the case of slope terrain (typical in Albanian cities), houses seem to jump on the top of each other forming a unitary mass in which the relationship between parts is evident. This unity is extended to the spatial configuration and to the strong bond with nature and is evident also in the dynamics of space, views and variety of forms offered.
In conclusion, since urban historical development of Albanian ottoman cities was influenced both by Ottoman, Mediterranean and European culture as well as is strongly related to local context (Epirus Region) the typical ottoman Balkans cities characteristics are valid only in general terms for Gjirokastra and serve to put it in a wider context, which opens the possibility of a comparative research on the urban form of ottoman cities in the Balkan context and the possibility to define a local character of Gjirokastra ottoman urban fabric and to put into evidence singular historical, architectural and landscape values of the city .

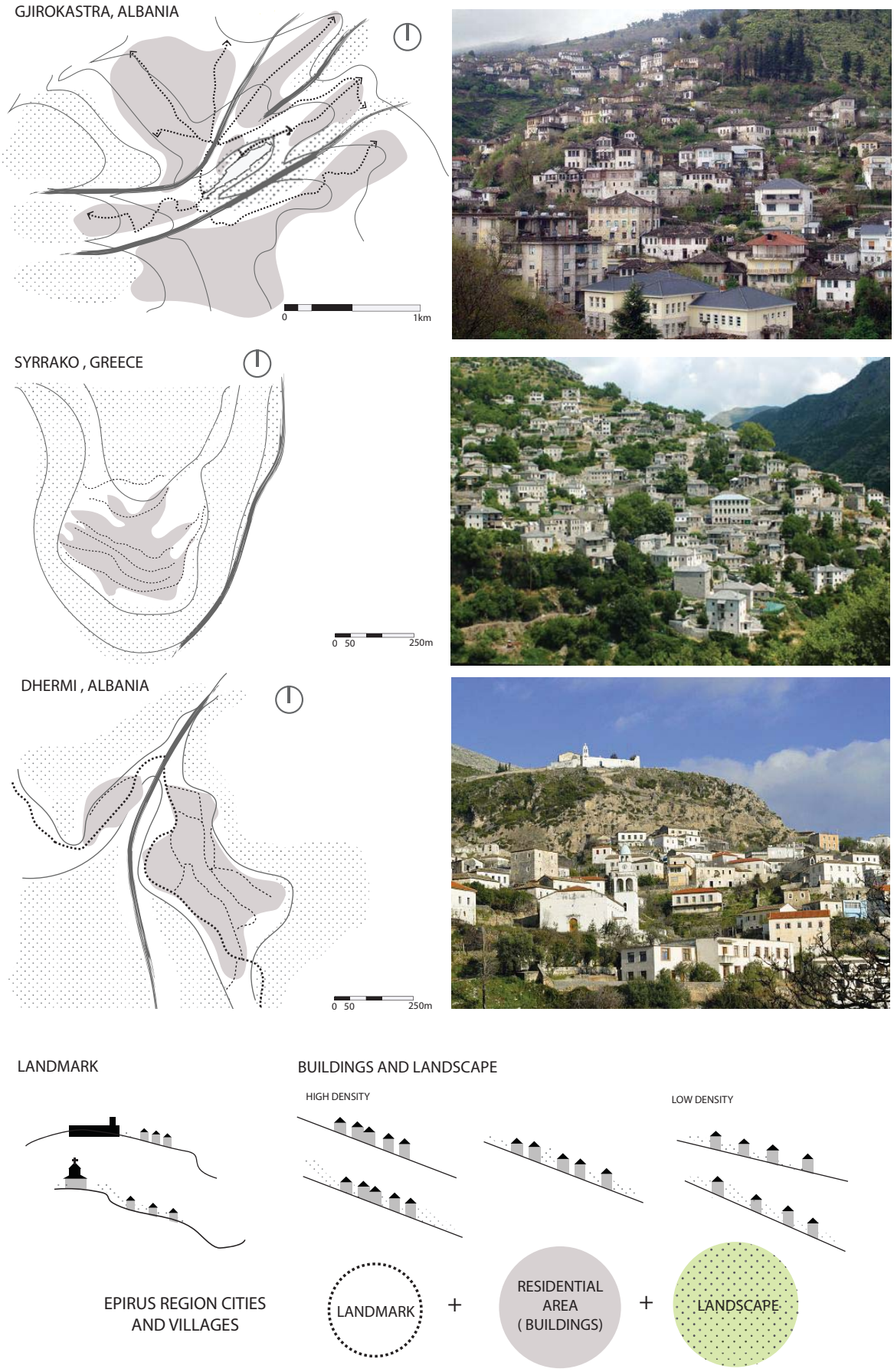


Fig. 86 Analyses of comparison between Epirus historic centers (Gjirokastra, Syrrako and Dhermi) in terms of visual integration with the topography and natural landscape characteristics. (Source: from author)

3.2 GJIROKASTRA HISTORIC URBAN FORMATION AND DEVELOPMENT AS AN OTTOMAN CITY

Gjirokastra is one of the most important cities of the ottoman period in Albania. For its outstanding universal architectonical and urban design values and the preservation over time of the historical urban ensemble in 2005, Gjirokastra was inscribed into the World Heritage Sites (fig. 87). In addition, beside the general characteristic as an ottoman town, Gjirokastra was appreciated because it bears a strong identity related to the local character developed in accordance to its territory as well as to the way of life, to the spiritual and cultural background and local tradition.
The city of Gjirokastra lays in a natural hilly terrain dominating the western side of the Drino river valley, in perfectly protected site for a military fortification, having visual control over the valley and the mountain range of Lunxheri and Boreto (Fig. 88, 89). The slope of the mountain “Mali i gjerë” at this point becomes moderate and enable not without difficulties the development of the residential area. In fact, the orography of the terrain with various hills, escarpments, valleys, narrow ridges and deep ravines with seasonal streams and in some cases very steep slopes on

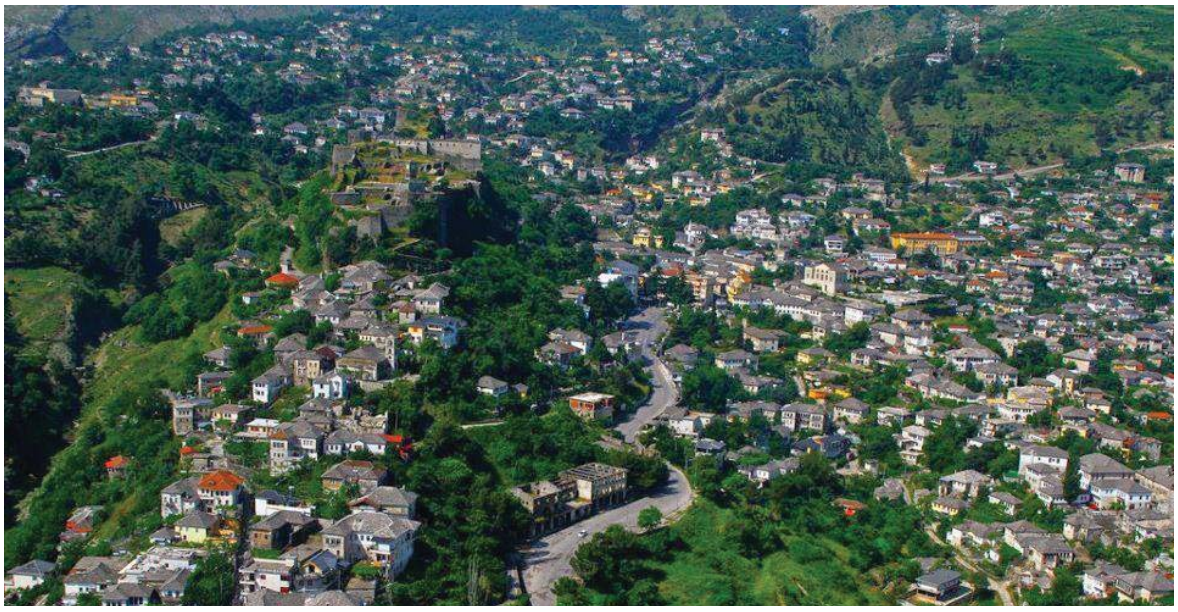


Fig. 87Bird view of Gjirokastra (in 2014) (Source: http://toursinsouthernalbania.blogspot.al/2014_04_01_archive.html)

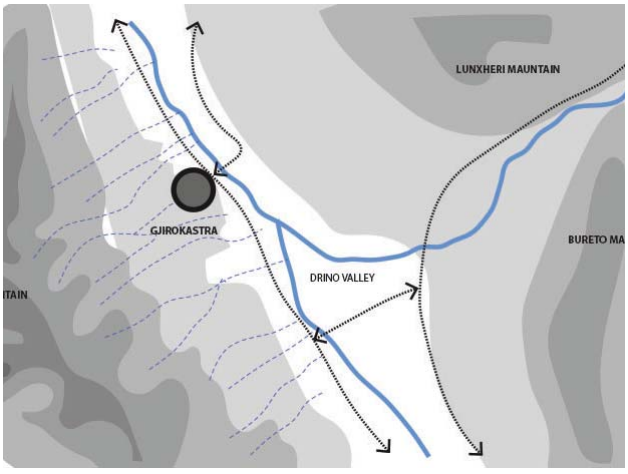


Fig. 88 Gjirokastra, territorial framework, (Source: from author) Fig. 89 Gjirokastra , the historical city limits in relation to the topography of the terrain, (Source: from author)

one hand make is difficult to structure a residential area, but on the other hand in absence of surrounding walls self-defense through family units (Mezini, Pojani 2015) becomes easier.

The original settlement was founded in the higher part of this territory in the second half of the 13th century before ottoman conquers, first as a residential area and then as a castle. In fact, historical records by chronicler J. Kantakouzenos (Historia e Shqipërisë. 1959) sustain the existence of the city first and then the castle and confirm the ancient name of the city Argyrocastron which mean silver castle ((argýro) silver and (kastro) castle) in reference to the in reference to the grey stone walls, streets and slate roofs. Originally the castle was a feudal and administrative center, assuming as well the functions of habitation. In this period, under the Despotate of Epirus, the city and the surroundings they were ruled by the feudal family Zenebishi. In 1419, the city was conquered by the ottomans and in the XV century became the main center of the Sanxhak[65] of Albania which included a vast territory from Cameria up to the Mat river in the northern part. The beginnings of the open city according to different authors (Çelebiu 2000, Strazimiri 1972) dates from the XVI century period in which the city counts 380 dwellings, 200 of which were inside the castle. Based on this A. Bace (1972), claims that the extension of the city outside the walls is earlier and probably belong to the beginning of the XIV century, but because of the ottoman occupation a large number of inhabitant left the city. This phenomenon of shrinking cities is known with the advent of ottomans in the Balkans. The city started to recover in the beginning of the XVI century due to economic growth. This was reflected also in the increasing number of houses which was duplicated by the end of the XVI century reaching 302 units. But urban evolution was crystallized mostly during the XVII century due to the movement of rural population to the urban area.

According to Turkish Traveler E. Celebi (Elsie 2007), who visited the city in 1670, at that time there were 200 stone houses within the castle, 200 illuminated spacious houses in the Christian eastern neighborhood named Small Varosh (Pllake), other 150 houses in the Large Varosh (Pazari i vjetër) which is located on the feet in the north-western part of the castle and consisted of 40 shops and 6 additional neighborhoods: Palorto, Vutosh, Dunavat, Manalat, Haxhi Bey (Hazmurat) and Memi Bey (Teqe, Mecite, Partizani). According to, G. Strazimiri (1972) in Celebi definition of the 8 neighborhoods, Cfarkë neighborhood is not included. With this regard, he sustains that this neighborhood was significant in that period and because of a favorable terrain has been build earlier than Manalat neighborhood. Later, under the cliffs in the northern part of the fortress, close to the Fortress Bazar, in continuity was build a new bazaar which consisted of 150 two floor buildings.

E. Celebi provides very valued information about structural aspects of the city, by listing the structural elements, describing and critically posing them also in a hierarchical level of scale. Nevertheless, the process of formation and (possible) transformation over time of the urban structures is not very clear due to the lack of information from cadastral maps of proprieties. However, several hypotheses have been raised on the dynamic of the city growth according to the neighborhood formation. Both of them sustain that the city is formed step by step, setting one neighborhood at a time. Despite the castle, there were no other fortification walls. Similarly, to other ottoman cities in the Balkan area, Gjirokastra lack surrounding walls in the residential area. Therefore, it can be considered as an open city, with the possibility to expand freely in any direction. Determinant elements, in this case, are the advantages that certain terrains offer and the relation with the existing part (the castle and the bazaar).

65 Sanxhak were the main administrative Turkish units in the early period of the Ottoman Empire

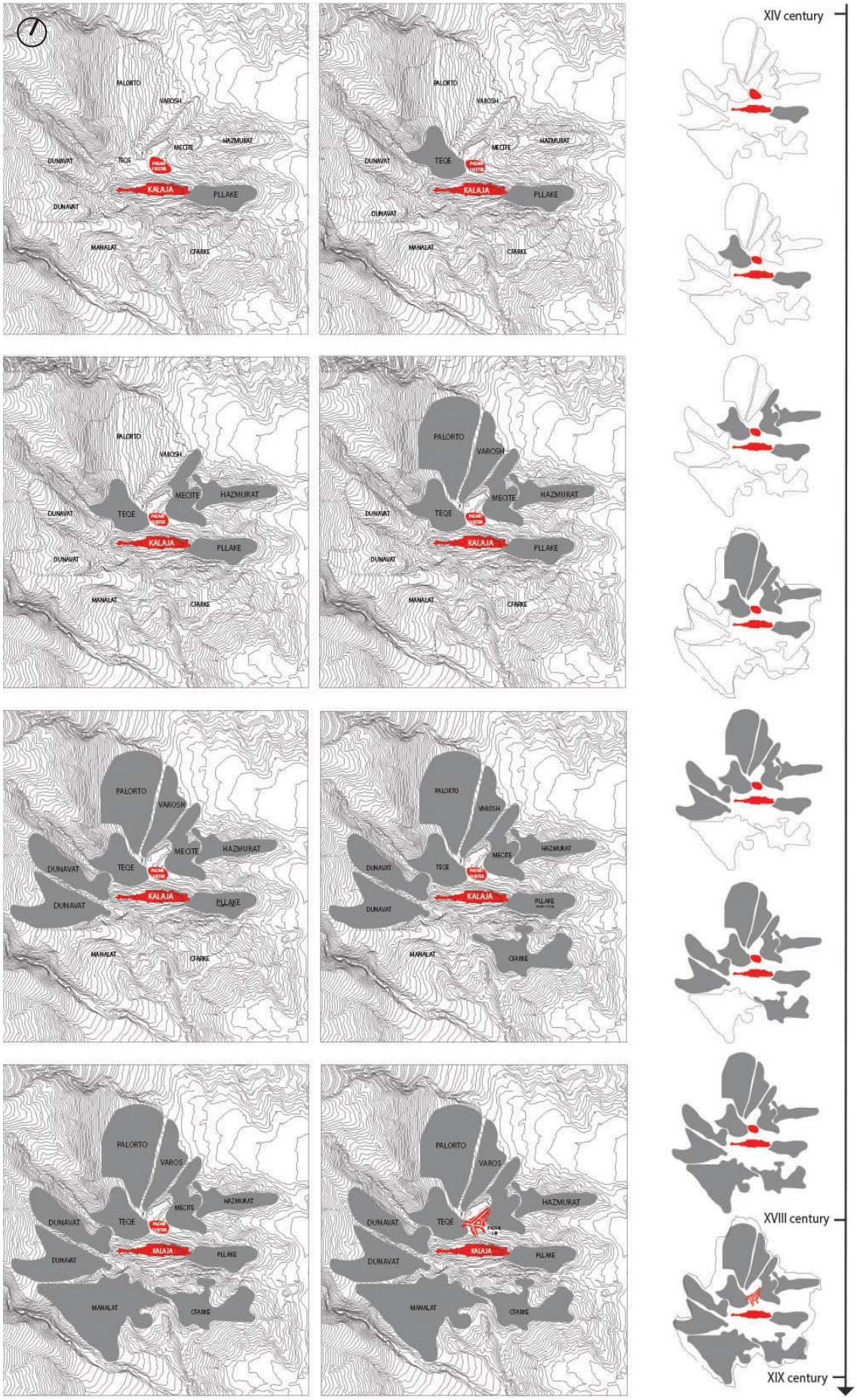


Fig. 90 Urban development phases of Gjirokastra neighborhoods during the ottoman period. (Source: from author based on Strazimiri (1972) descriptions and argumentation)

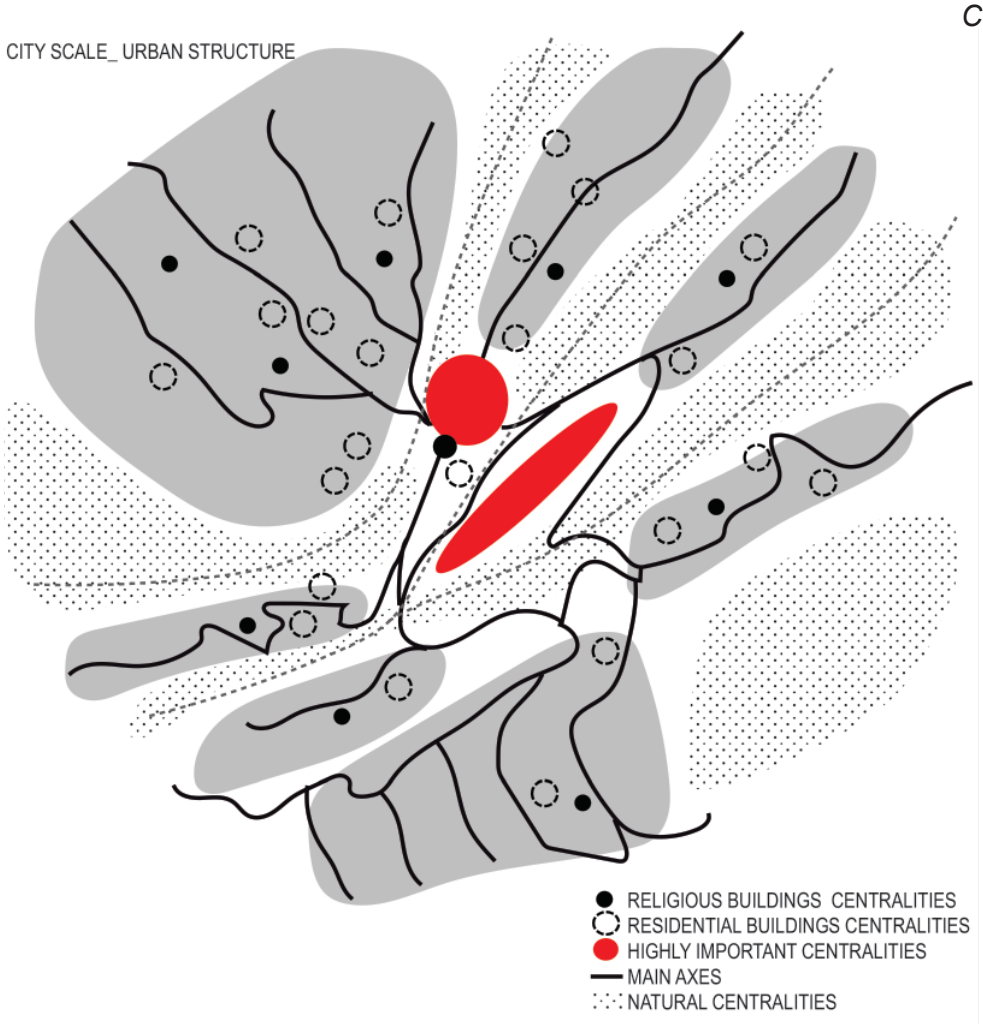


Fig. 91 Gjirokastra, general city structure from the XVII century, (Source: from author)

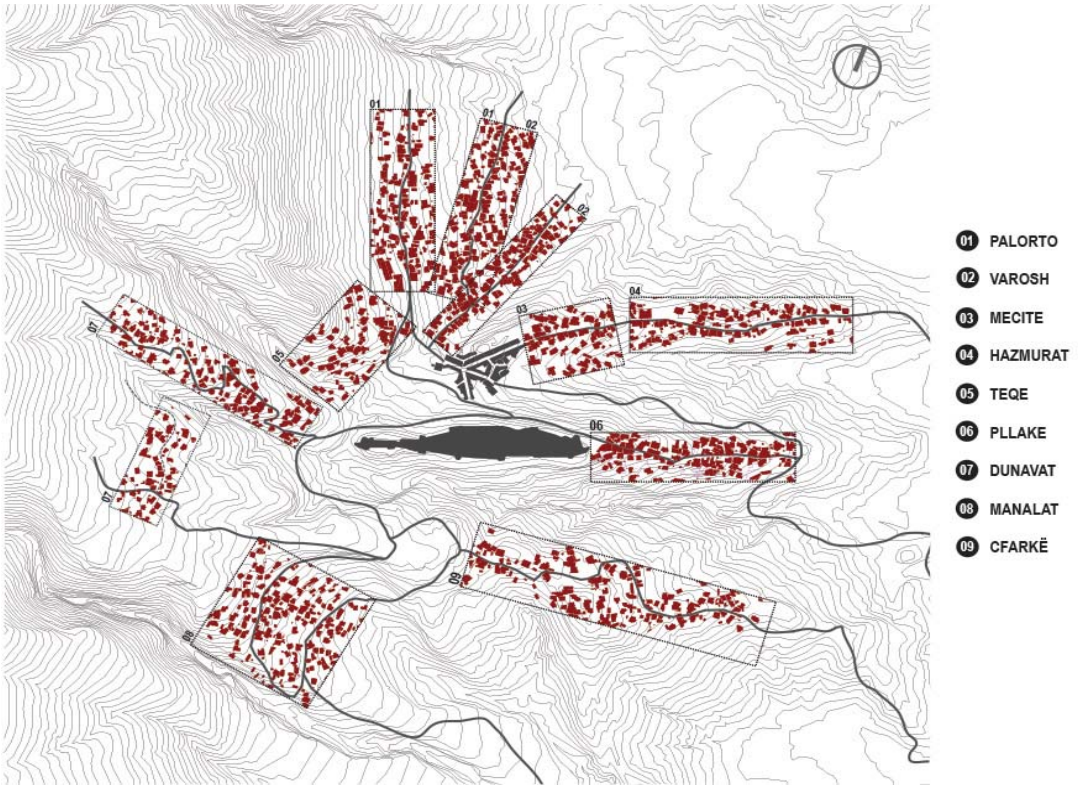


Fig. 92 Gjirokastra urban morphology and neighborhood definition in relation to the main axes, (Source: from author)

Thereon, E. Riza (2004) based on E. Celebi travelling notes (Elsie 2007) argues that it should have been more logical to occupy first the areas close to the castle, and then more fragmented terrains in the hills around. Therefore, Riza suggested the following order of neighborhood formation: Pllakë, Teqe, Palorto, Hazmurat, Dunavat, Cfarkë, Manalat, Mecite, Varosh, Pazari i vjetër. On this regard, Strazimiri (1972) has a slightly different point of view on the chronological order of the various neighborhood formation. He suggested that first were formed the neighborhoods in the northern part of the castle which was considered as the front of the city, due to the presence of the bazaar and then the above and back part of the castle according to this sequence: Pllakë, Teqe, Mecite, Hazmurat, Varosh, Palorto, Dunavat, Cfarkë, Manalat, Pazari i vjetër (Fig. 90). This version is more acceptable since it is more consistent with the logic of the urban structure formation, which was determined by the main paths that face easily the steep terrain, close to the castle and then to occupy the upper part of the hill and the back of the castle starting from the main paths traced gently on lower slopes.
Hereupon, in this period the city structure was almost formed (Fig. 91,92), although the neighborhoods were not very dense, in particular the neighborhoods distant from the center, due to the open character of the city. However, the general composition of the city is given by the system of roads along which were build the 8 neighborhoods, the particular character of each neighborhood, the presence of the castle (as palace of the ruler and fortification, but originally inhabited), the bazaar (for crafts and commerce) at the center of the whole composition and the use of “Kulla” housing typology. For more than a century, from XVIII to XIX century, there were no drastic changes in the city dimension, nor even further transformation of its structure since the amount of population do not changed. In this phase, it is possible to understand the character of the ottoman city by the neighbourhood configuration and the main structural elements composing the city.

Gjirokastra separated neighborhoods

Architect Emin Riza (2004) in his rigorous studies on Gjjirokastra noted four types of neighborhoods based on the natural terrain configuration and the way it has influenced the buildings articulation.
a) Crest neighborhood (Fig. 93). Crest neighborhoods are articulated along the crest road with buildings situated on both sides of the road, almost defining its perimeter. They seem to descend on both sides of the hill apparently in a symmetrical way, but maintaining also a certain level of roughness as they adapt to the terrain by orienting their main facades on different directions. In Pllakë neighborhood, they are very dense in correspondence to the main road, with very reduced plots, but descending from the hill on both sides plots become larger offering an interesting articulation of the buildings with the greenery. Descending the hill, in the areas where it is more appropriate buildings open also their view in more than one direction, offering a more articulated composition at the urban level although from the architectural perspective, buildings volume remains quite simple and modest, even in their dimensions. Similarly, in Hazmurat neighborhood, the buildings develop along the crest road and descend following the terrain rotating in the direction of the contour lines. Hereupon, buildings articulation is influenced on one side on the terrain configuration by orienting it perpendicular to the terrain sloop which allow also to have the maximum view on the direction of the slope and other secondary views on the sides. On the other hand, the crest road, attracts building facades which in some

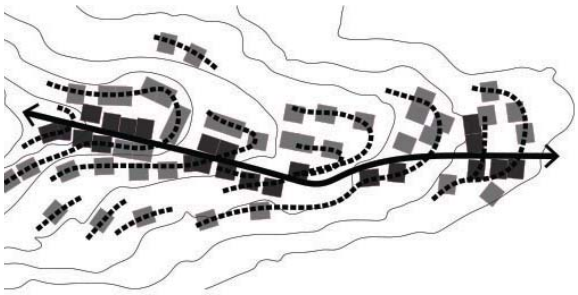


Fig. 93 Scheme and photo of crest neighbourhood in Gjirokastra (source: author's).

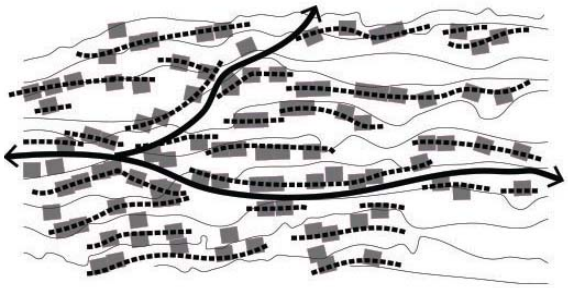


Fig. 94 Scheme and photo of moderate terrain neighbourhood (source: author's).

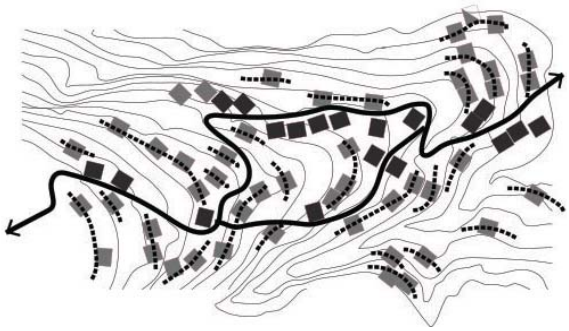


Fig. 95 Scheme and photo of steep terrain neighbourhood inGjirokastra (source: author's).

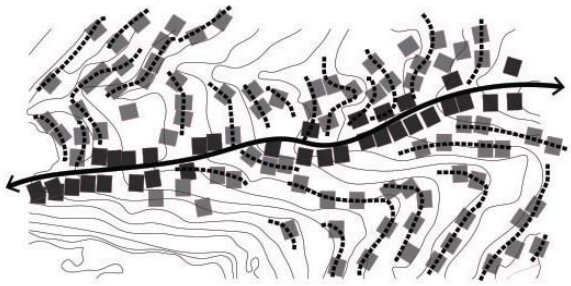


Fig. 96 Scheme and photo of neighborhoods situated between two crest (source: author's).

cases appear to be rotated and adapted to the road direction.
b) Neighborhood situated in a moderate slope terrain wwith a system of principal roads running almost parallel to the isohypses of the terrain (Fig. 94) in Palorto, Manalat, and part of Teqe neighborhood. A second network of paths with high steep and in some cases stairs connects vertically these roads, providing access also for inside houses. This neighborhood due to the favorable terrain is mostly characterized by large scale buildings, of wealthy families and larger terraced plots used as family gardens. Building usually orient their main facade parallel to the terrain in order to get the best view. Seen from the distance, the image is composed of overlapped houses with grey stony roofs integrated with the greenery. However, compared to other hilly neighborhoods, its image is quite homogenous, as buildings run almost in parallel to each other due to the regularity and constant character of the terrain in various section.
c) Neighborhoods through a very steep terrain (fig. 95) Due to the steep terrain and the organic roads that cross this kind of neighborhoods, their image results very rich in terms of perspectives, vistas and a sense of profundity, achieved due to the rotation of the buildings to adapting terrain configuration and their opening in different direction to catch the view down to the valley. Dunavat neighborhood, for example, in its lower part has a well-defined road configuration due to the attachment of buildings which are roughly adapted both to the terrain contour lines and in the road perimeter. In the upper part, building orientation is determined is by the terrain contour lines, and present larger plots which leave most of the space to the greenery. The different density of buildings compared to the greenery, between the lower part is the upper part is what characterizes mostly this neighborhood.
d) Neighborhoods situated between two crest. (fig. 96), (Mecite and Varosh examples). This location is the less favorable as buildings have limited views and sun conditions, as they are surrounded by hills. Nevertheless, they contribute in creating a certain continuity with the crest neighborhoods by offering a gradual connection between them that flows parallel along the contour lines, changing direction and orientation only in correspondence to the main road.
In conclusion each neighborhood with the specific character of its composition between buildings and terrain creates a focus area in the overall image of the city which than comes together in a unitary image by the common image of the “kulla” architecture. In all the neighborhoods the position of the houses towards the road maintain certain characteristics, which are reflected than in the structured but still dynamic image of the main roads and in the dynamicity and open character of the secondary roads.

Before analyzing the characteristics of “Kulla” civic house, it’s important to understand its position in relation to the plot and the road system. Considering the general morphological features of ottoman cities in the Balkans and the lack of direct relationship with the building typology, it’s important to understand the role of the buildings in the formation of the road character. By analyzing various situations and several examples of relationship between the buildings and the road from the historic center, it’s possible to identify three main categories:

1. Buildings aligned on both sides of the road, shaping the road. They are usually present in correspondence to the main roads, attributing them a more rigid and structured character. This example has been largely used on the oldest neighborhood of Pllakë, which is denser and lack large yards. This characteristic is present

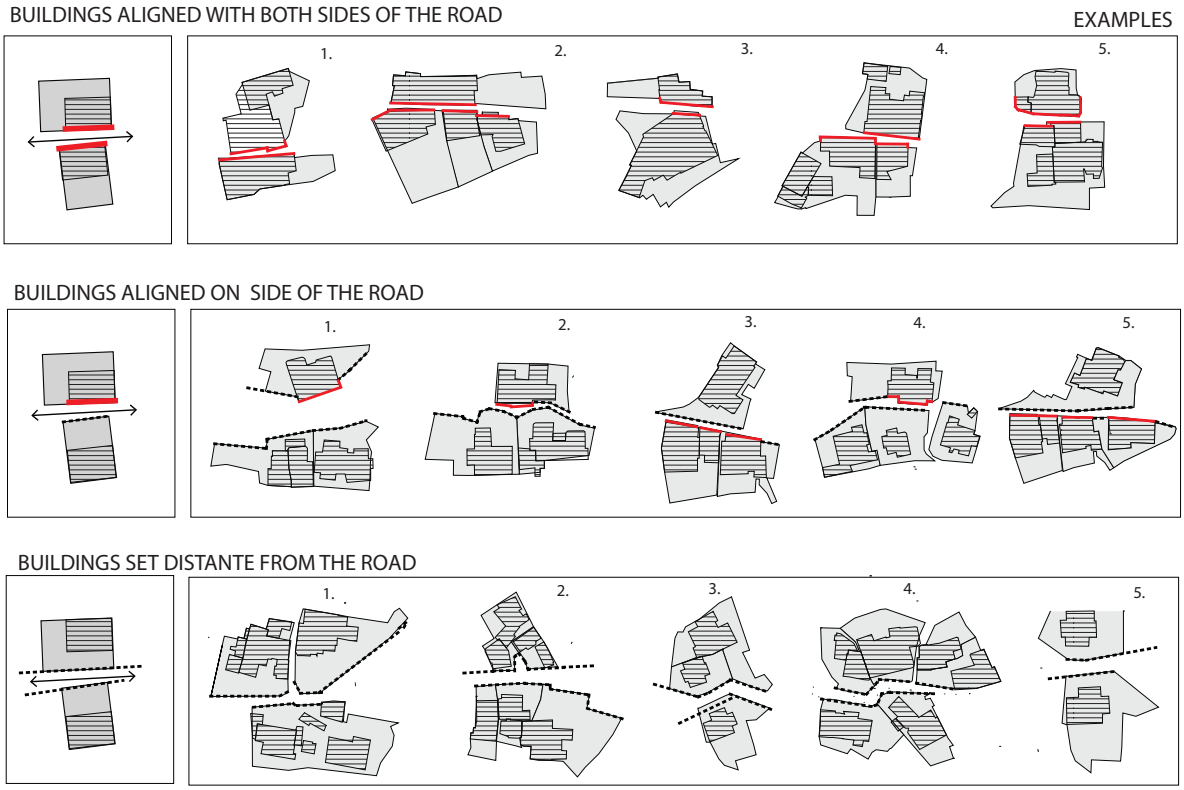


Fig. 97 Study of relationship between houses and roads in the city of Gjirokastra. Three main typologies. (source: author's).

also in the bazaar area, which due to the necessity to have direct contact with the road, is built along the road. Other buildings erected later, after the fall of the ottoman empire, in the proximity of the bazaar area have as well the same feature, due to the need to develop commercial activities along the main roads. In this specific case, it refers to later buildings. Nevertheless, they contribute in strengthening the road character with buildings aligned on both sides in a continuous wall. This features are also present in the continuation of the main roads offering continuous alterations with entrance doors and yards. This gave rise to the dynamic character of the main roads and the possibility of various vistas.

2. Building aligned only one side of the road. This kind of relationship is dominant in the formation of the roads character in the city of Gjirokastra. It does not present a constant character. In fact, the orientation and distance of the building in relation to the yard wall is changing every time. In addition, in case of alignment, it is alternated on both sided and along one side. This kind of applications offer a huge variety of forms and dynamic of vistas, which enrich the visual character of the urban space making it more stimulant for the sight.

3. Buildings set distant from the road. In this case the building is set inside the plot. It is separated from the road through the surrounding walls and the greenery of the yard. The elements that contribute in the road formation are the yard walls, door entrances (which in the case of Gjirokastra are very prominent) and the greenery that emerges on the upper part of the walls. The house contributes only partially in the formation of the road character. This characteristic is present usually in secondary roads, but still is used only in particular terrain situations in which is possible to have large plots and the building is positioned in the center of the plot, having two yards one in front of the buildings and one on the back. This road feature can be easily found in secondary roads in Palorto and Manalat neighborhoods. (Fig. 97)

Representative buildings and spaces

Gjirokastra as other ottoman cities in the Balkans did not have proper urban squares or civic representation buildings. The only building for administrative purposes were the castle and the only significant social spaces in the city were the religious buildings and the hammams. During the communism, most of the neighborhood mosques were demolished and actually the residential area lack a center or a recognized significate point. However, actually their significance is overcome somehow by the monumentality of housing typology. Similarly, the spatial character of the city is given by the semi-domestic character of small spaces, which put into relation the buildings, internal greenery and roads.

The castle

The castle represents the old citadel as well as the military and administrative fortress out of which the city expanded starting from the 13th century. During the ottoman period the citadel was not used only for military purpose, but was also inhabited. It constitutes a district, with its own mosque, shrine, guards, residences.

The main transformations were employed starting from 1811, with the conquest of Ali Pasha, which added the clock tower in the northern part, built and aqueduct to bring water to the castle and decided to reallocate residents outside the castle, maintaining it entirely for his residence and military purposes. (Doempke, 2012, pp. 35-36). Since Ali Pasha time, the castle was used first as a prison in 1930 during the conquest of King Zog and then during the Communist period become a museum of Arms. Apart from its functional transformations, since the city expanded outside the castle, it remains the most dominant image in Gjirokastra and one of the main visual centralities. Moreover, the presence of the clock tower, which constitutes the highest part of the city signs a strong landmark visible in all the parts of the city and from the lower valley of Drino.

Gjirokastra castle fits perfectly in the plateau at the top of the central hill and with its geometrical shape dominates the natural panorama and emerge out of the form of the city creating a strong center. Moreover, its proportional hierarchy in comparison to the lower part of the city constitutes a positive element of orientation for all the neighborhoods as well as in distance view.

The central bazaar (fig. 98)

Bazaars were important part of the urban structure of ottoman cities, in most cases, by occupying a central area separate from the residential part and dedicated entirely to commercial and craft activities. In fact, Gjirokastra after the expansion outside the castle, developed as a city based on farmer activities and as an administrative base of the Ottoman Empire. This character has influenced the urban structure of the city outside the castle in particular after the 17th century, when the Ottoman governor, planned and built a new commercial center for Gjirokastra along the western slope of the hill, the Pazar i Ri (New Bazaar), at the feet of the castle. (Doempke, 2012, p. 42) substituting the “Castle bazaar” [66]. This central area welcomed also other public activities such as administration, trade, arts and crafts, religious, baths and hotels (Funduq).

The bazaar structure is quite regular. It is composed of about 80 two-three story raw buildings (Celebiu 2003) dedicated to commercial activities, which starting from the

66 The “Castle bazaar” was mentioned by E. Celebiu (2003), who sustain that in the XVth century there has been a residential neighborhood and an old bazaar outside the citadel.

Fig. 98 View of Gjirokastra bazaar. (source: author's).

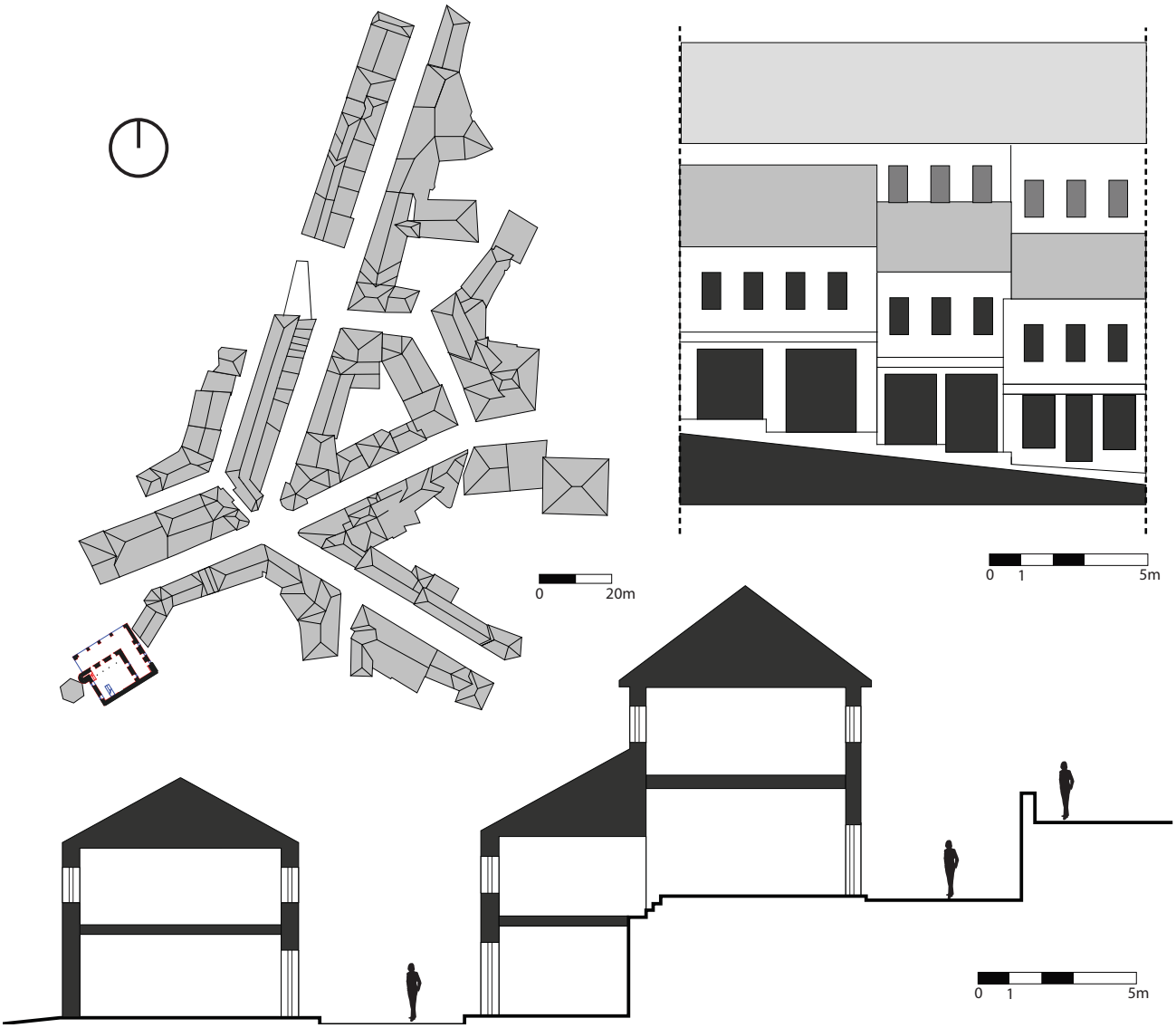


Fig. 99 Plan of Gjirokastra bazaar. Scheme of a typical facade and section of the bazaar (source: author's).

"neck of the bazaar" which constitutes the central area, run along five radial streets that gradually end up in the residential area. Its configuration has strengthened the radial structural typology of the city, in which the bazar constitutes the center. It is also strongly connected to the castle through one of the radial roads. Both of them constitute a visual centrality due to their dimension, form, architecture and space configuration compared to the residential area. In addition, the presence of the main city mosque with its minaret, highlights its role as a strong center, since it emerges from the moderate high of the bazaar buildings. The bazar seems visually a separate entity in the city structure but its spatial configuration is closely related to the residential area configuration creating formal bond between them. The increase of commercial activities need after the fall of the ottoman empire caused an extension of the commercial character along the residential roads, by providing new houses with commercial activities on the ground floor. For this reason, actually there is no precise separation between the bazaar and the residential area and this will probably become weaker in the future.
The complex of the bazaar is composed of small units which are scaled in relation to each other following the slope of the terrain. Therefore, the access from the same road occures from different levels. Each unit has a large retangular opening in the ground floor façade to exhibit the merchandise (occasionaly arch form is also used) , while the upper part used for complementary functions, present small windows with a vertical extension. Volumes located in the main cross-road go beyond the buildings alighment in the first floor through cantilivers, creating visual centers or point with extreme interest for the sight. Each unit is covered with two-sided roof, which only occasionaly are oriented towards the road facade presenting triangular fronts (fig. 99).

In conclusion ,the complex of the bazaar seem to have similar characteristics to the traditional houses in terms of modules, openings and proportion, typology of roof and roof material. It reflects also the general characteristic of adaptation to the terrain which is valid for every building in Gjirokastra. In this regard, it represent a good example of visual integration with the overall image of the city and in particular to the traditional architecture of Gjirokastra.

Civic "Kulla"[67] typology
The housing architecture in Gjirokastra plays an important role in the city structure and in particular in the characteristic image and character of the city. According to architect Emin Riza (2004), in his monography on Gjirokastra architecture, traditional housing architecture can be divided in 3 main types (Fig. 100,101) depending on the level of development and articulation:

1. Perpendicular, half-storey type
The earliest and simplest typology of Gjirokastra civic tower is the perpendicular type which due to the slope of terrain has a different number of floors, and is extended along the main axe in a half-floor on the ground level. This simple type constitutes the bases for other elaborated types that were developed later. The perpendicular tower is constituted by a simple rectangular block posed perpendicular to the terrain with its main axe. It has small, modest dimensions in plan (the short side is around 3.8-6.5m and the long side is in medium 15m), but is developed in two, three or in few cases four floor high with an extended vertical proportion. Variations to this type

67 This term was first used by ethnographer Rrok Zojzi to distinguish the civic tower from the rural tower. (in Riza. E, Qyteti dhe banesa qytetare shqipëtare e shek. XV-XIX, Dita 2000, Tiranë 2009)

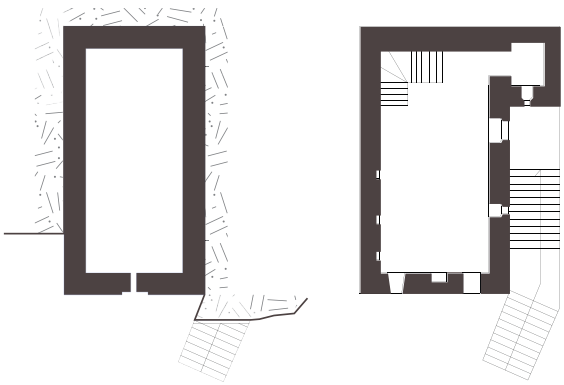
include small added volumes on both sides and on the back of the building.
Functional uses and the distribution of spaces: Regarding the functional use and the distribution of spaces within building, there is a vertical hierarchy of spaces that culminates in the upper part with the guest oda. In fact, the most important living spaces are located in the upper part of the building, which is the higher space, having also visibility, light, but also control over the territory. On a contrary, the lower part was a servant area: the ground floor was used as storage. It often contains the water tank room (stera), and space for animals or working activities, while the upper part was a proper living part (the living space for the family in the first floor and the guest oda (room) in the upper floor. They have often separate entrances. Intermediate floors, with a reduced high are usually used as living spaces during the cold season and sleeping rooms and are connected with the upper part through internal stairs. In this modest typology, the main volume is usually a single space or is divided in two rooms and the servant areas are usually positioned on the sides or at the back of building, lacking the advantages of the view which are attributed to the living spaces. In fact, in most of the cases they look back to the mountain.
Facade: This functional organization is reflected also in its external architecture of the facade. In fact, the main volume, which usually present an extended high, is mostly closed in the ground level and increase gradually the openings in the upper part which is dedicated to the guests oda. This part, in contrast to the basement and first floor which is made of stone, in many examples has also a characteristic treatment with çatma covered with white plaster, which made it a highly visible and identifiable part. This simple typology is very important since it constitutes the bases for evaluated and more complex types.

2. One wing or L type.
The one wing type is the most common. In this phase, there is an evolution of the first type and to the existing volume, is added a new block, which contains the stairs, the "*nën-divan*[68]" area, the "*divan* " and the "*çardak*"[69] in the upper part. The stairs, which in the earliest type where outside, in this variant are included in a separate block. The architecture of this variant is identified by the contrast that this block creates with the main prismatic volume, as it is more articulated and is open in the upper part of the "*çardak*". In more evolved types, a "*kamarje"* or an open balcony is added in the upper part, included in a small volume extended in verticality that reaches the ground creating a more expressing composition in the central part.
Functional uses and the distribution of spaces: In this second type, the functional principles of spatial organization are similar to the first type. The lower part of the house is used as a servant area for animals, food storage due to the cool temperatures and in some cases as a kitchen, while in the upper part is positioned the living area. Despite the main volume which have the same functional organization with *oda-s* (room) in the upper parts, oriented towards the view, the added part reflects a more open character as it serves as a living space during the warm season. In some cases, it can be also closed and used only as a distributive space for the house.
Facade: The facade is made of two main blocks: the original vertical volume of the simple type and a larger one, which is more open in the façade. In this sense a contrast between them is evident. However, they are also characterized by simi-

68 A space in the upper part of the Gjirokastra civic tower which is used to connect the living areas, but can also be used as a living space during the warm season.

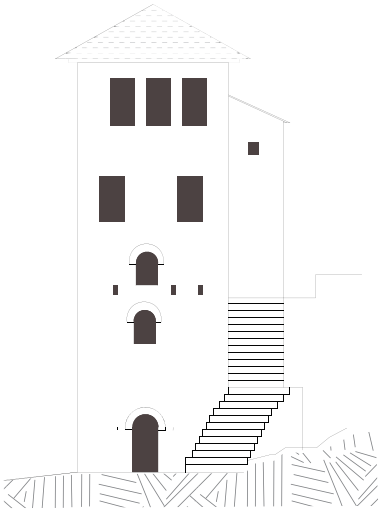
69 An open space in the upper part of the Gjirokastra civic tower which is used as a living space during the warm season.

1. PERPENDICULAR TYPE
DHRAMI HOUSE



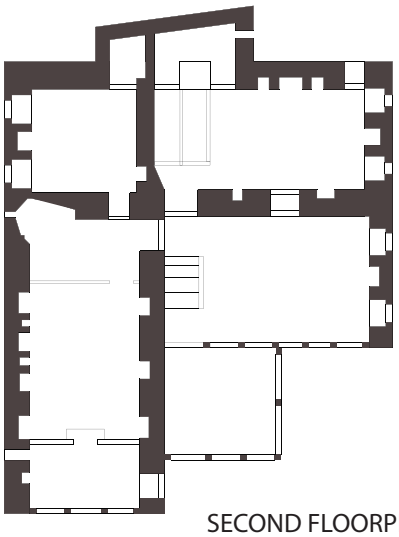
GROUND LEVEL PLAN

TYPE PLAN

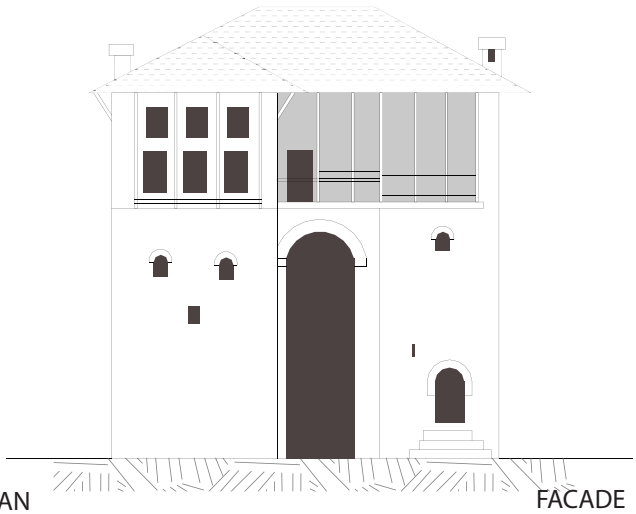


FACADE

2. ONE WING TYPE
CENE HOUSE

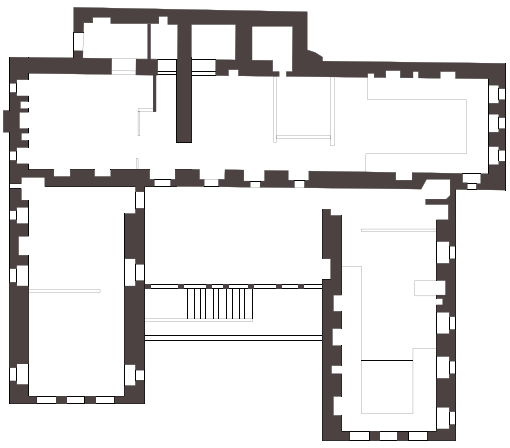


SECOND FLOORPLAN



FACADE

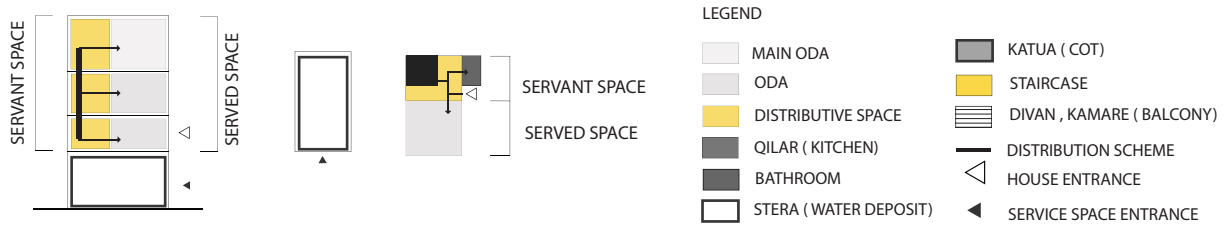
3.TWO WING TYPE
SKENDULI HOUSE



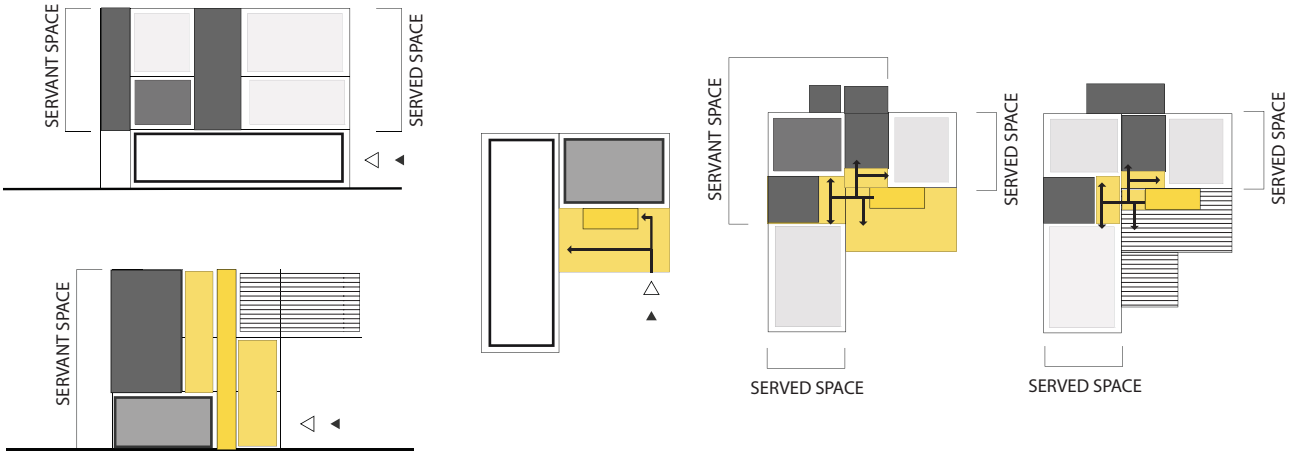
SECOND FLOORPLAN

FACADE

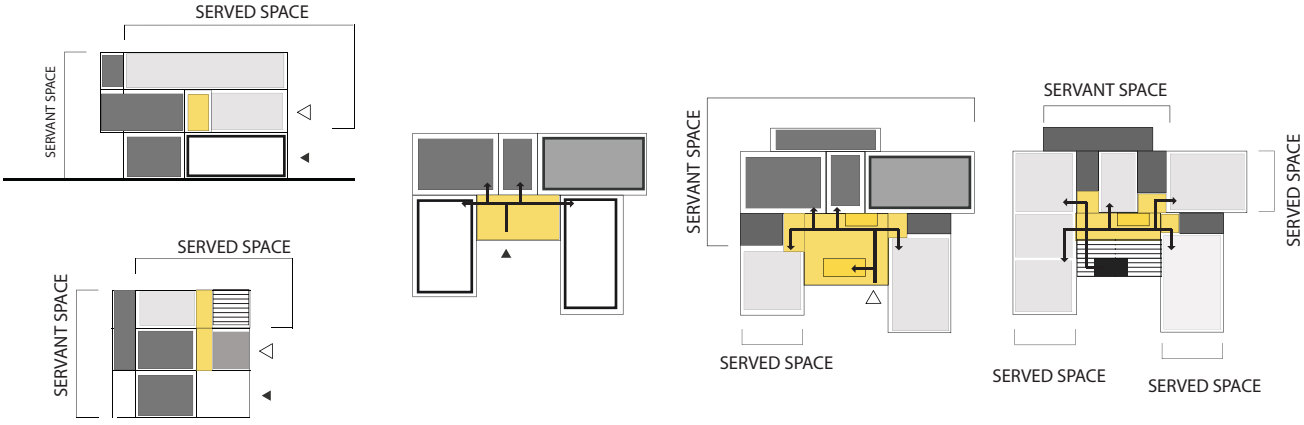
DHRAMI HOUSE



CENE HOUSE



SKENDULI HOUSE



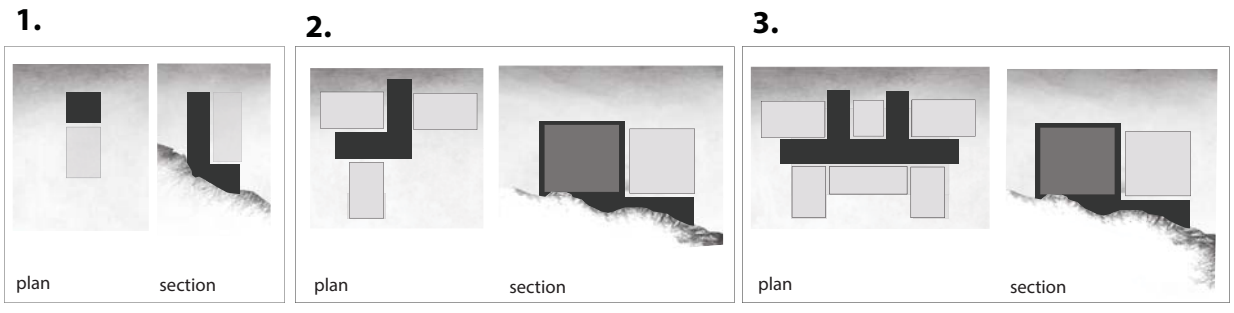


Fig. 100 Gjirokastra buildings typology and spatial distribution analyses. Served and servant space. Funtional and distribution scheme for each typology *(source: author's, based on IMK surveys)*

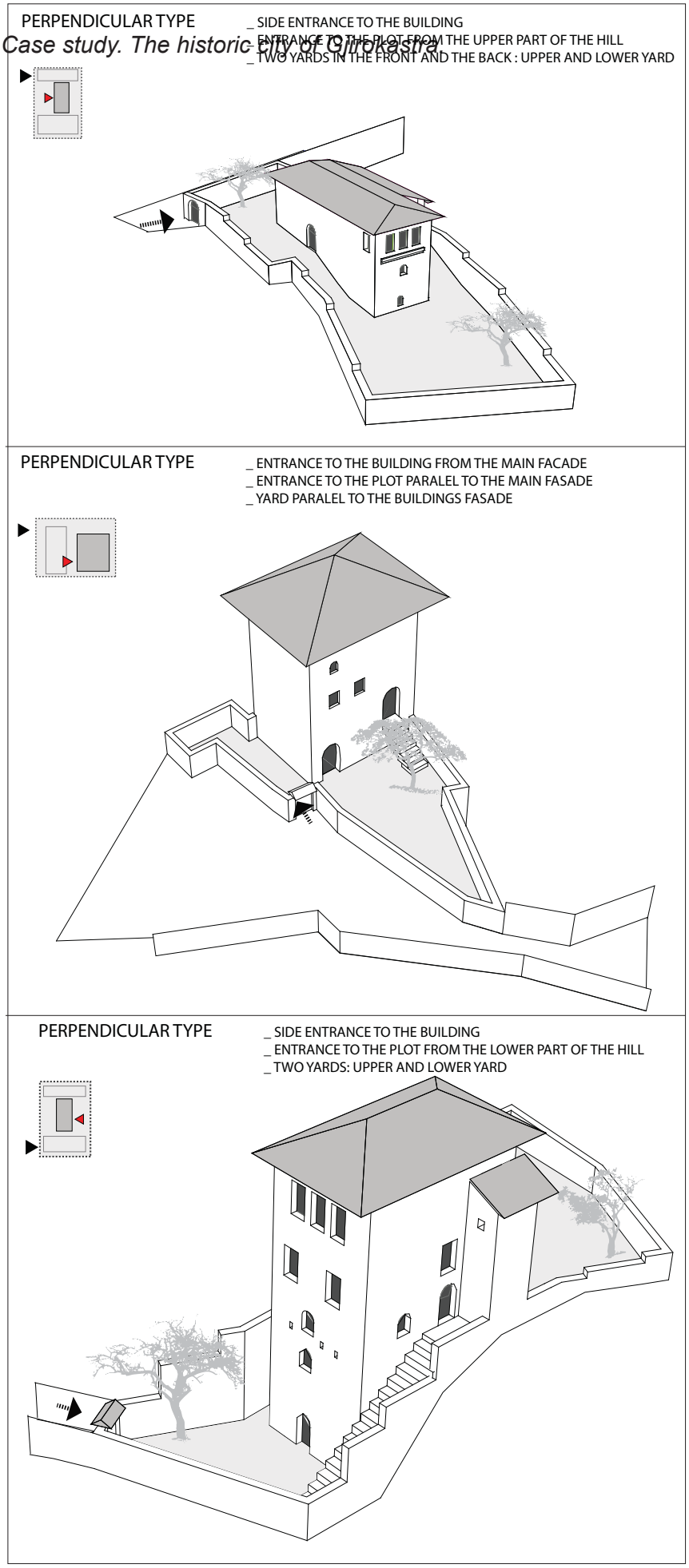
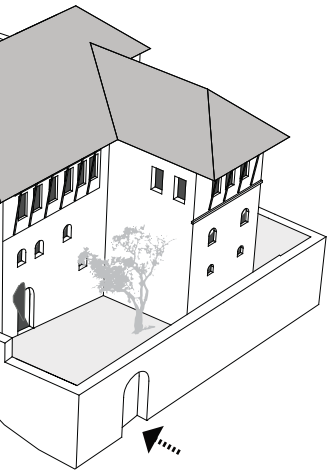


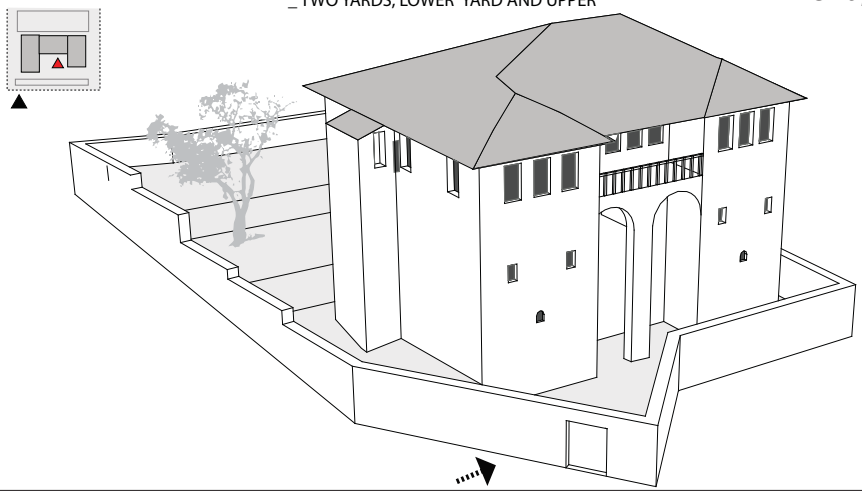
Fig. 101 Analyses of the houses types and building plot as basic organisms that contribute in the def nition of the urba relation to the slope of the terrain, the entrance to the building plot, the entrance to t

HE BUILDING
T FROM THE LOWER PART OF THE HILL

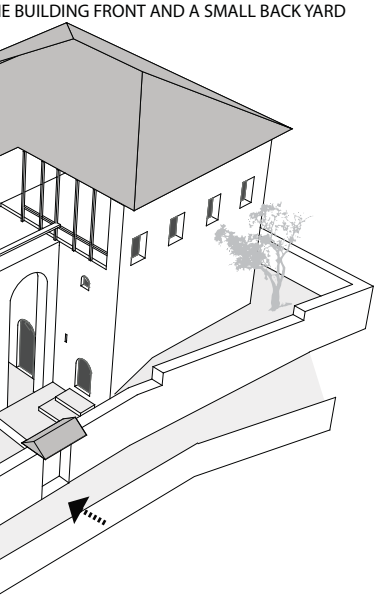


TWO WING TYPE

_ FRONT ENTRANCE TO THE BUILDING
_ PLOT ENTRANCE FROM THE LOWER PART OF THE HILL
_ TWO YARDS, LOWER YARD AND UPPER

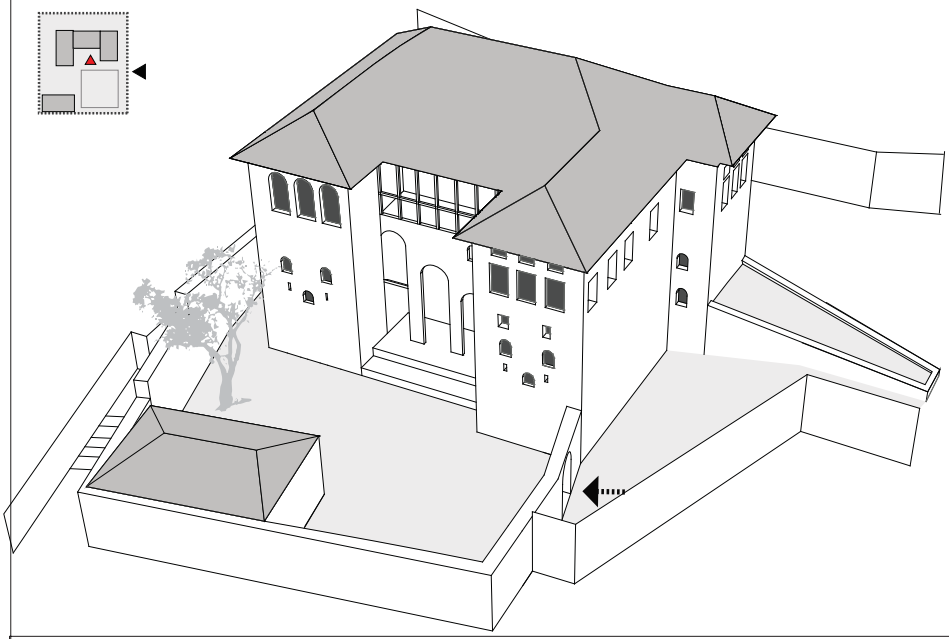


HE BUILDING
FROM THE BUILDING SIDE
E BUILDING FRONT AND A SMALL BACK YARD



TWO WING TYPE

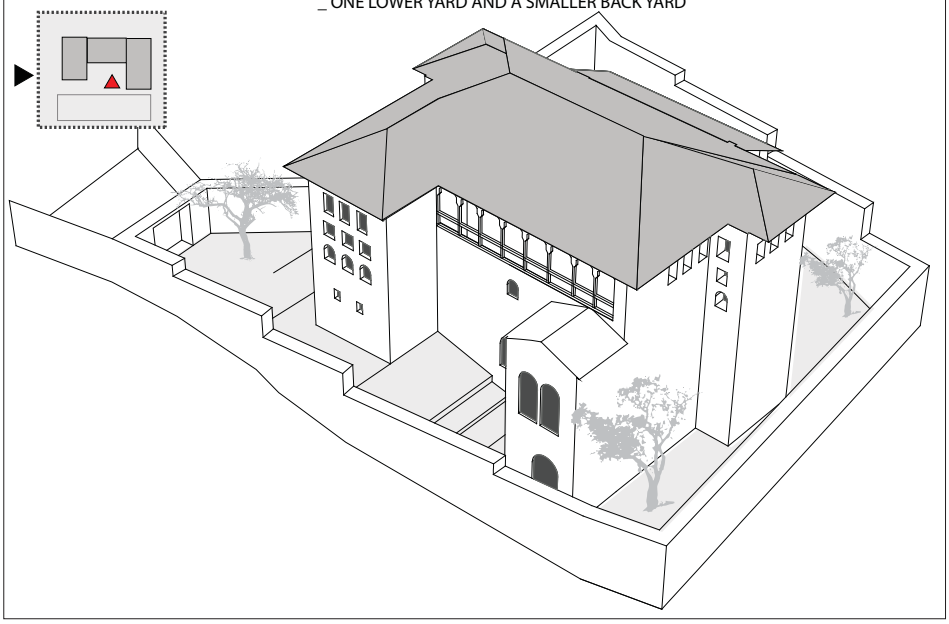
_ FRONT ENTRANCE TO THE BUILDING
_ PLOT ENTRANCE FROM THE SIDE OF THE BUILDING
_ ONE LOWER YARD



HE BUILDING
T FROM THE SIDE PART OF THE BUILDINGS

TWO WING TYPE

_ FRONT ENTRANCE TO THE BUILDING
_ PLOT ENTRANCE FROM THE SIDE OF THE BUILDING
_ ONE LOWER YARD AND A SMALLER BACK YARD



an morphology of Gjirokastra. For each typical case study are taken into consideration: the orientation of the house in the house, the position of the yard in relation to the building. (source: by the author)

larities as both of them presents a vertical gradation of openings. In fact, the lower part has only few openings, usually fengji (small windows use for weapons) while the upper part is animated by a series of vertical windows aggregated together in pairs of two and three in the main volume and have larger extension in the attached volume.
Even in this case, variations are achieved by adding small volumes on both sides and on the back of the building, which in some cases serve to enlarge *oda*-s and in other cases are used as service area.

3. Two wings or U type.
In this variant, the prismatic volume of the simple type is duplicated and mirrored on the other side of the connective central block of the divanhane and çardak. Due to this duplication of the living areas, the central part becomes only a connective volume, which can be used also during the summer.
Functional uses and the distribution of spaces : In this evolved type, the principles of functional organization are quite similar to the previous variants. However, given the dimension of the building, and it symmetrical composition, the living areas are usually located in the wings with frontal and lateral orientation and openings, whereas in the central part at the bottom are located the servant spaces and in the front the çardak, used as a living space during the summer.
Facade: In terms of architectural composition, the duplication of the main vertical volume, makes the central block highly visible due to the symmetry and architectural contrast that creates with both sides, which are more closed and prismatic. In fact, this part constitutes the center of the façade and is articulated freely, since the symmetry and general character of the façade is given by the symmetric presence of the vertical volumes.
Houses type play an important role in the definition of the image of Gjirokastra. Nevertheless, its urban landscape depends also on the positioning of the builing and their orientation, the form of hte builing plot, the presence and position of yards and entrances to the builing and to the house yard. Both of them influence the way people preceive visually the city.

In conclusion, each of this typologies seem quite constant in the main volume composition and in the front façade. Variations and adaptations to specific spatial needs, terrain configuration and relationship with the road are open to changes in both sides and in the back of the building. Hence, the understanding of basic types and the range of their variations can serve as a starting point to understand the significance of the civic kulla in the overall image of the city, as the most distinguished element that attributes a specific character to the urban landscape perception.

3.3 TRANSFORMATION OF THE CITY IMAGE AFTER THE FALL OF THE OTTOMAN EMPIRE. RISKS AND CHALLENGES.

After the fall of the ottoman empire, in the beginning of the XX century, Gjirokastra became an important administrative, cultural and economic center, initially as part of the Autonomous Republic of Epirus, then during the monarchy of King Zog and later during the communist regime.

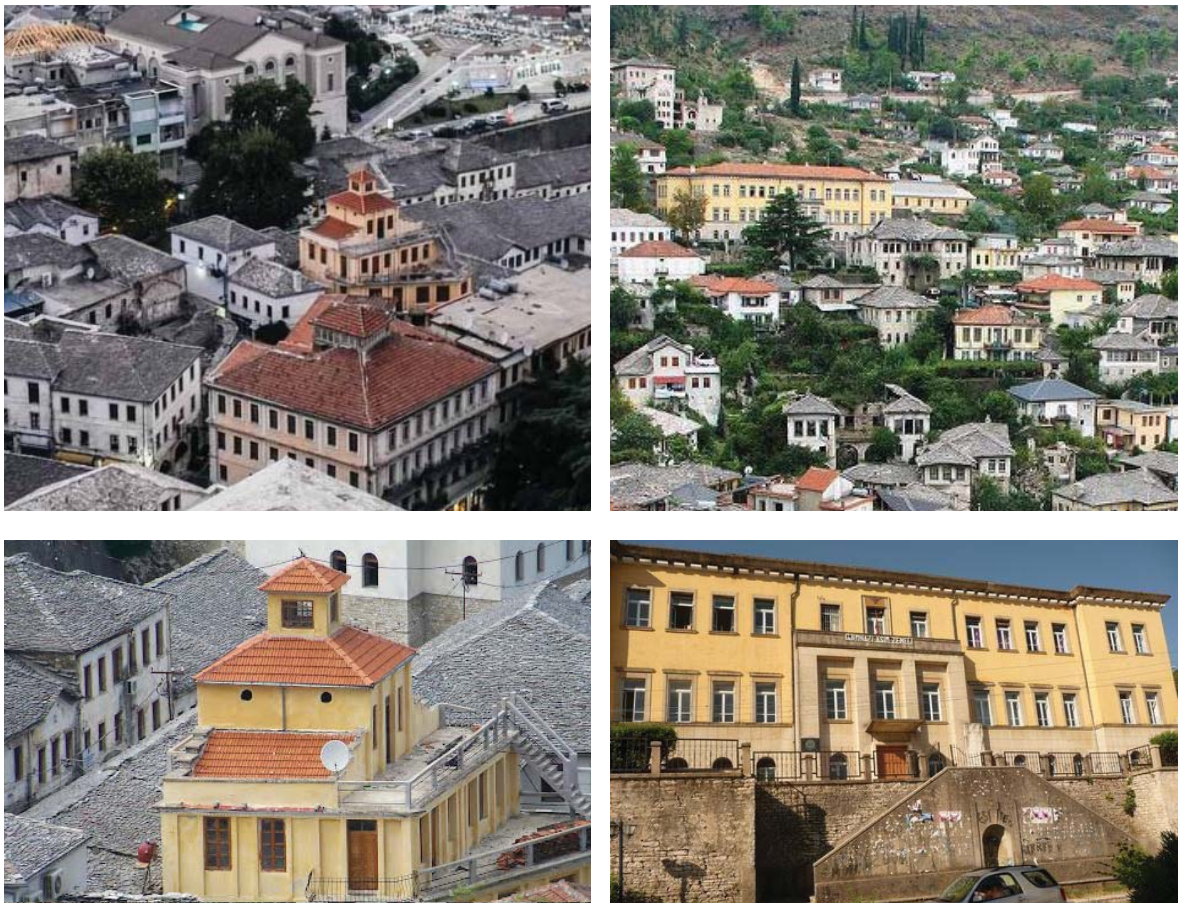
- Gjirokastra under monarchy

With the advent of the monarchy in 1928 and instauration of the fascist model, the city has undergone a series of transformations, which aim to upgrade it to the present requirements due to trade flourishing with neighborhood countries (Qirjaqi, Bilushi 2011)[70]. In this period, new houses and villas were commissioned by the newly bourgeoisie class (Qirjaqi, Bilushi 2011)[71] formed due to trade and commerce. In parallel, were introduced also new service buildings (administrative, educational, juridical etc. such as the city hall, the cultural center, the post office, the bank, sports grounds, hotels [72], schools) and public squares (Miho 2003), (fig. 102).

70 Qiraizi, Bilushi (Qirjaqi, Bilushi 2011) noted also the role of the newly build airport of Gjirokastra in the development of commerce activities and consequently in the development of construction sector.

71 Id. listed a series of houses build in the historic city during this period: Vila Emin Kokalari, build in Palorto during '31 –'33; Vila Papavangjeli build in Varosh in '37; Aleks Ceci, three floor house in Varosh; Teli Mihali, house and commercial activity in Varosh in 1937; Koco Kekezi, four floor house in Varosh etc.

72 See Hotel "Royal" (today known as hotel "Sopoti") or Hotel "Savoia" (Kashau Hotel)



a) b)

Fig. 102 a) Hotel b) High School erected during the monarchy period. Both of them present similar design elements to the traditional architecture but are also distinguished by the monumental scale and by the contrasting color which make that emerge to the view. (Source: by author)

Vilas and houses in this period reflect western influences. In the façade appear elements foreign to the traditional architecture such as balconies, porches, tiling's, Venetian shutters etc, as well as the use of modern materials such as beton-arme and steel, in the structure of the buildings and in details of the façade. Nevertheless, regarding urban morphology and they were usually posed in continuity with the historical pattern.
In contrast, public buildings seem to have a larger scale and dimension compare to the scale of the historical buildings, as it was in the fascist philosophy to build striking, monumental objects. However, in terms of architecture, they present an interpretation of the ottoman traditional architecture in the facade elements and details, although new techniques and materials were applied, so as they can be distinguished from the existing buildings. Buildings present also a contrasting color in the exterior, making them visually easily identifiable. Some exterior elements such as balconies, decorated balcony railings, elaborated angles of the volume and windows frames, as well differ from the traditional architecture presenting a typical "Umberitan" architecture style, which was largely used in Italy in that period (Qirjaqi, Bilushi 2011). Nevertheless, they do not hardly disturb the city image, being posed in continuity and harmony with the morphology of the urban tissue and presenting some visual correspondence with the facade elements. In addition, they were mostly concentrated next to the bazaar area, reinforcing its role and only partially interfering with the residential districts.
The existing architecture of the ottoman city, in this period was preserved as new interventions consisted mostly in upgrading the city with public structure and not in substituting or transforming existing ones. Many of Gjirokastra religious buildings, which afterward will be demolished, survived until the first half of the XX century. This is evident in early photos, postcard and illustrators which show the cityscape full of mosque minarets.

- Gjirokastra under the communist regime

In the years under communism Gjirokastra was particularly appreciated for its unique cultural heritage and was declared a Museum City in 1961 in an effort to conserve the town. The state invested in craftsmen specialist, who acquired knowledge on traditional buildings and techniques of construction in order to constantly maintain the historic city.
Despite these attributed historical values, Gjirokastra as other parts of Albania, in 1967 was included in the campaign to extinguish religion by demolishing religious buildings. Mostly between the 1966-68th, on behalf of the declared "Albanian cultural revolution" set up by dictator Enver Hoxha, almost all the religious buildings in Gjirokastra were turn down (Gilkes, Booth et al. 2009). Only the central mosque was saved being previously declared monument of culture. Even in this case, no importance was given to its religious significance, at the point that it lost its function and was used for other activities. The loss of mosques changed the characteristic historic landscape dominated by minarets and highlighting the role of the traditional kulla-s which were previously left in background.
Meanwhile, due to the growth of population, commercial activities start springing up along the main roads, and in particular in the roads that connect the historical city with the new one. Many existing buildings altered the ground floor due to the necessity to adapt to the market demands. However, this was limited to the main roads, as an extension of the commercial area of the bazaar along the axes which connect the historic part with the new city.

Fig. 103 Buildings designed during the communist period. a) Hotel Cajupi b) City hall, c) Cultural center d) National Bank and residential buildings.

Fig. 104 New public buildings erected during the monarchy and the communist regime in the historic center of Gjirokastra. (Source: author's)

Earlier, before the declaration of protected heritage, Gjirokastra underwent several transformations of it's historic image. In the early phase of communism, many new public and administrative buildings spring up in the historic city around the central area of the bazaar, imposing the system ideology an architecture style of the partner county such as Russia, china etc. In 1951 in fact a cinema in Russian style substituted the prefecture building erected during the King Zog regime. Other buildings that were design and build in this period were: The seat of the region (by arch. S.Luarasi), Telecom building (by arch. S. Luarasi), The national Bank and the residential building in the upper floors (by arch. M. Pepa), Saving Bank, "Çajupi" hotel and the former Comity of Labor Party (the current city hall) (by arch. S. Luarasi.), the old Post building (by arch. Vasilika Cico)[73](fig. 100). Both of them were strongly invading the city center, transforming its local character. However, the good think is that the general urban morphology and the character of the neighborhoods with the traditional architecture, which were the most significant part that contribute in the character of the historic city was preserved (fig. 103,104).
Later in the same period, two contradictory approaches were undertaken: on one side, studies, documentation and restoration projects of the historic center and on the other side the "State Construction and design" Office has destroyed part of the traditional ensemble to provide new public buildings within the historic context. During this period was build the Odeon (by arch S. Bakllama), The new cinema, (by arch A. Doraci), The officers palace (by arch E.Dobi),[74] etc.
Nevertheless, these interventions show an effort to be posed in harmony with existing historic buildings. Yet, lacking a structured approach in harmonizing with the historic city and in-deep studies on historic architecture and urban landscape which could suggest the right road, they can be considered more or less as valid attempts to communicate with the historic context in order to safeguard the integrity of the historic landscape.

- Gjirokastra after the '90s

Only later Gjirokastra started to suffered large modern development interventions that harmed it historical image. In fact, a significant part of the historical city has been transformed and readapted through the redevelopment of individual residential buildings or adding's of new ones without any regard of the historical landscape. Still, the central area, has been protected, as in 1961, the Communist government declared Gjirokastra a "Museum City" and identified a perimeter of protected area, classified buildings into protected categories and guide appropriate refurbishment interventions through the State Institute of Monuments. The rest of the historical city outside the museum area
Starting from the '90s, after the fall of communism, due to the lack of control over the territory, proper urban regulations, and a management plan for the historical area, illegal constructions, incoherent interventions and unplanned urban development's start springing up in particular in the buffer zone, highly impacting the image of the historical city. In addition, partial or total historical buildings collapse due to the abandonment, risk to destroy not only the single building as architecture but impact also the decay of the historical urban landscape which is considered as an ensemble for is unity as a whole (fig. 105, 106).
This is highlighted also in ICOMOS Advisory Mission report on Gjirokastra[75] , which

73 Based on the National Archive of Construction Projects

74 Id.63

75 Report on the ICOMOS Advisory Mission to Historic Centres of Berat and Gjirokastra (C 569bis) 27th to 29th April 2016 (source: http://whc.unesco.org/en/list/569/documents/)

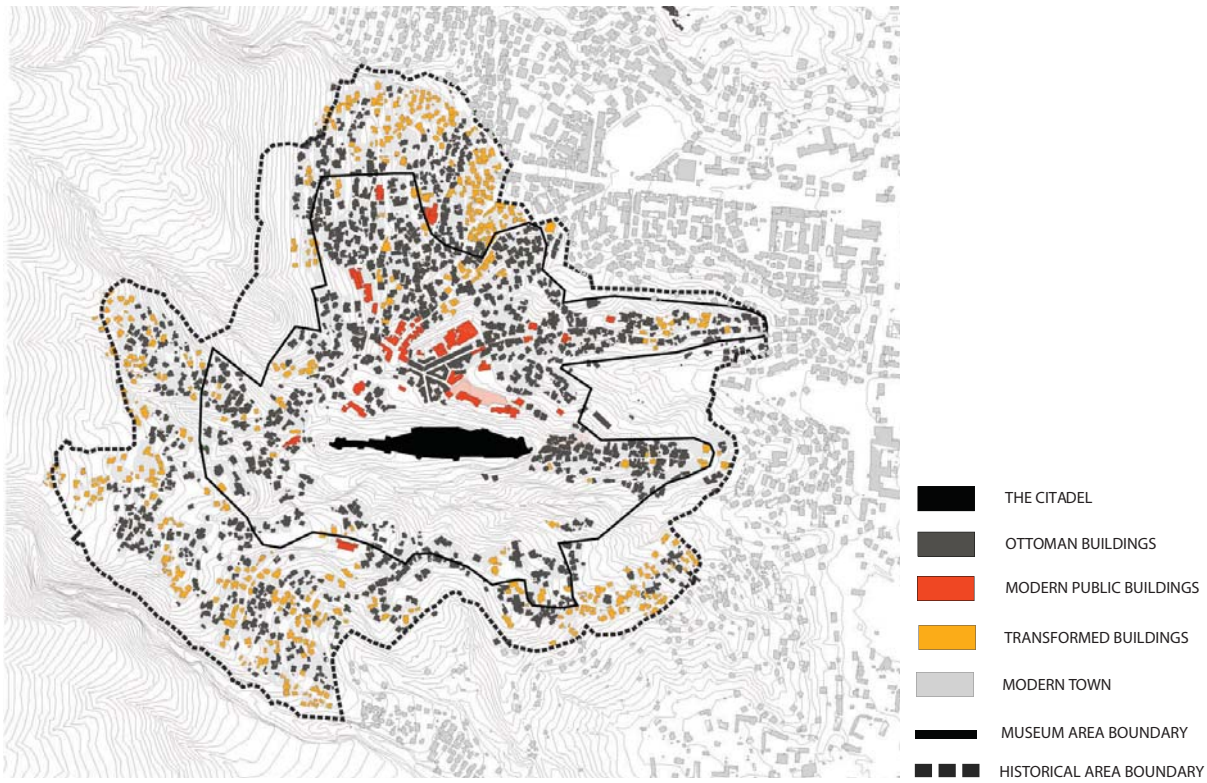
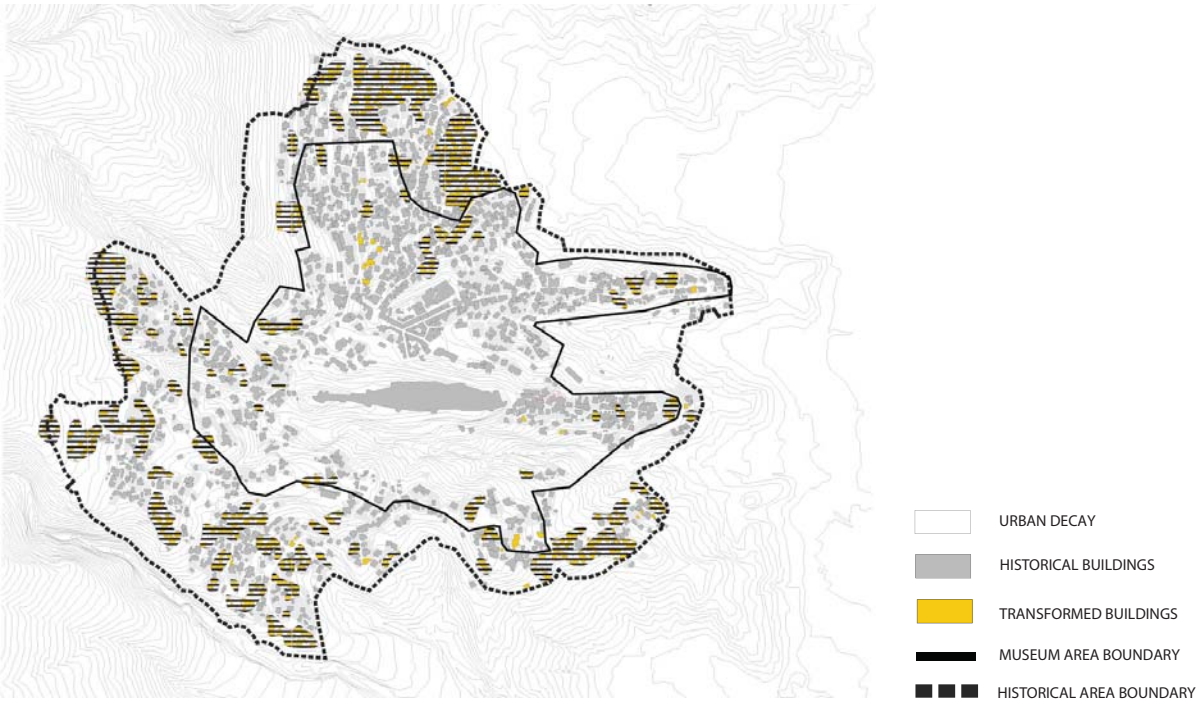


Fig. 105 Urban development and transformations of Gjirokastra in relation to the historical ottoman setting. (Source: author's)



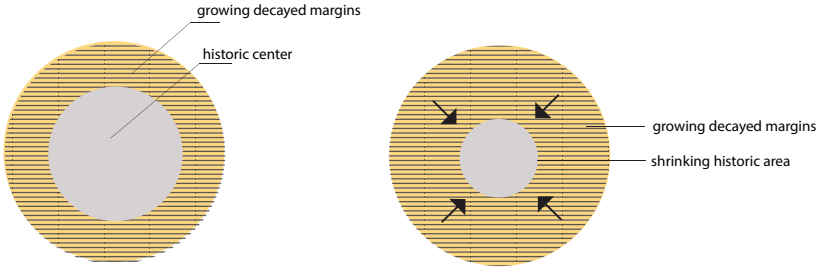


Fig. 106 Gjirokastra: The degree of transformation of the historical town (Source: author's)

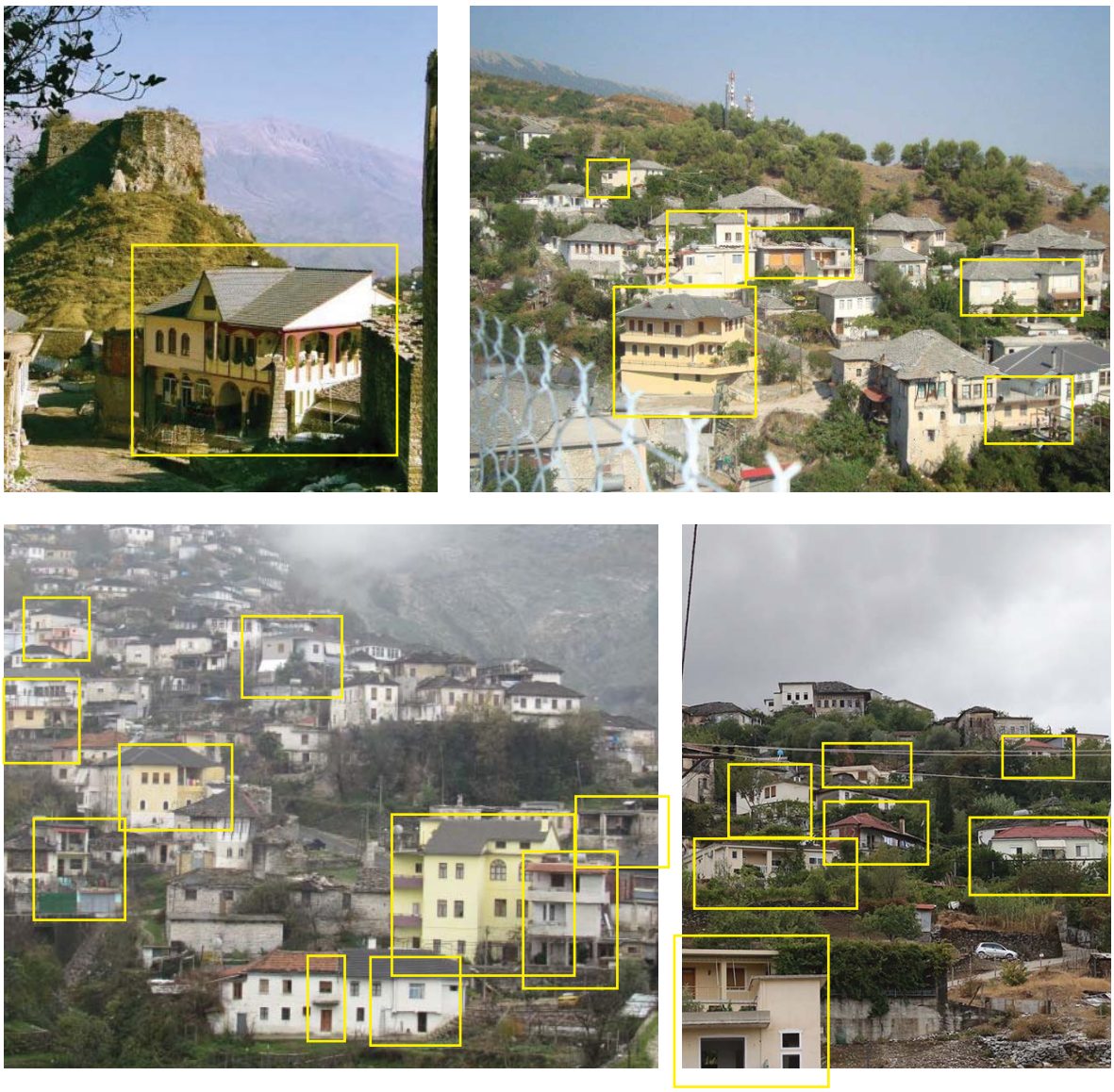


Fig.107 Current incompatible interventions in the buffer zone. Luck of dialog between the old and the new. The city image as a whole is harmed by these inappropriate interventions (source: author's)

recall as a fundamental target keeping visual integrity and visual interrelations in the historic area among the buildings and urban space. Moreover, the historic area and its surroundings were considered in their totality as a coherent whole whose balance and specific nature depend on the fusion of the parts of which it is composed.
Recent UNESCO report on the state of conservation[76] of Gjirokastra historic area, still press on the urge for appropriate mechanisms of development and control in order to guarantee the safeguard of the historical city and suggest the use of a landscape approach as carried by the international Recommendation on the Historic Urban Landscape (2011). In order to avoid further decay and inappropriate interventions, this report recommends at least to maintain the moratorium on new constructions within the buffer zones, until approval of appropriate tools for protection and management of the city.
Hence, this study intends to put into evidence the importance of visual perception of the historic urban landscape of Gjirokastra, as the most representative and valuable urban ensemble in Albania in order to press on the importance of visual quality and serve as orientation in a sustainable future development of the historical city.

76 UNESCO report on the state of conservation. Historic Centres of Berat and Gjirokastra 2017 http://whc.unesco.org/en/soc/3574

3.4 THE SAFEGUARD OF THE HISTORIC URBAN LANDSCAPE. LEGAL FRAMEWORK.

Urban cultural heritage in Albania for the first time were putted under protection in 1948 with the Decree No. 586 of 17.3.1948, G. Z. Nr. 39/1948[77], approved with the law No. 609 /24.5.1948, G. Z. Nr. 72/1948. In this decree, historical cities in their totality were excluded as cultural heritage to be protected and only architectural monuments as part of it were considered as a separate category. Only in 1961, Council of Ministers Decree No. 172/2.6.1961[78] declared the following historical cities, Gjirokastra, Berat, Kruja bazaar and the underground of Durres, protected "*museum cities*" and based on the Council of Ministers Decree No. 170/ 02.06.1961[79] , followed a regulation on "*The management of the museum city of Berat"*, to which were oblige to referee for interventions of preservation also Gjirokastra, Durrës and Kruja, which lack a regulation of their own.

On this bases, was initiated a huge work on the identification, collection of documentary materials and graphical representations with the intent to determine a list of protected buildings and to conserve them properly. This measures were followed by the Council of Ministers Decision No. 283 /28.07.1962 [80] on the protection, adjustment and restoration of these monuments. Up to this period, historic cities were protected only partially, through the conservation of the single monuments.

In 1962, Albania became member of ICCROM (*International Center for the Study of the Preservation and Restoration of Cultural Propriety*), which increase it's standards at the international level. In fact, the changes of 1971 in the law on cultural heritage were mainly based on the principles of "*The Venice Charter*" of 1964, an International Charter for the Conservation and Restoration of Monuments and Sites.

In the last years, the influence of western legislation and charters had increased. The current law in force, no. 9048 /07.04.2003[81] on "*Cultural Heritage*" is mainly based on the Italian law of 1997 [82].

Herein, *Part 1 of Article 29* includes as object of protection and conservation not only "museum areas" within the historical city, but the same historic city as a united complex, presenting historical, cultural, monumental, architectonical, urban and environmental values. Hence, **historical city as a whole came to the attention of researchers and institutions with the aim to safeguard the historical setting in its totality.** The approval of the law followed the Council of Ministers Decision Nr.832, date 11.12. 2003[83], which asserts a specific regulation on the administration of the historical city of Gjirokastra based on three main areas defined :

1. **the museum area,** in which were allowed only reconstructions of existing

77 Dekreti Nr.609, datë 24 .5.1948. "Mbi mbrojtjen e monumenteve të kulturës dhe sendeve natyrore të rralla" (eng. "On the protection of cultural monuments and rare objects"

78 VKM, nr. 172, datë 02.06.1961. "Mbi shpalljen e qyteteve- muze, "Mbrojtja e monumenteve", Tiranë, 1972, nr. 1, faqe 22-23. 92

79 VKM, nr. 170, datë 02.06.1961. "Mbiaprovimin e rregulloresmbiadministrimin e qytetitmuzetëBeratit, "Mbrojtja e monumenteve" Tiranë, 1972, nr. 1, faqe 24-35.

80 VKM Nr. 282, datë, 28.07.1962 "Mbi disa masa përmbrojtjen, ndreqjen dhe restaurimin e monumenteve"

81 LIGJ Nr.9048, date 7.4.2003, Për " Trashëgiminë kulturore"

82 Testo único delle disposizioni legislative in materia di beni culturali e ambientali, a norma dell' articolo 1 della legge 8 ottobre 1997, n. 352.

83 VKM Nr.832, date 11.12. 2003, Për Miratimin e rregullores së administrimit të qytetit-muze të Gjirokastrës. Available from: http://www.kultura.gov.al/files/userfiles/vkm_nr._832_dt_11.12.2003_web_dhe_ndryshimet.pdf

buildings, necessary for the adaptation to the contemporary conditions of life.

2. **the historical area,** in which are prohibited new buildings, and are allowed only reconstruction and restoration interventions.

3. **the buffer zone** in which were allowed adaptations, additions and new buildings that are in line with the characteristics of the historical city such as dimensions, volumes, materials, roof form and colors. **(f g. 99. a))**

This regulation apart from recognition of the historical city values and the definition of protection interventions within the existing buildings, considered also as an important part in the conservation of the historical city, the buffer zone, or the residual area around the historical city, which has similar topographical and morphological characteristics and is in part occupied by traditional buildings.
After the inscription of Gjirokastra into UNESCO world heritage sites in 2005, another step forward for the protection of historical cities was undertaken. In 2007, was approved the first national charter of restoration[84], as **part of the 2007th amendment of the law on cultural heritage, recalling mostly the Italian charter of restoration of 1972 .** A particular regard was given to the recognition of the values of the historical city in its totality as a separate category to be protected. In fact, in the *Appendix D, of Article 11*, is firstly highlighted that the aim of preservation interventions in the historical city is the continuation in time of the values that characterize it as a complex, considering not only its central part, but its spatial and visual character.

[… *is not limited to the conservation of the formal character of particular architectures or environments, but include the conservation in the essence of the common characteristics of the whole urban ensemble and of all elements that def ne these characteristics.*] (Appendix D, of Article 11, Albanian Charter of Restoration, 2007[85])

The Albanian Charter of restoration oriented and gave guidelines regarding specific methods of intervention for the preservation of the historical city which have to be preceded by a careful historical and critical reading of the entire historical complex extracting its formal and typological synthesis.

[*Urban ensemble's protection is achieved through the study of particular elements such as streets, squares, etc., the interior spaces such as gardens, parks, open spaces, etc., other signif cant structures such as walls, gates, etc. and besides them and other natural elements that are fused together such as natural outline, water leakage, geomorphological features etc. The above mentioned building elements should be conserved not only in their formal aspect that characterizes their architectural or environmental expression, but also in their typological character…*][86]

Based on the critical and historical readings of the city and its morphological synthesis, the attitude of the Albanian Charter was that of intervening through homogeneous criteria and equilibrium between the old part and the surrounding, which lead to **interventions of adjustment and improvement conserving the character of the historical city**.

84 Vendim Nr.426, datë 13.7.2007, Për miratimin e "Kartës Shqipëtare të Restaurimit"

85 Id., ShtojsaD, Neni 11

86 Id., ShtojsaD, Neni 11

[“*Conservative improvements” mean … the preservation of the general environmental characteristics, which means the integral preservation of monumental and environmental ensembles and the adaptation of other elements or buildings with modern life needs, considering extraordinary or even partial changes of the elements, only when they f t and adopt to the overall character of the historic center. ... in this type of intervention, it is important to respect equilibrium and the typological and constructive quality of buildings, prohibiting those interventions that alienate and deform the characters*.] [87]

In order to be operative, these interventions were thought to be embodied into regulatory plans in areas that connect the historical part with the new city, detailed plans for urban restructuration and executive plans.
Recently, **based on the decree no. 619/07.07.2015[88] , the perimeter of the historical area of Gjirokastra was enlarged considering as part of it also the residual area, or the buffer zone.** The regulation of the historical city was as well changed compared to the previous one of 2007th and was named “The regulation on the protection, integrated conservation and administration of the historical center and protected area of the city of Gjirokastra”. According to this regulation[89] , the urban setting to be protected includes:
1. the historical center and
2. its residual area (fig. 108. b)).

The residual area, around the historical center in fact contribute with is historical and cultural values in enriching, completing and protecting the historical landscape of the city. This dialectic relationship can on one side, enhance the visual integrity of the historical center and on the other side adjust the residual area introducing it as an integral part of the city.
In this regard, Gjirokastra regulation serves as an example for other cities to be conserved in wider prospect of visual continuity with the historical city, as a manner to safeguard both, the historical city and to integrate in a sustainable way these areas with part of the historical city that presents a strong visual character.

In the case of Gjirokastra, in article 7 of the regulation on “*Protection, Integrated Conservation and Administration of the Historic Center and Protected Area in the City of Gjirokastra*” are listed some guidelines to follow in case of interventions in residual areas. Nevertheless, most of them are only orientative and result useless as they seem to be quite subjective.

Article 7, on “A*llowed interventions in protected area*”, states that **architectural and morphological elements of new buildings should be posed in harmony with the morphological elements of the traditional architecture**[90] , and **buildings features should not be posed in contrast with the traditional architecture and**

87 Id., ShtojsaD, Neni 11

88 VKM Nr. 619, datë 7.7.2015 Për shpalljen “Qendër historike” të një zone në qytetin e Gjirokastrës dhe miratimin e rregullores “Për Mbrojtjen, Konservimin e integruar dhe Administrimin e qendrës historike dhe zones së mbrojtur në qytetin e Gjirokastrës”.

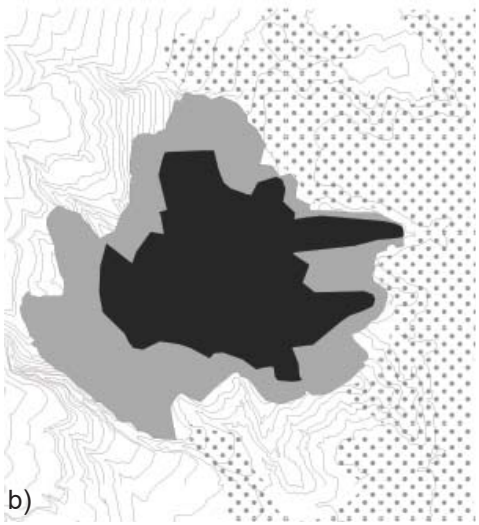
89 Id. Article 3

90 Id, Part 9 of Article 7, Architectonical elements such as roof, facades, finishing’s, surrounding walls, and colors should be in harmony with the morphological elements of the traditional architecture. The slope of the roof should be 26-31°.

a)

Fig. 108 a, b Map of the categories of protected areas in the Historical city of Gjirokastra according to the last two regulations in power. (source: Author's)

a) VKM. Nr. 832 dt. 11.12. 2003, Për Miratimin e rregullores së administrimit të qytetit-muze të Gjirokastrës. (Council of Minister decision for "The approvation of the administration regulations od the museum-city of Gjirokastra")



b)

b) VKM Nr. 619, datë 7.7.2015 , Për shpalljen "Qendër historike" të një zone në qytetin e Gjirokastrës dhe miratimin e rregullores "PërMbrojtjen, Konservimin e integruar dhe Administrimin e qendrës historike dhe zonës së mbrojtur në qytetin e Gjirokastrës". (Council of Minister decision for the proclamation of " historical area" of a zone in the city of Gjirokastra and the appoval of the regulation " For the protection, integrated conservation and administration of the historical center and protected area in the city of Gjirokastra).

the historical urban setting[91].

Regarding public space and intervention on street patters to adapt to functional requirements of the contemporary city, Article 8 on "*Streets and public space in the historical and protected areas*" requires **the establishment of a harmony of the added parts(usually furniture elements) with the spatial patterns of the historical city**[92] . In addition, Article 8 states that these interventions must be based on the use of traditional materials, forms and techniques[93].

In both types of interventions, in buildings and spatial patters, the terms **harmony and contrast** which refer to the relation between existing and new intervention, as were posed in the regulations are not measurable and quite subjective, and open to various interpretations, which can lead to abuse and incompatible interventions.

This gab on the legislation needs to be filled and well defined, in order to objectively judge interventions in the residual areas of the historical center, to provide local authorities with concrete criteria of assessment and professionals with practical tools

91 Id. Part 6 of Article 7. The construction features should not contrast with the traditional urban and architectural composition.

92 Id Article 8, "Urban furniture interventions with placement on the streets of benches, lights, bins, flower pots or other elements of urban furniture are allowed, if they are part of a re-qualification project for the area, envisaging the establishment of elements in harmony with the traditional typology and traditional values".

93 Id Article 8, "The reconstruction of road infrastructure and public space is allowed when improving the existing conditions or providing new ground or underground infrastructure by using traditional materials, forms and techniques."

when intervening in those areas, in order to operate in harmony with the traditional urban landscape.
However, as its discussed ahead, the regulation in power about Gjirokastra, is mainly focused on the morphological harmony with the traditional architecture and spatial patterns, neglecting aspects of environmental quality related to the skyline of the city, its mass in relation with the natural setting, which means that these aspects of urban landscape are not taken into account in the present regulation, as they are mainly based on very old European legislation and charters of conservation.
That's why, for the purpose of this study, it's important to take into account urban landscape international approach[94] towards the historical city conservation, to understand the extension of the concept in relation to the surrounding area in which is posed the historical city and the importance of urban landscape visual continuity.

94 Refering to the last charter: "The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas", Adopted by the 17th ICOMOS General Assembly on 28 November 2011, (source: http://www.icomos.org.tr/Dosyalar/ICOMOSTR_0209751001353671440.pdf)

CHAPTER 4
GJIROKASTRA CASE STUDY.
DESIGN CONSTANTS FOR A SUSTAINABLE HISTORIC CITY IMAGE

Brief: This chapter will illustrate the synthesis of urban form of Gjirokastra. Concrete parameters that def ne Gjirokastra urban character will be explored based on the three previously mentioned theories. These constants are key concepts or patterns of relationship that can guide and orient future intervention, congruent with the idea of the city as urban ensamble and highly integrated with the landscape characteristics. These parameters will be def ned starting from the large scale by def ning the relationship between the build mass and the natural landscape setting and continuing with relation between the single building unit and the whole build environment and the single spatial units confronted to larger spatial patterns.

"The city, however, does not tell its past, but contains it like the lines of a hand."
Italo Calvino

4.1 Massing

The concept of massing in the case study of Gjirokstra will be discussed and anlysed basically in two levels. First considering the city in its totality and secondly focusing on the single partWs. Accordingly, massing significance will be read in urban scale by uniderstanding the silhouette of the city and its main components and by analysing silhouette of the single parts (buildings) which costitute its image as a whole.

Urban massing

The historical skyline of the city of Gjirokastra has been best illustrated in its totality by Edward Lear in a sketch dated back in 1848 (fig. 109) in which he contemplated the city from the front mountain highlighting its aesthetic value. This sketch reflects the build mass in relation with the geography and topography of the territory, dominated by the castle and the clock tower and configured by the housing volumes which follows the form of the terrain. The build mass is mostly left up on the top of the hills and in the upper valleys where the slope seems to be favorable, and is isolated around by a steep terrain and vegetation, which confines its border. Its position results also favorable in terms of visual exposure towards the Drino Valley view. The form of the city is opened, although it seems to have its proper laws of growing and expanding into the territory based on a continuous adaptation of the

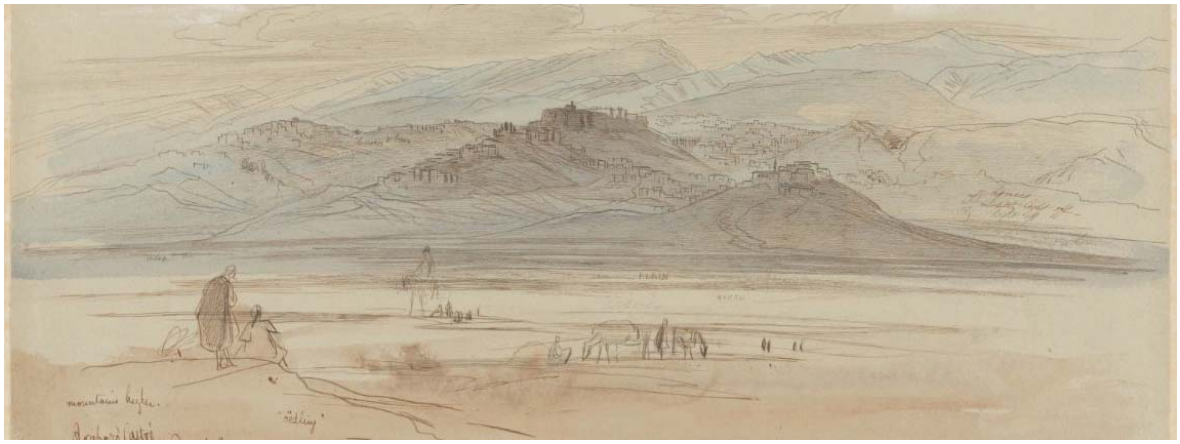


Fig. 109 Edward Lear illustration of Gjirokastra landscape in 1848 (source: https://ids.lib.harvard.edu/ids/view/28324333?buttons=y)

Fig. 110 Hazmurat neighborhood in Gjirokastra, Photo by Aldo Sestini (source: Meini, Monica, Dalle esplorazioni Geograf ch al turismo virtuale: L Ablbania rivisitata sulle orme di Aldo Sestini, Bollettino della societa geograf ca italiana, Roma, - Serie XIII, vol. V (2012), pp. 281-309)

Fig. 111 View of Hazmurat neighborhood, Gjirokastra in 1939 by British traveler Vandeleur Robinson (source: http://www.albanianphotography.net/robinson/photos1939.htm)

Fig. 112 View of Old Pllake neighborhood, Gjirokastra 1940, by Italian photographer Giuseppe Massani (source: http://www.albanianphotography.net/massani/)

a)

b)

c)

Fig. 113 The build mass towards the landscape. a) View of Varosh and Palorto neighborhood, with in a background the Teke of Baba Mane comples , Gjirokastra 1940, by Italian photographer Giuseppe Massani (source: http://www.albanianphotography.net/massani/); b) Photo of Gjirokastra from Palorto by Branimir Gušić, (source: http://www.albanianphotography.net/gusic/photos.htm) c) View of Hazmurat neighborhood by Branimir Gušić, (source: http://www.albanianphotography.net/gusic/photos.htm)

buildings. Massing in this case was represented as an addition of volumes, which are aggregated in together and gradually follow the form of the terrain. Although the single volume is represented as rectangular and in a strong contrast with the rolling terrain, the overall image of the city seems to strongly emphasize the silhouettes of the hill, due to their gradual scaling corresponding to the terrain. This illustration highlighted also the tallest and most significant buildings that constitutes visual landmarks which are the castle, in the central part with its clock tower, and the mosque minarets. The mosques, as the only important public building, were considered as a reference point for the community of each neighborhood and in this sense they sign the neighborhood center through the minaret. Nevertheless, in this representation they do not present an evident visual strength, probably because the typical houses of Gjirokastra, the civic tower, which were much more impressive.
Historical photographs of Gjirokastra (fig.110, 111, 112, 113) reflect better this aspect of urban form. In the first half of the 20th century,in fact, various travelers (e.g. Aldo Sestini, Vandeleur Robinson, Edwin Jacques, Giuseppe Massani, Branimir Gušić, etc.) who visited Albania, photographed Gjirokastra showing their interest in the city particular landscape and the relation between the city as a build mass and the topography of the terrain. Unable to catch the city in its totality, due to its particular configuration, photographs show partially its form through the various relationship that the compact neighborhoods create with the surrounding natural setting, following the configuration of the hills and the natural skyline which is contrasted only in correspondence to important landmarks. These outlines of the build mass with the sky and the earth (the skyline and the earth contact line) are precise and organic at the same time, open to expansion and transformations that are in line with their internal rules and the city image as a whole. Thus, it's important to have a clearer understanding of the urban form in plan and in a wide visual perspective, gaspering its essential shape in order to define rules and parameter that influence the safeguard of the historical skyline character, for interventions in the residual historic areas around the historic center, in which the historic character has been only partially developed and need to be further implemented in line with the historic character of the urban landscape.

The image of Gjirokstrastra build mass seen from a distante in a large angle perspective show that the main components that determine its image are the skyline or the silhouette towards the terrain, the compact sum of buildings outlines and the

Fig. 114, Wide angle perspective photo of Gjirokastra putting into evidence the build mass in relation to terrain characteristics (source: graf c illustration by author's)

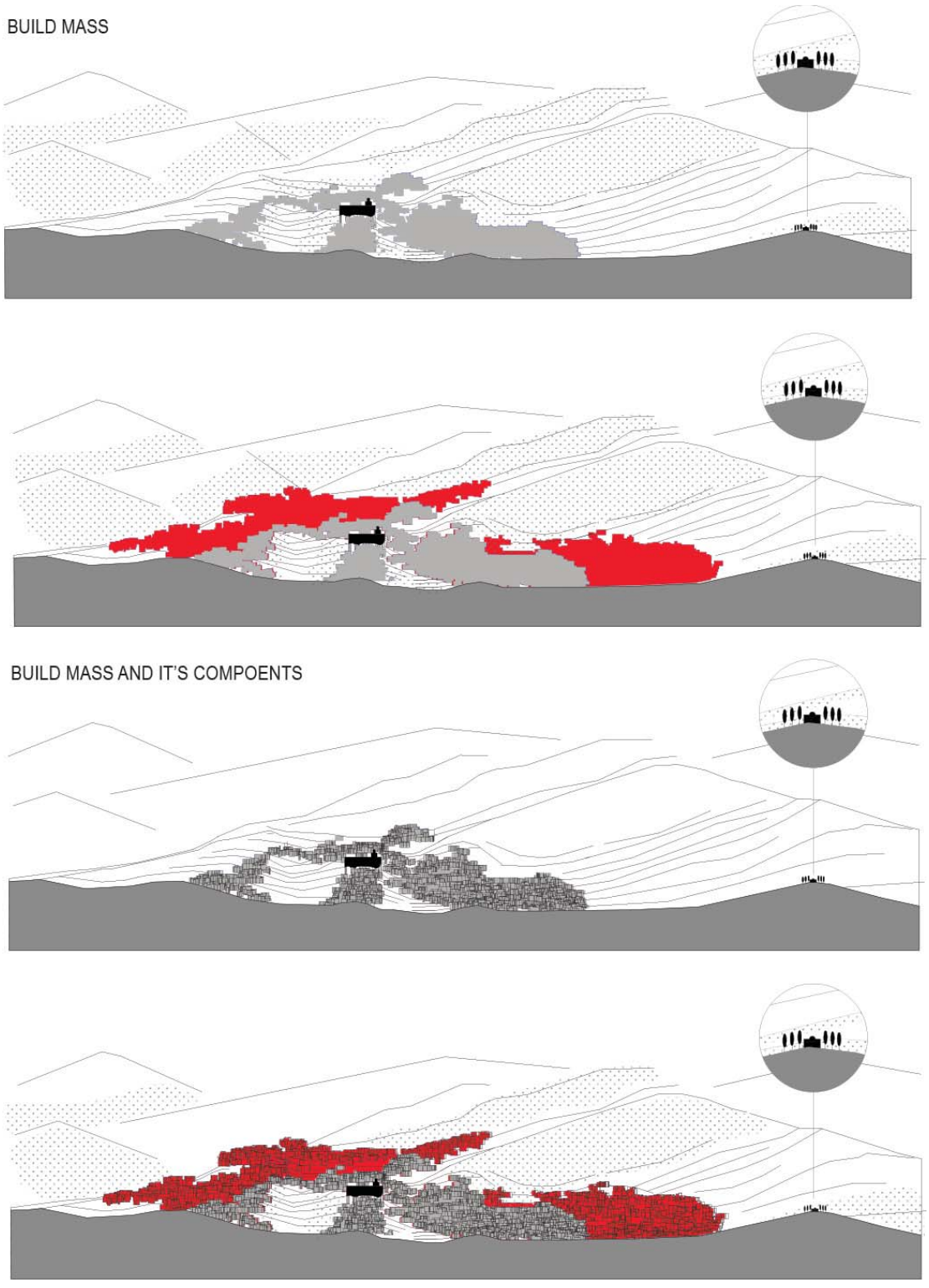


Fig. 115,The skyline and the build mass of the historical city of Gjirokastra (in red, the residual area around the historic center), (source: authors)

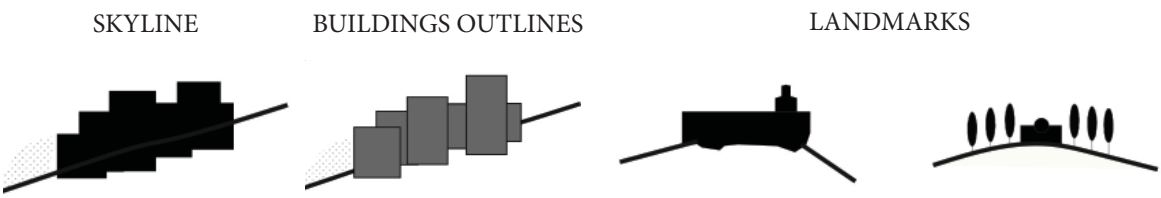


Fig. 116, Urban massing of Gjirokastra. The main emerging components: a)skyline b)the sum of buildings outline c) landmarks (source: authors)

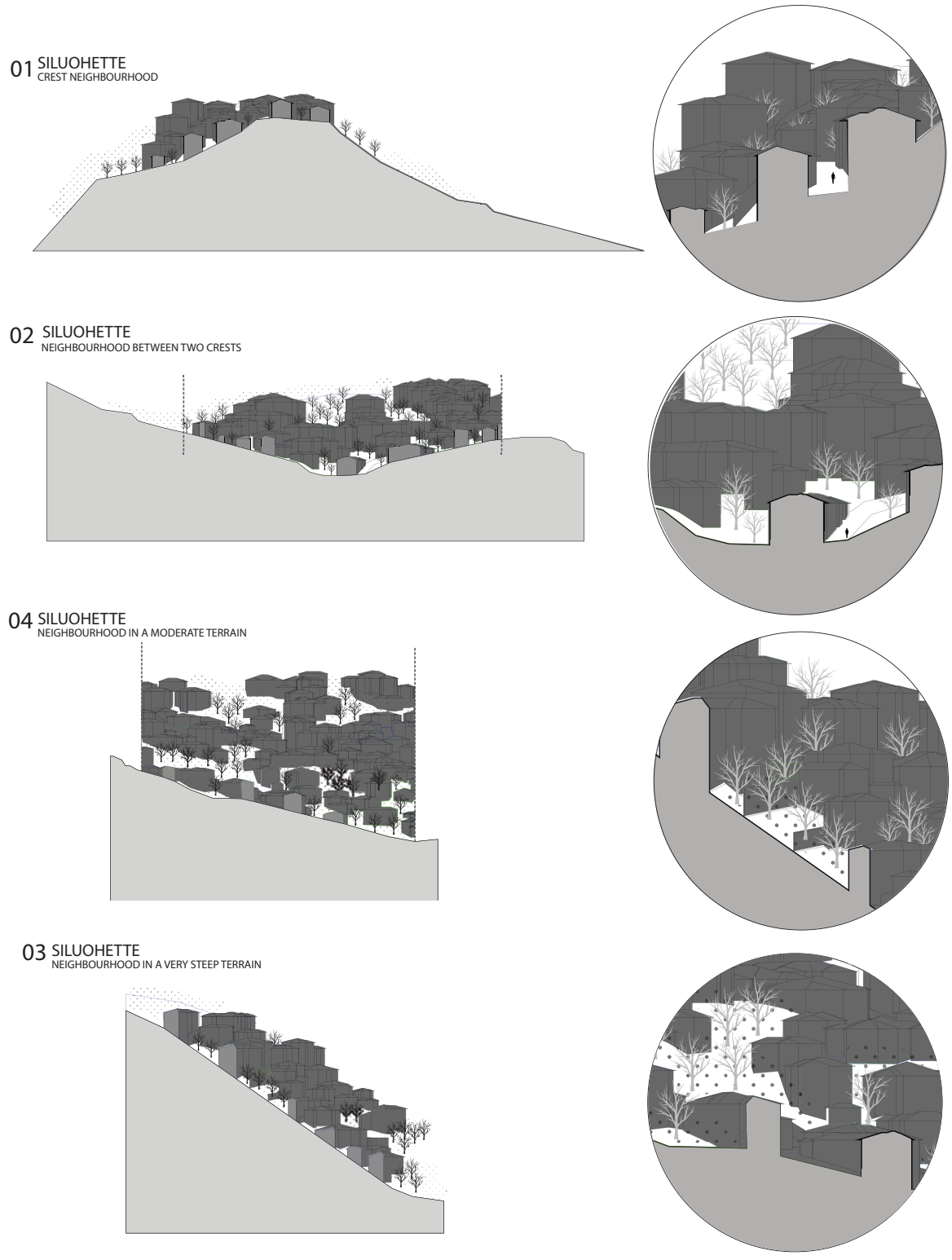


Fig. 117, a) Typical silhouettes of Gjirokastra neighbourhoods. b) The relationship between the build mass and greenery. (source: author's)

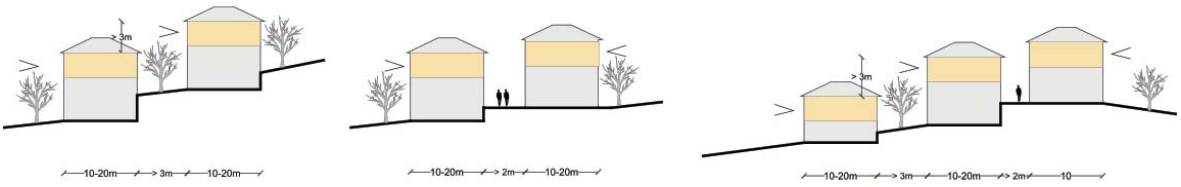
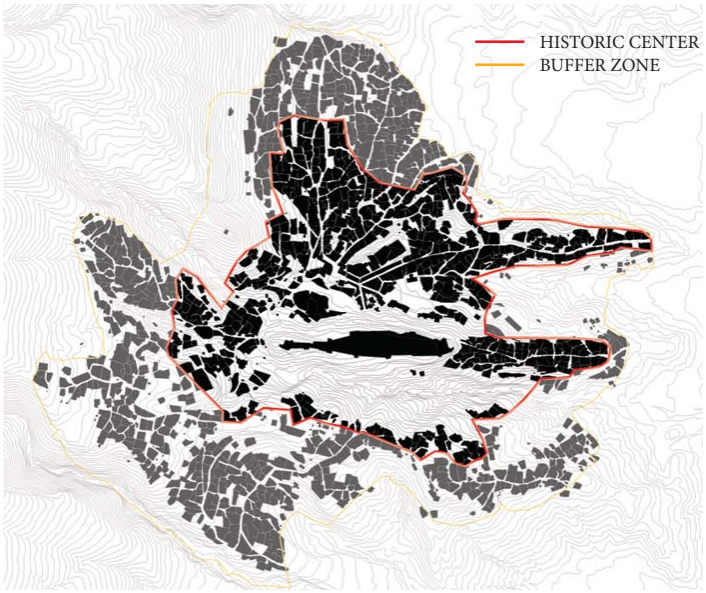


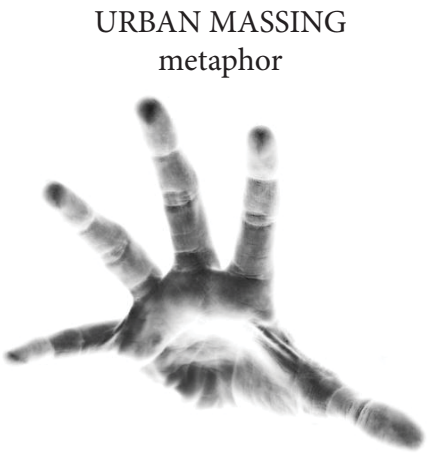
Fig. 118, Buildings reciprocal position and orientation towards the view, typical sections (source: author's)

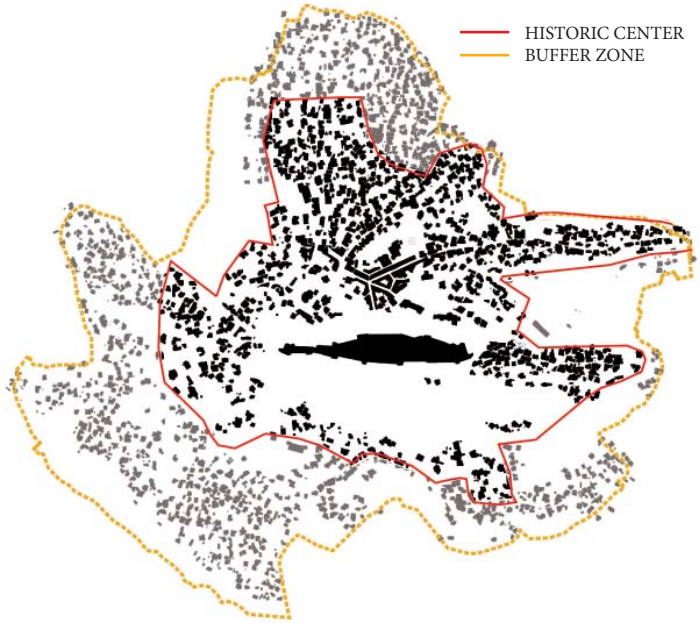
landmarks, in particular the castle and the religious complex of Bektashi (fig.114). This outline defined by topografic conditions present a compact charater in each neighborhood, and needs to be presereved by defining a precise limit to the builings for each neighbourhood which costitutes also the limit of greenery in the the valley or escarpment. New interventions should be proposed inside this limit, in the logic of compactness.

The visual significance of the landmarks is given by the location on the top of the hills and their vertical dimension. Another important aspect that enhance their role is that they are totally separated from the residential part and are surrounded by a green belt, which needs to be preserved in oder to safeguard their visual significance.

Beside the landmarks, the skyline of Gjirokastra reflects the gradual escalation of buildings following terrain forms. Although each neighborhood has his own characteristics in terms of buildings configuration, orientation and density of the build mass, which is reflected also in the relationship with the green yards the skyline is similar, since it depends on the contour lines of the buildings, which belong to the same typology (fig. 115 ,116, 117) . Hence, the gradual escalation of the buildings,







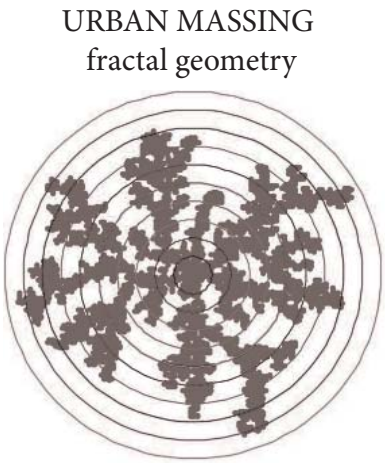


Fig. 119, Mass-void map, historic area and buffer zone; a) buildings plot vs open space; b) build mass-void; Fig. 120, The quality of urban form, Gjirokastra, c) city metaphor of f ngerprint; d) the fractal dimension of the urban form (source: author's)

enhance the horizontal lines of the roof base making the complexity of its image easily legible. In each neighborhood, in fact, the relation between the buildings changes in terms of orientation, distance and high. Orientation usually follows the isohypse lines, while distance and high depend on the view of the upper part of the building, which was the most important house space. (fig. 118)
Regarding the historic city image as perceived from above (in plan), although its seem chaotic at first sight, has its internal order, which is related to two main morphological aspects.
First, the build mass in plan can be compared metaphorically to a fingerprint. (fig.) This image represent a comprehensive vision of the city related to buildings mass distribution and their relation to the natural setting. It regards not only the configuration of the historic center, but includes also the residual area around, which is part of the historic city and has a similar morphological logic. Thus, the metaphor of the finger system extended to the residual area can be still compressive and readable in the historic city, reinforcing this collective idea.
Secondly, it regards, the fractal dimension of the urban form as a whole, in terms of historical organic growth and contour limits of the city. This fractal dimension, which usually characterises medieval organic cities, evokes a sense of beauty in the overall perception of the form of the city, since it reconnects visually the city as a whole through shapes belonging to the same family, growing from the historic center towards the surrounding area (fig.119,120).
Architectural massing
Urban massing in its totality do not only depend only on the formal configuration of the build mass towards the natural setting, but is the resoult also of the relation between the single architectonical volumes (unit) that constitute the build mass (whole). Architectural massing, in fact, can describe formal patterns as buildings silhouettes resemble with each other, resoult as repetable which are similar and coherent in their relation with each-other. These correspondences strengthen the idea of unit-whole relationship at urban scale and the meaning of the build mass. In this sense, architectural massing is important for the overall appranc of the city image.
Based on the three main residential building typologies of Gjirokastra, 37 buildings have been selected and analyzed, choosing 5 of the simples and less evaluated type and 16 for the other two type, as the most representative examples which are still preserved. (fig.121) This is sufficient to understand constant massing characteristics that influence the urban massing configuration and possible variations that can open up inventive design possibilities. Thus, depending on three main building typologies it's possible to define three types of buildings silhouettes:

1. Vertical extended mass associated to the perpendicular housing type
The perpendicular type present in the main front facing the view, a simple massing profile made by the rectangular body of the building having a vertical accent and the triangular shape of the roof. Their role is highlighted also by the orientation towards the view which make it easily graspable to the sight. In background, additional volumes can be added presenting a lower visual impact being smaller and less treated. Nevertheless, by contrast they further reinforce the front shape and its vertical extension.
2. Compact mass associate to one wing housing type
The build mass of the one wing typology is primary defined by the combination of two volumes: one with a vertical accent in terms of proportions and the other one

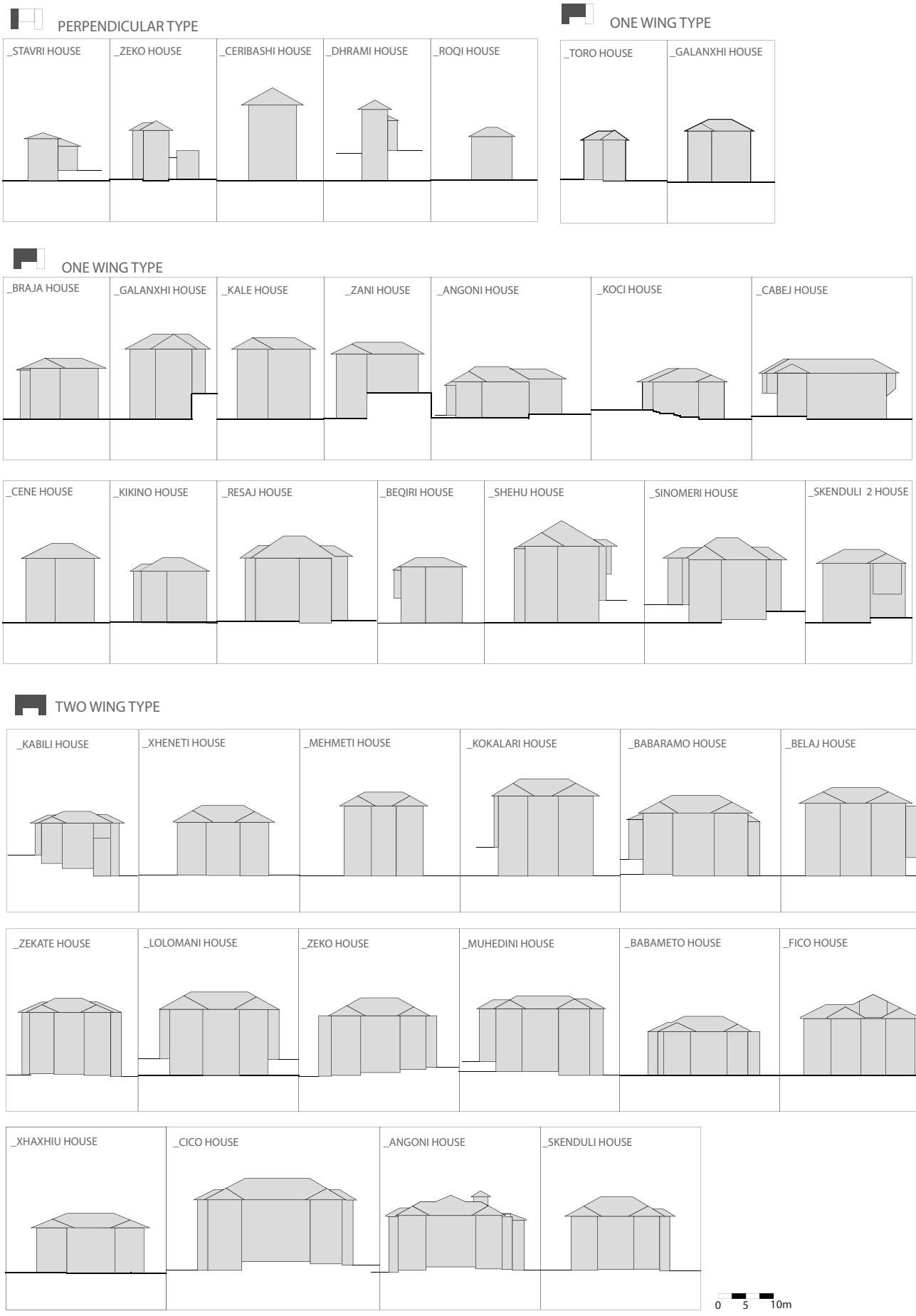


Fig. 121, Architectural massing analyses on three housing types of Gjirokastra. (source: author's)

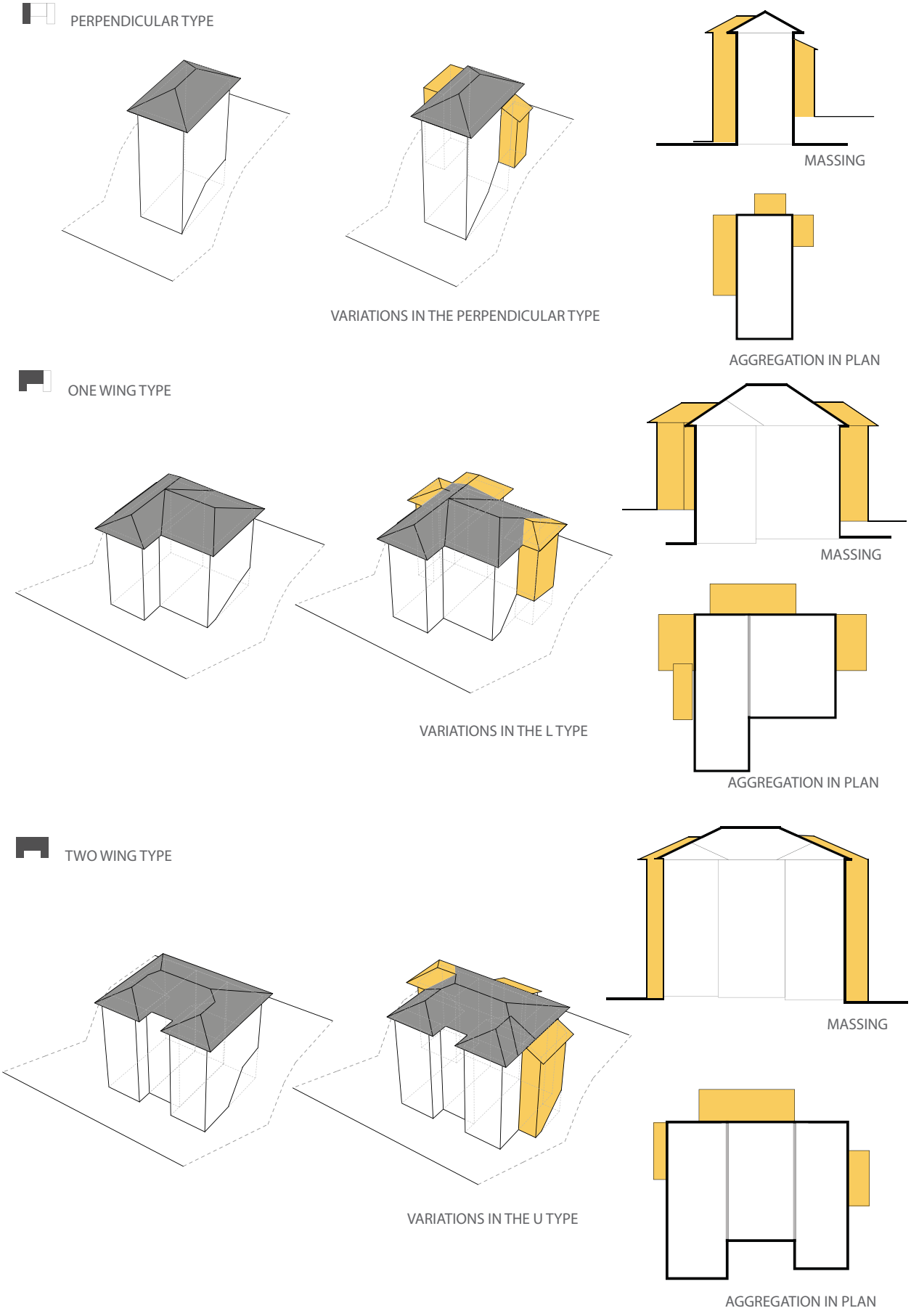


Fig. 122 Building silhouettes according to the typology. Basic form and possible variations. (source: author's)

shifted backwards. The overall object mass result compact and unified under the trapezoidal roof silhouette, as according to gestalt principle of connectives, distinct volumes connected under the same element, in this case the unified shape of the roof, tend to be perceived together as a whole. Still, variations under the same type given by small volumes attached in the back of the main ones, do not disturb the clear shape of the building, but on a contrary set it in the foreground, as good shape.

3. Compact mass symmetrically def ned, associated to two wings housing type

The build mass of the two wing typology is primary defined by the attachment of three volumes, having on their own a vertical accent. Although the central one, is usually shifted backwards, the overall perception is that of a compact mass under the trapezoidal roof silhouette. In this case as well, the clear silhouette of the building is animated by smaller volumes which due to proximity and common fate related to the vertical extension are perceived as part of the build mass. In this sense the clear buildings silhouette is highlighted by their foreground animation.

In conclusion, the mass of the city as a whole is defined as the result of visual coherence between the single buildings silhouette due to their formal similarity. In this sense, it responds to almost three types of silhouettes which can change slightly in proportion, but are composed by the same shape. (fig.122) Complexity and variation in this case, can be set by the secondary volumes composition, an do not disturb or impact the build mass.

4.1.2 Geometry and proportions

Geometry and proportions have been historically considered either by architects or master builders as elements that contribute in perception of architectural beauty, and as such they have been object of interest throughout the history of architecture. Moreover, when considering the overall image of the city, geometry and proportion have contributed in achieving both order and complexity of the visual frame, as they represent a technical tool to compose harmonic forms within a certain framework, which are linked visually being similar and having a common fate in terms of proportion. Moreover, harmonic proportion (such as golden ratio) constituting a constant in building's façade, can be easily identified in the visual frame at urban scale, creating structural connections between elements of different façade that follow the same proportions. This enhance the legibility and visual interest in urban landscape perception.

In the case of Gjirokastra it's important to analyses element that are interconnected to each other due to common proportional and geometrical forms and to define through a synthesis constant repeatable elements that can be used again in urban scale in order to regain unity of the visual frame (fig.123 a,b,c).

Gjirokastra as a traditional city although was not design by architects based on a complete plan as a whole, presents unity in urban scale as result of the use of geometry and proportions starting from the elementary cell that constitutes the simplest buildings typology. This is valid both in plan and façade. Other buildings typologies are the result of combination of elementary geometry and certain proportional rules which came as a result of extended human needs as such reflect their way of living, using and perceiving space. This typological evolution is regulated by the use of geometry and proportion starting from elementary units through combination of similar entities. In addition, significant visual elements perceived in façade can also play an important role in the perception of volume proportions and in their own legibility as elements that create coherence at urban scale.

Fig. 123 a), Geometry and proportion in Gjirokastra traditional houses according to the buildings type. Plan and main facade analyses. Part B (source: author's)

Geometry and proportion in plan

In view of the city from above the geometry and proportions of houses define an important layer for the level of interaction between entities and the image as a whole. The more these entities find correspondence with each other, the more the image of the city is coherent in its complexity as a whole. That's why it's important that starting form the single entities of the house, which is the main objects that defined the image of ottoman cities (in this case Gjiokastra), and to analyses its form in terms of geometry and proportions trying to define a structural connection between the single buildings and their role forming a whole. In this regard, three types of traditional Gjiokastra buildings were analyzed.

In the perpendicular type of house, which is the simples one, the geometry of the plan having a longitudinal extension perpendicular to the terrain is regulated by golden ratio proportion. The shortest side correspond usually to one space width and goes from 400-650 cm with an average of 5m which represent the space of light of stone structures. From the functional point of view, it defines the main room (oda), or in case of composed volumes it defined the geometrical figure in which is inscribed the plan of the house. However, in case of composed volumes that are attached to the main one, this geometric form is usually associate to the main volumes.

The analyses of geometry and proportion in plan of one wind type of Gjirokastra house conveys three main type of plans: plans based on rectangular shape, plans based on the golden ration proportion and composite plan made of one main part which is based on either rectangular or golden ration proportion and smaller attached volumes bases also on this geometric figures (square and golden ratio). In the first two cases, the two main volumes (the wing and the horizontal body) are both inscribed on this shapes, while the thirst variant is more free in the composition of squares and golden ratio spaces in plan at the point that each geometric form represents internal spaces.

Likewise, the geometry and proportion of the two wings typology plan is defined by the inscription of volumes within a square, a golden ratio rectangle, or similar proportions as defined by L.B. Alberti. Significant volumes attached present also the same geometrical and proportional features. Smaller attached volumes become insignificant to the overall form and do not necessary respond to particular geometric features.

Geometry and proportion of functional spaces that costitute the plan

Moving to an architectural scale that goes deep into the organization of spaces within a house, it's possible to identify as well some geometrical and proportional rules related to the dimension of space inside the house.

In all the typologies in fact, from the analyses, it's possible to define a series of constant that regard the proportion and geometry of the most significant space in Gjirokastra house.

The main oda-s follow in fact the golden ratio proportion in plan. Smaller spaces like kitchen or service areas are usually squares in plan. This rule is applied for the most significant spaces in terms of dimension and hierarchy. However, for the purpose of this study, it's not our direct intention to further analyze the form in plan, if not becouse of the conviction that it influences the façade and can constitute an important element in the design of new buildings that are posed in visual continuity with the existing ones (fig.124).

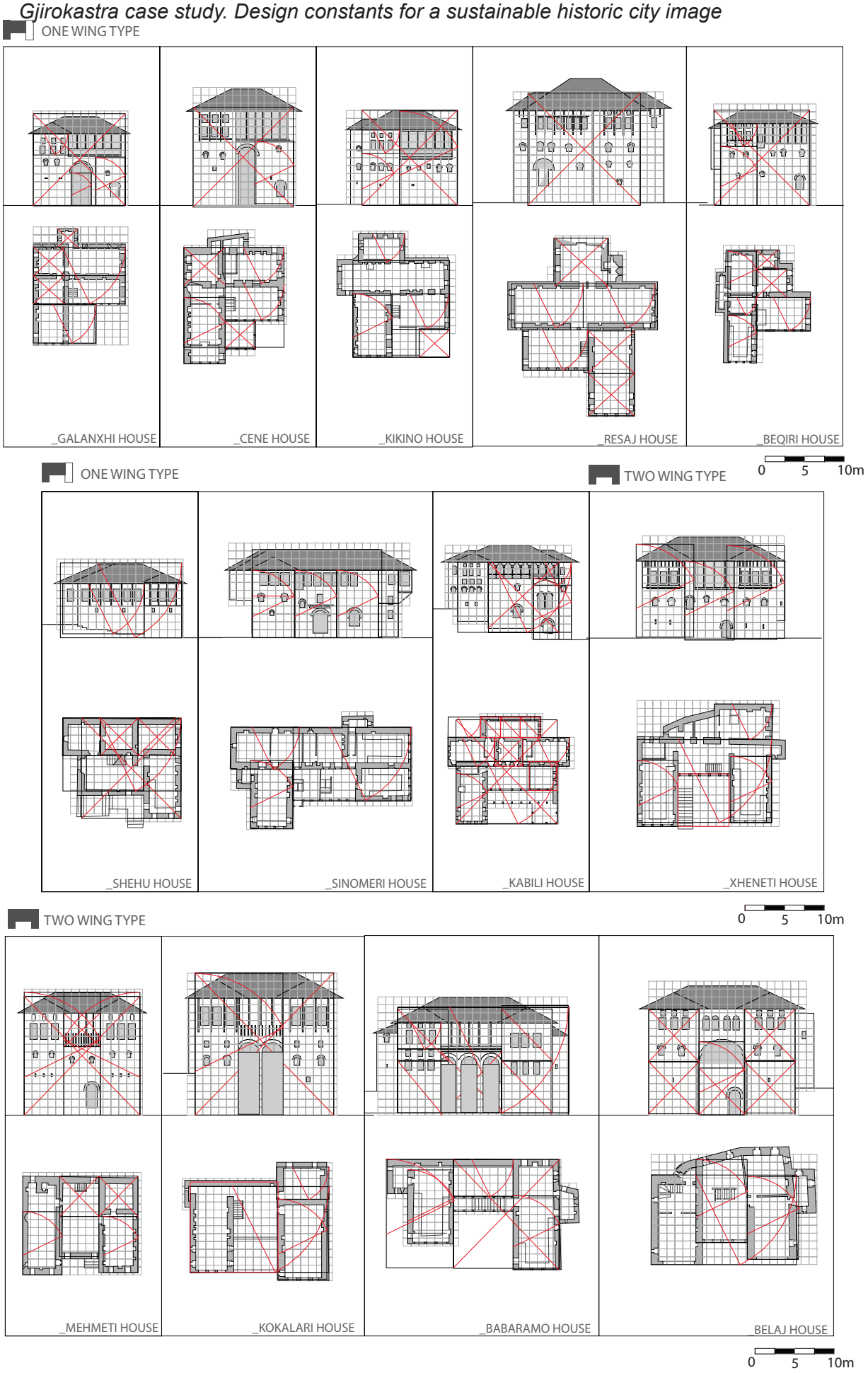
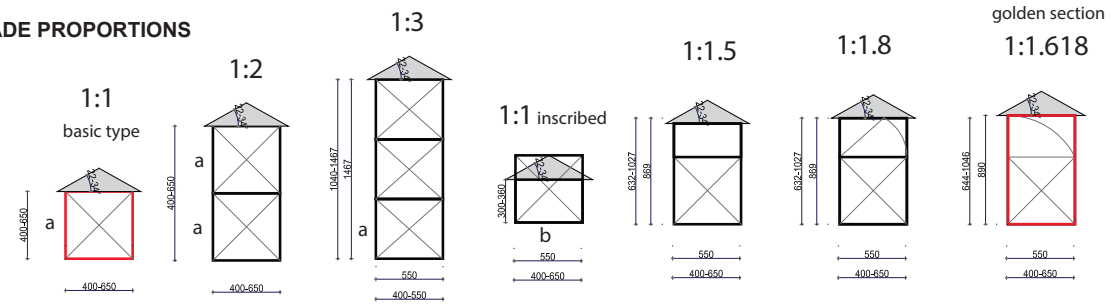


Fig. 123 b), Geometry and proportion in Gjirokastra traditional houses according to the buildings type. Plan and main facade analyses. Part B (source: author's)

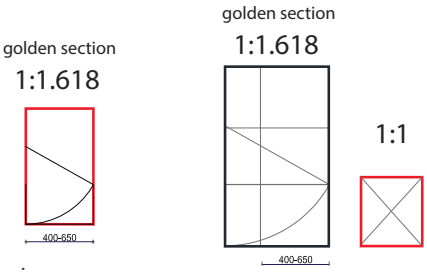
Fig. 123 c), Geometry and proportion in Gjirokastra traditional houses according to the buildings type. Plan and main facade analyses. Part C (source: author's)

PERPENDICULAR TYPE

FACADE PROPORTIONS

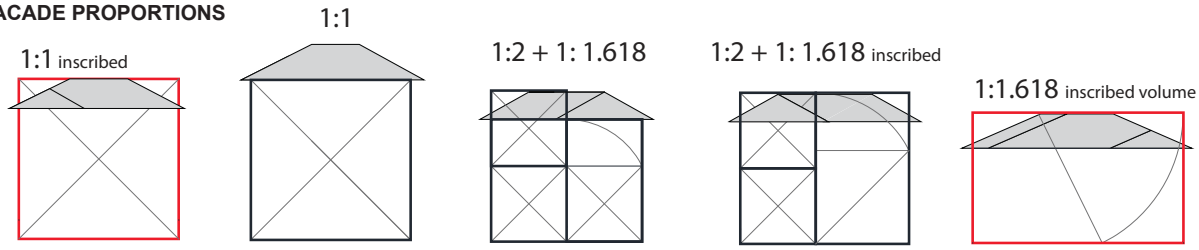


PLAN PROPORTIONS



ONE WING TYPE

FACADE PROPORTIONS



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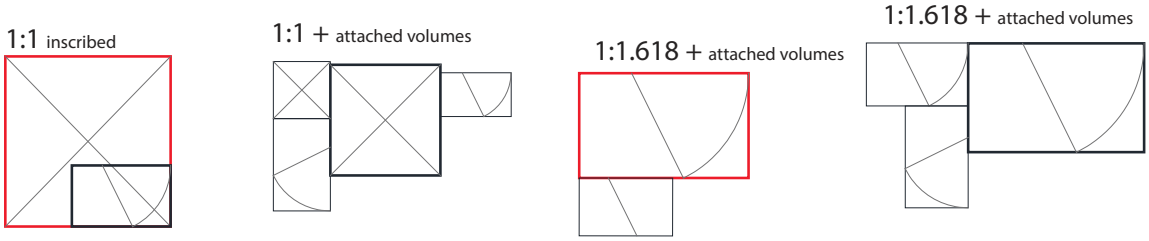
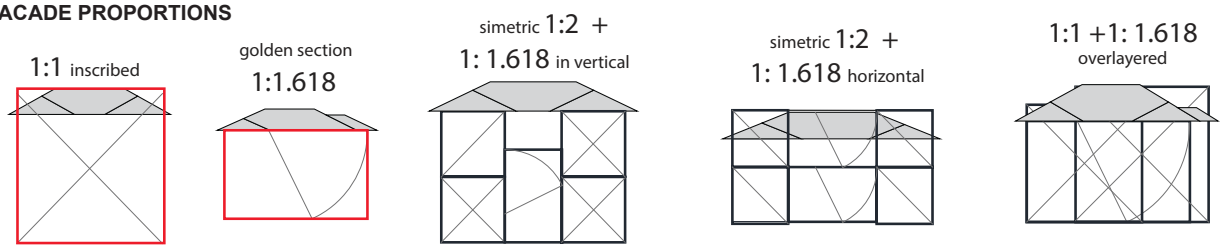


TWO WING TYPE

FACADE PROPORTIONS



PLAN PROPORTIONS

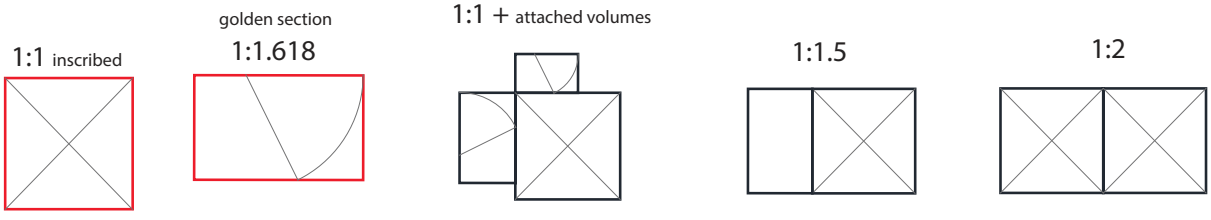


Fig. 124 Geometry and proportion constants in traditional buildings according to the buildings type. Constants in plan and main facade. (source: author's)

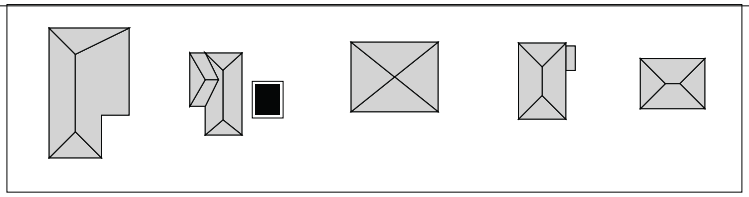
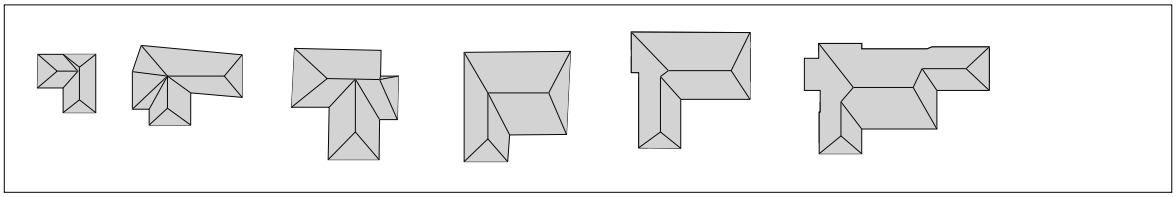
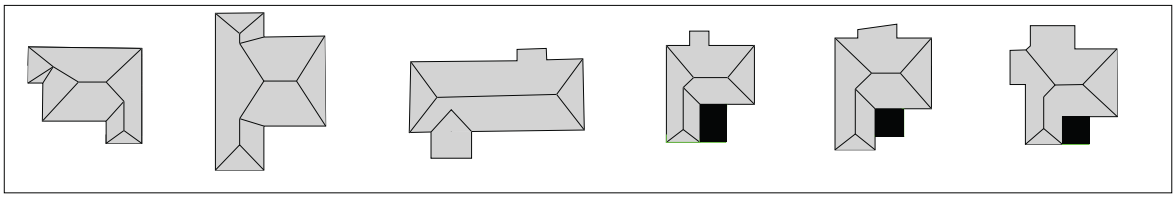
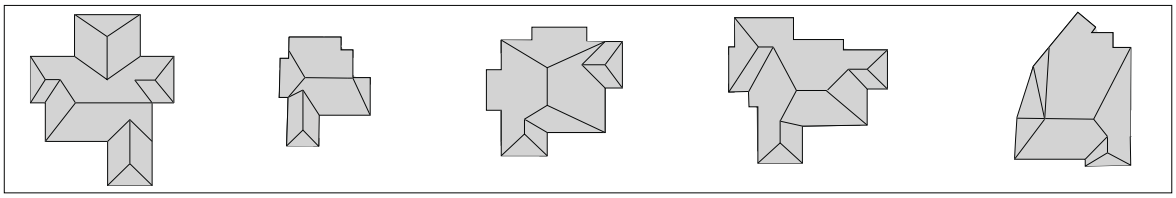
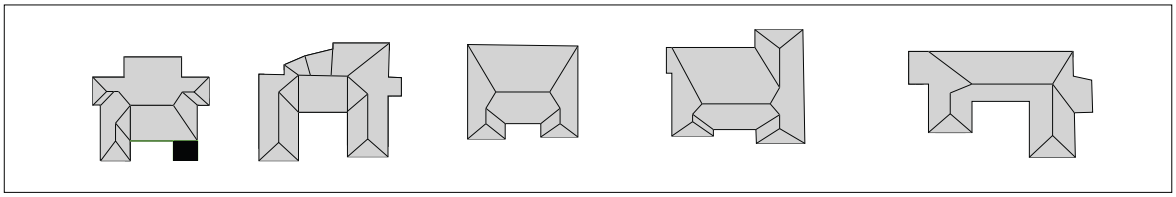


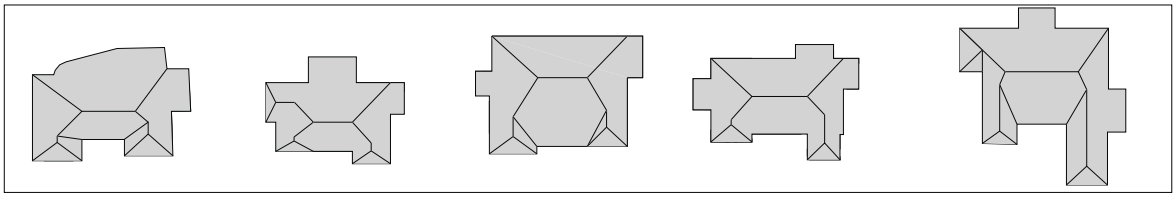
Fig. 125 , Analyses of roof typology in th traditional house of Gjirokastra. Geometry and form constants. (source: author's)

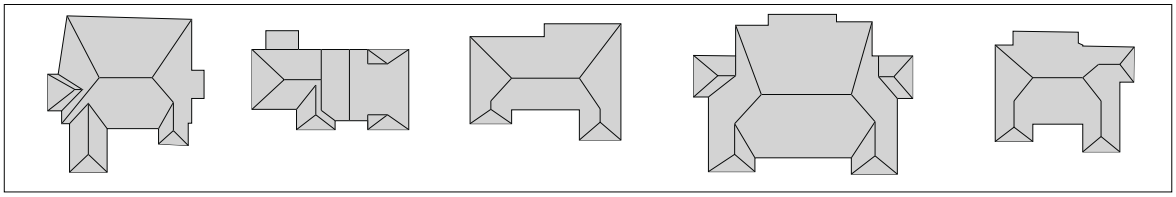


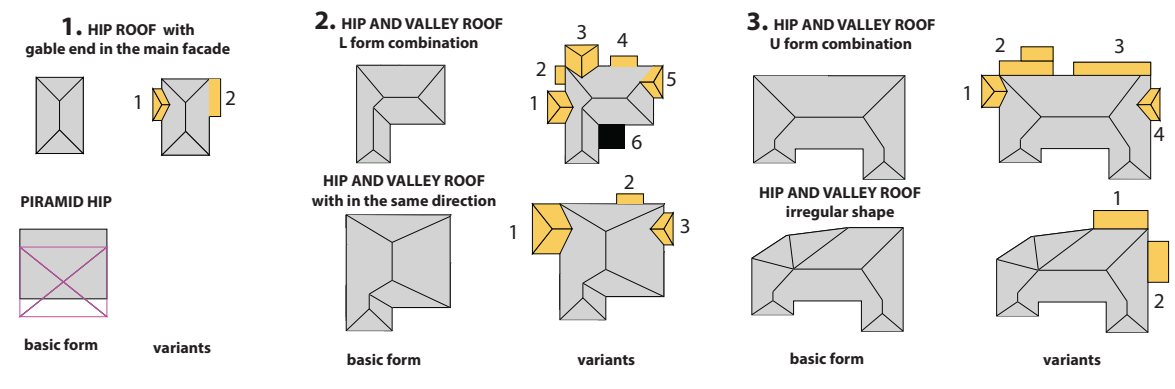












Geometry and proportion in building's façade

The façade of the traditional house of Gjirokastra is the main visual element that define urban landscape. At first sight, its proportion and the proportion of design elements that constitute it are the main visual elements that find correspondence with

Starting from the simplest type, the perpendicular one, is understandable the dominance of the vertical dimension of the principal volume. By the analyses of various examples, we can sustain that façade proportions refer to the use of square, inscribed square, which includes also the extension of the roof, and their multiples, as all as golden ratio and albertian proportions. The width of the façade is from 400-650cm with an average of 550 cm that corresponds to the light distance.

The other two types façade is based on square, golden ratio proportion as basic forms. In addition, this harmony is achieved also in a smaller scale as a combination of design façade highly visible parts, such as main volume distinctions, or the differentiation between the upper level and the lower one. In particular, in two wings type, due to symmetry, volumes proportions are mirrored on the other side. In both cases this parts work separately and find correspondence in the city image due to similarity with each other (fig.124).

Roof geometry and proportions

Roofs shape is usually very simple in basic typologies, hip roof, mono-pitched and orienting the gable end towards the main façade. The slope is almost constant in the various example and goes from 22-34 degree. This is valid for all roof varieties. In one wing type of houses, the roof type used is cross hipped roof and valley orienting the valley direction towards the main façade. Variation in this type, include the presence of small additional volumes which are covered by a separate roof, intersected with the main one or by the extension of the main roof. Building which have and additional volumes that ends up with a balcony (kamarje), are not covered by the roof in this part. In exceptional cases, roof and valley type is oriented in the same direction.

Similarly, in two wing types, the roof used is twice cross hipped with the lower hips posed in the main façade. In more complex variants, added volumes are covered by a separate cross intersected roof, or by the extension of the main roof to cover the added volume(fig. 125).

Façade openings geometry and proportion

Façade openings, including windows, doors, balconies and other elements that influence the perception of the facade constitute an important contribution to the significance of historic city image of Gjirokastra. They are not only an integral part of the buildings design, but considering the city image as a whole, they play an important role in its distinctive appearance. In this regard, openings dimensions and proportion are regulated according to the various parts of building's façade and easily find correspondence in the perception of the city image as the relationship of the single parts to form a coherent whole. In the traditional house of Gjirokastra there are different type of windows that correspond to certain parts of the building façade.

Openings in the upper level (fig.126, 127)

Starting from the upper part of the facade, which is the most important living area, in

correspondence to the guest oda, we have different forms of windows:

1. Rectangular window which according to surveys and analyses result to have a vertical accent with proportion between the high and the width that goes from 1:03-1:07. Openings dimension in this part are considerably large compared to the lower levels, which is more closed and protected. Its dimensions go from 50-120cm in high and 30-60 of width. Their proportion depends also on the way they are aggregated, reinforcing further the vertical dimension. In all variants, the guest oda main façade presents triple windows, while on the side we can find single or double windows.

2. Arched windows as well have an accent of the vertical dimension with proportion between the high and the width that goes from 1:0.3-1:0.5 and triple coupling in the main façade. The dimension of the single window goes from 75-110cm in high including the arch and 30-60 of width.

3. Composed windows are posed over each other in the same vertical axe. This coupling point out further the vertical extension of the openings in the upper part of the façade. Usually the lower window is higher and bigger and have a vertical extension, while the upper one is more square like and usually has more decoration. However, what count in term of visual perception of the façade proportion is the dominance of height compared to the width. In fact, calculation the overall vertical extension of the coupled windows compared to the width, it results from 1:0.2-1:0.4, with a height from 150-315 cm and a width of 50-90 cm. This kind of windows are usually used in buildings with big dimensions (3-4 floor high).

Openings in the intermediate levels

The body of the house, in one and two wings typology, in the upper part usually presents an open çardak, which space is marked by the structure of the roof (testeke). This element plays an important role regarding the perceived proportion of this part of the façade. In fact, they divide the space vertically by creating modules with a proportion that goes from 1:0.2-1:0.45. Their high reaches up the high of the upper floor, while the distance between them goes from 40-80cm. In many examples this part result also as closed and marked by arch and rectangular windows having an extended vertical proportion. In addition, this proportion is highlighted by grouping windows of 4, 6, 7 and 8, which recall the same proportion of the open space.

The rest of the upper part façade perimeter is marked by the sporadic use of single windows, which present almost the same vertical extension, but are more free in terms of dimensions, as the sides and the back part of the building having more served areas has less demand for light and view.

The central part of the building façade, is perceived as a full volume, although its marked partially by openings. Openings in the intermediate levels usually result in small compared to the masonry. Moreover, they have a more balanced proportion in itself and also considering their visual relation to each other. In fact, they contribute in the visual balance of the wall, maintaining the equilibrium of the full masonry mass.

In this part, we found the same form of windows as in the upperpart, the arch and rectangular and the coupled windows in verticality. What differs is their overall proportion in respect to the façade mass which is reflected in its dimensions. Rectangular windows for example vary their high from 40-150 cm and the width from

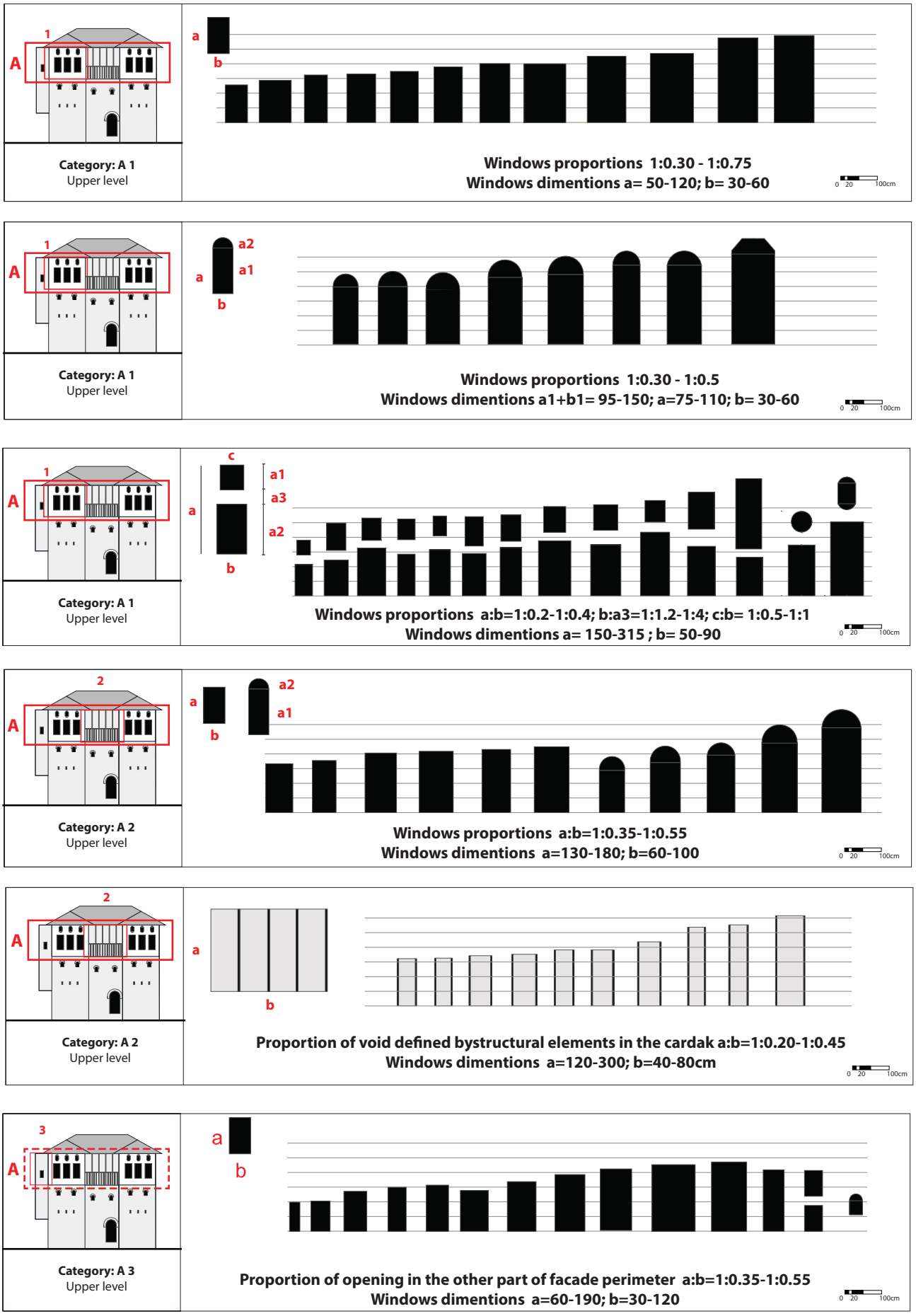


Fig. 126, Geometry and proportion constants of openings in upper part of the facade of traditional house of Gjirokastra. (source: author's)

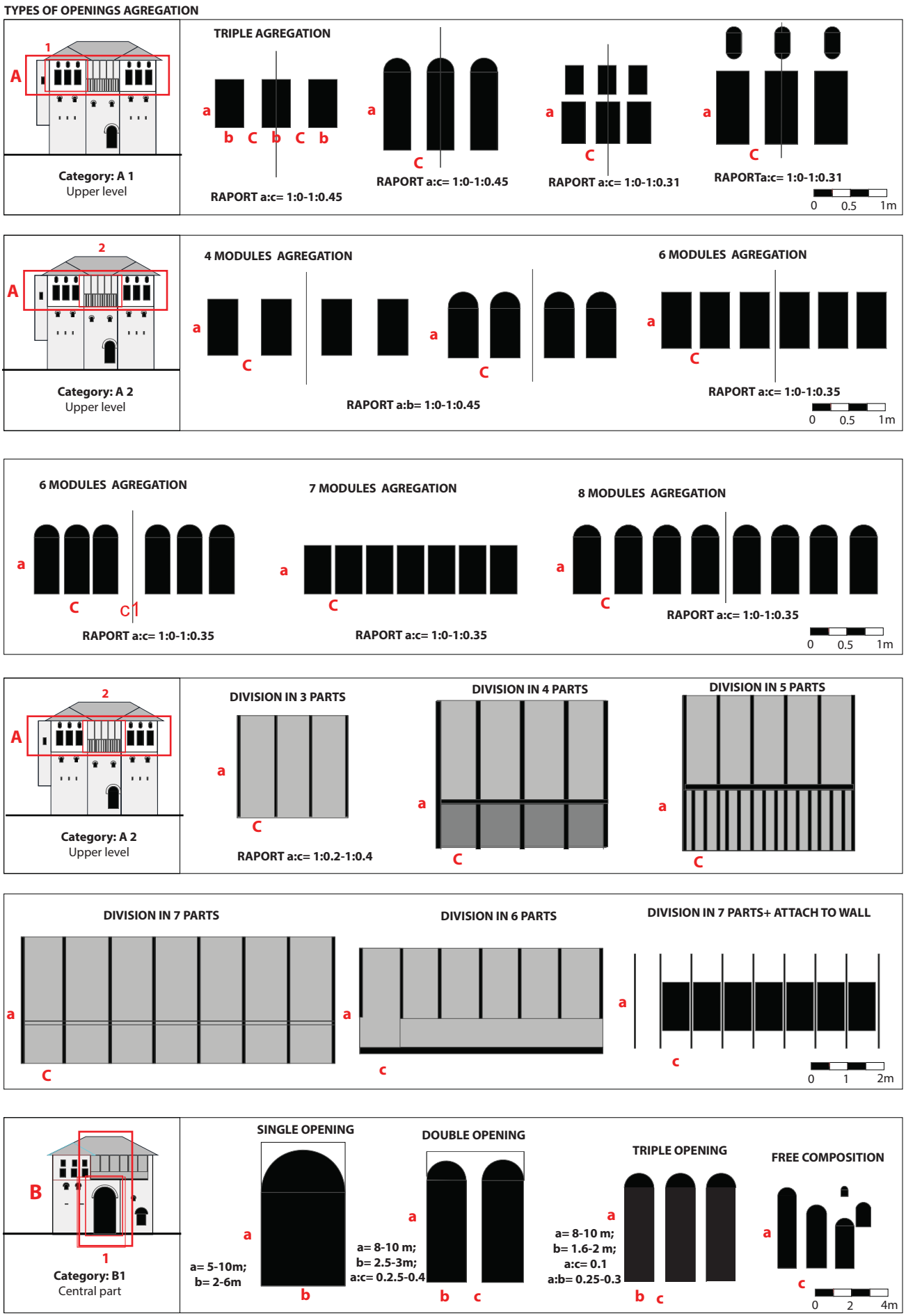


Fig. 127, Constant of aggregation of openings in the facade of traditional houses of Gjirokastra. They impact facade perception and the visual interrelation at city scale . (source: author's)

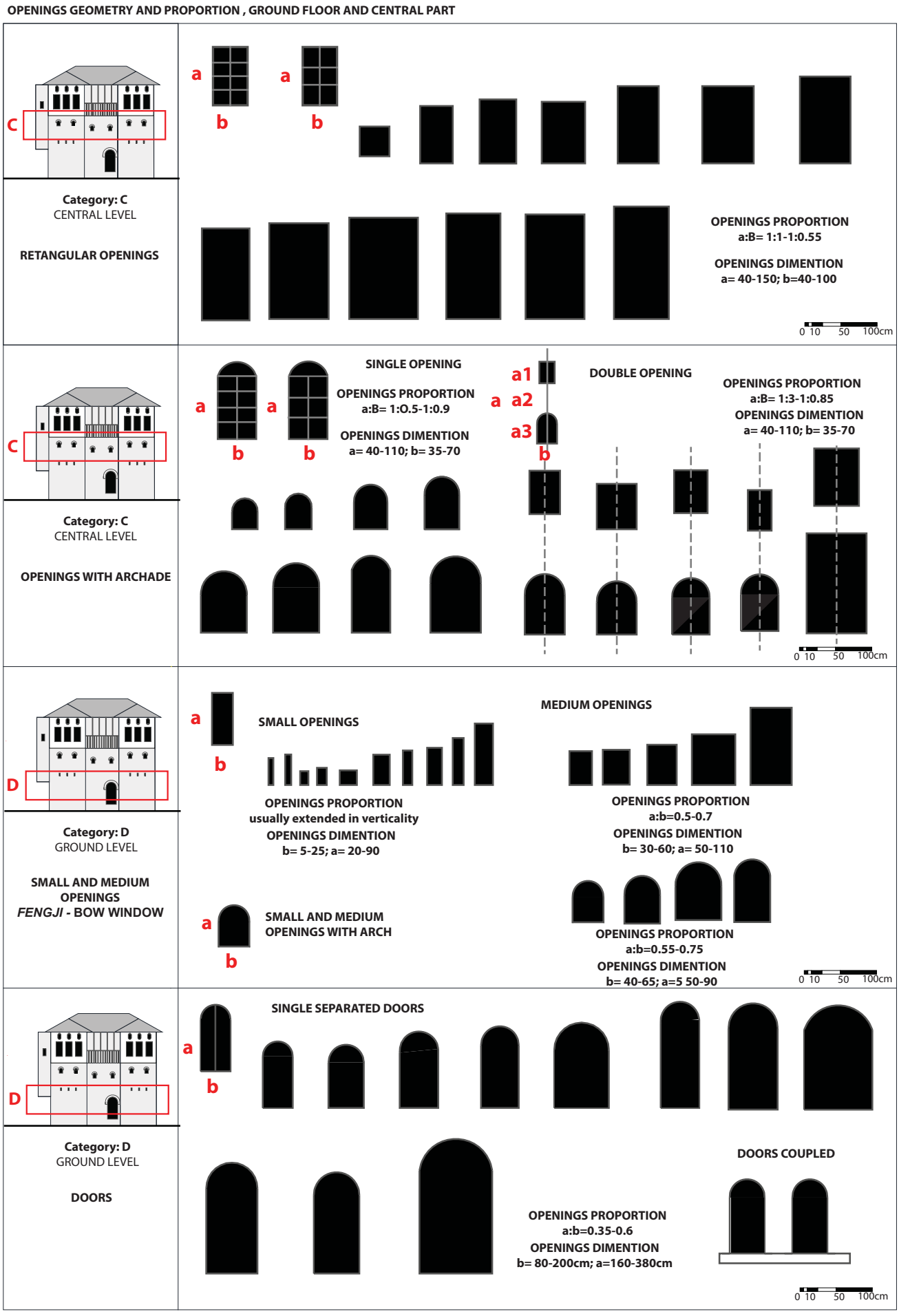


Fig. 128, Geometry and proportion constants of openings in the central-lower part of the facade of traditional house of Gjirokastra. (source: author's)

40-100cm, arch windows vary their high from 40-110 and the width from 35-70cm, while double coupled windows have almost the same proportions but due to their grouping extend the verticality of the façade, and are usually used in two floors.
All the above mentioned openings have frames with a network of equal modules of 4x2 or 3x3 extended in verticality. This is valid also for arch windows in which the part of the arch constitutes a separate piece. The frame proportion is very important as its almost square module do not disturb the perception of the vertical dimension of the openings.

Openings in the ground level (f g.128)

The ground floor façade of Gjirokastra house has usually two types of openings very different from each other in proportion and size: small windows (fëngji) and doors. As result of its close character which is related to the demand for protection, and due to the position of non-livable spaces (the ground floor is usually used for livestock or for processing agricultural products), windows are almost lacking. Instead there are some small openings with a rectangular form in facade (their dimension vary from20-90 cm in height and 5-25 of width) which ones have served to observe and control the territory and eventually can be used as arm places. Windows (arch or rectangular form) are very few and vary the width from 30-65cm and the high from 50-110cm. They proportion tend also to the vertical extension varying between the high and the width from 0.5-0.75.
In contrast, doors are bigger a have a larger impact on the façade perception. By the analyses of the case study examples, it resulted that their dimensions vary from 80-200 cm of width and from 160-380 cm of high. Their proportion is understandable to have a vertical extension which similarly to the windows reaches the level of 0.35-0.6 between high and width. Regarding their position in the façade, doors can be found in the ground level and in the first floor.

Openings including more than one level (f g.128)

Another design element that is present in the façade of evaluated typologies of traditional houses are the arcades that run through three different floorplans up to the upper level of the façade. From the analyses of the various examples results that according to their aggregation is divided the central space in one, two, three equal parts, or in case of more arcades they can be compose din a freeway in the central part. This giant order enhances the vertical dimension of the buildings.

In conclusion, the volumetric proportions defined by the analyses of the selected examples of the traditional houses can be used as tools to design new buildings in the residual area that can easily be posed in a visual structural relation with the build volumes of the traditional city. In addition, the maintenance of the same roof slope and roof typology is seen as continuation of the uniformity of this distinctable element of the city image. Moreover, maintaining the various openings dimensions and proportion in the residual area, can guarantee a structural relation, not only between the single entities (including windows and doors) but also considering their contribution in the dialog with the historic city redefying its image as a whole.

4.1.3 Levels of scale

The historic urban landscape of Gjirokastra is characterized by continuous and coherent levels of scale that appear in the view of the build mass **(f g.)** and in the road configuration.

Fig. 129 a) Levels of scale in the view of Gjirokastra group of houses ; b) c) Levels of scale in windows and external door (source: photos by the author)

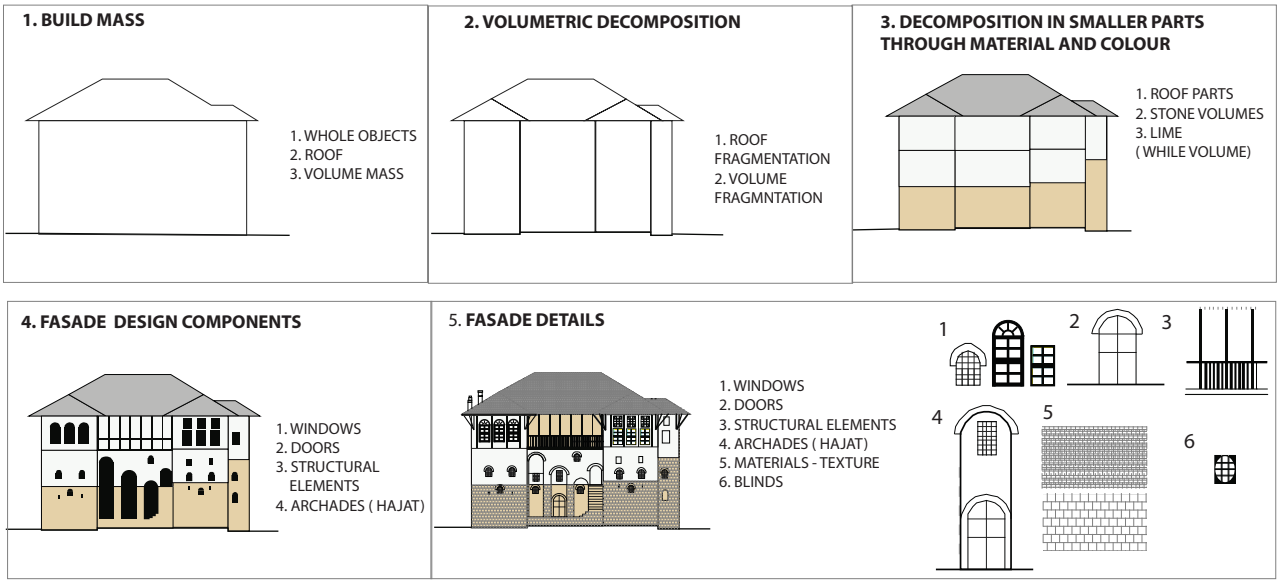


Fig. 130, Geometry analyses of the levels of scale of Gjirokastra buildings and the various components in each scale (source: author's)

The build mass is made up by putting smaller and bigger objects together. It can be considered as the sum of the various buildings silhouettes, which on their side are divided into volumes and roof shape. Volumes are usually rectangular and have a vertical extension, being more marked in the central part and having a smaller size on the sides. In particular, in the main façade which due to the slope of the terrain is usually the highest, there is a further division of volumes and rectangular shapes, usually based on proportions and marked through materials and colors. Some of

them constitute strong centers and are reinforced by the openings. In addition, the front façade openings such as windows, and entrance door are composed of good “levels of scale”. Windows in the main volumes are highlighted by the use of vertical proportion and by their typical aggregation (as mentioned in the previous issue). The windows of the middle floor are smaller and sometimes arched; hence they are differentiated from the windows of the other rooms which are bigger or further small allowing a connection with different levels of scale. Furthermore, design elements such as arches around the windows and doors, detailed frames, particular textures, and further detailed layers create smaller centers and intensify the centrality of the windows underneath them. First the windows are divided in two equal parts, and then these parts are divided again in four equal parts with narrower lathes. The smaller one does present e net instead of a proper window. So the windows or doors are composed of different centers which are in different scales, hence they have good “levels of scale” which also extends to the whole façade and to the urban landscape vision (fig.129).

All these parts that step by step influence the configuration of the urban landscape have influence on its. According to Ch. Alexander (2002) each part has an own center.

Within the total assembly of the single parts in the landscape configuration each level of scale determines tension between the centers and contributes to bring life to the urban imagery. In order to create a good composition, Alexander states that one jump in scale should be around 1:3, in order to avoid a jump of scale and support the role of the centre.

In conclusion, the levels of scale in the imagery of Gjirokastra urban landscape are achieved through 5 main steps which are part of the building facade design project.

1. The silhouette that highlights the connection with the mountains silhouette as a higher level of scale
2. The division and distinction of smaller volumes (the silhouette is divided into 3 or more parts)
3. The differentiation and fragmentation of these volumes in geometric patterns (each part is subdivided into 2-3 other parts)
4. Windows composition according to precise proportion rules (see the constant of “Geometry and proportion”)
5. Details and texture through which windows are described as centers. (fig. 130)

As a result, new buildings or adjustments in the residual area, that intend to integrate it with the historic urban landscape must provide at least five levels of scale in the buildings main facade, which respond to the previously described actions. In order to have good level of scale, the gules of geometry and proportion between scales

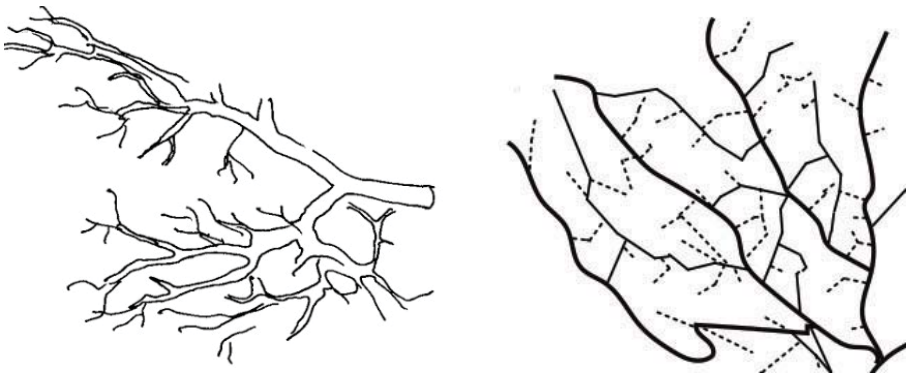


Fig. 131, Levels of scale of Gjirokastra street pattern compare to the fractal geometry of the lung (source: author’s)

must be followed.

Considering urban morphology and the dynamics of urban space visual perception, the levels of scale in Gjirokastra space can be found in the fractal geometry of urban morphology and in the perceptual view of the roads.
In terms of spatial morphology, the city of Gjirokastra starting from the large road space of the bazaar is extended along 5 main roads, from which a series of other secondary roads spring up and further expand in tertiary roads that give access to other inside buildings, describing a fractal geometry (fig. 131). This constitutes a typical connection between scales, presenting a continuity in terms of geometrical form, but being developed gradually from the large to the small scale.
This feature is described through the gradual escalation of roads.
1. Primarily road is in average larger ones and present a sloping plan. In the historic city of Gjirokastra they are historically defined as backbones of each neighborhood.
2. Secondary roads connect in an organic way to primarily roads, following terrain configuration. They spring up in different sections and direction. In some cases, they can be alternated with stairs.

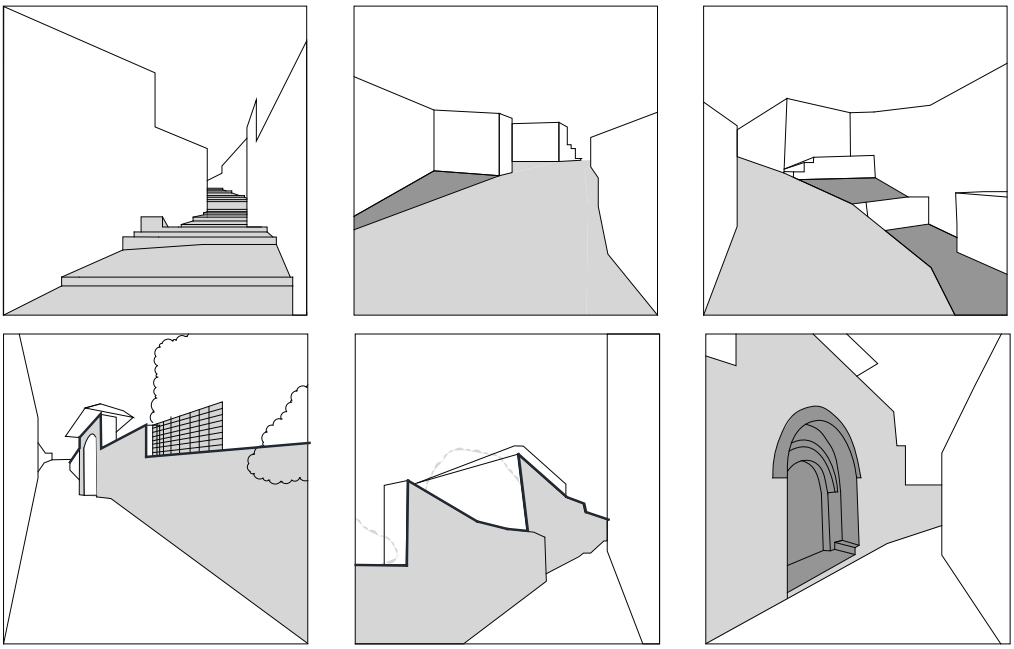


Fig. 132, Levels of scale in Gjirokastra road perception: a), b), c) Element of the horizontal plan: d), e), f) Elements of the vertical limit (source: author's)

3. Blind roads have a smaller section, can present stairs and usually have yard walls on both side being related only partially or diagonally with building's facade.
This road morphology is present in the whole historic city of Gjirokastra, including the residual area. Hence, it's important for new interventions to be conservative of this character, and to maintain the gradual passage of scale between roads, which have been developed organically by people.
Apart from road layers, level of scale in terms of visual perception of urban space depend also on the features of the roads horizontal plan and its vertical limits.
Good levels of scale in the horizontal plan of the road pavement depend on three main visual characteristics:
1. The presence of stairs or pavement textures. It creates step by step focus points, which stimulate attention and exploration. (fig.132 a)
2. The presence of enlagments or pochets , which usually give axess to the builings. This elements enhance the readability of the road, breaks uniformity and offer

Fig. 133, View of Gjirokastra. presence of multiple local symmetries. (source: photo by the author)

surprise. (fig.132 b)
3. Both elements integrated (fig.132 c)
Good levels of scale in the vertical limit are defined by the presence of the following elements:
1. Various patterns: stone wall, transparent fence associated to the wall and vegetation coming from inside or outside the wall. (Fig. 132.d).
2. Wall excalation with different levels in relation to the human scale, defining a max high of 2.5m. (Fig. 132 e).
3. Openings (doors, windows), candilivers and other vertical details which due to good levels of scale perfectly integrate with the vertical limit of the road. (Fig. 132 f).
In conclusion, the image of the historic city of Gjirokastra is described through the presence of levels of scale at different levels: the build mass and the builings facade, the spatial morphology of the city, and the visual character of the roads as they are preceived by observers.

4.1.4 Local Symmetry

When we look at the various urban perspectives of the historic city of Gjirokastra, either panoramic of buildings group seen from a distance or road views, it turns out that it presents a significant number of sub-symmetries in the visual pattern (fig.133) (of course not an overall symmetry, but a set of local symmetries in connected sub-regions of the configuration). This features according to Ch. Alexander (2002) are one of the reasons of coherent and organized patterns, which reflect on their side aesthetical visual quality. Thus, it important to identify, the various level of local symmetries in relation to buildings typologies (as buildings play the primarily role in the city image) and to understand if there are certain constants in buildings conception which can be repeatable in new objects in order to integrate the city image as a whole.
By the analyses of 38 selected houses (fig. 134,135), it was possible to reach some conclusions.
1. In the simple's house typology, local symmetries are usually present in 1-3 scales:

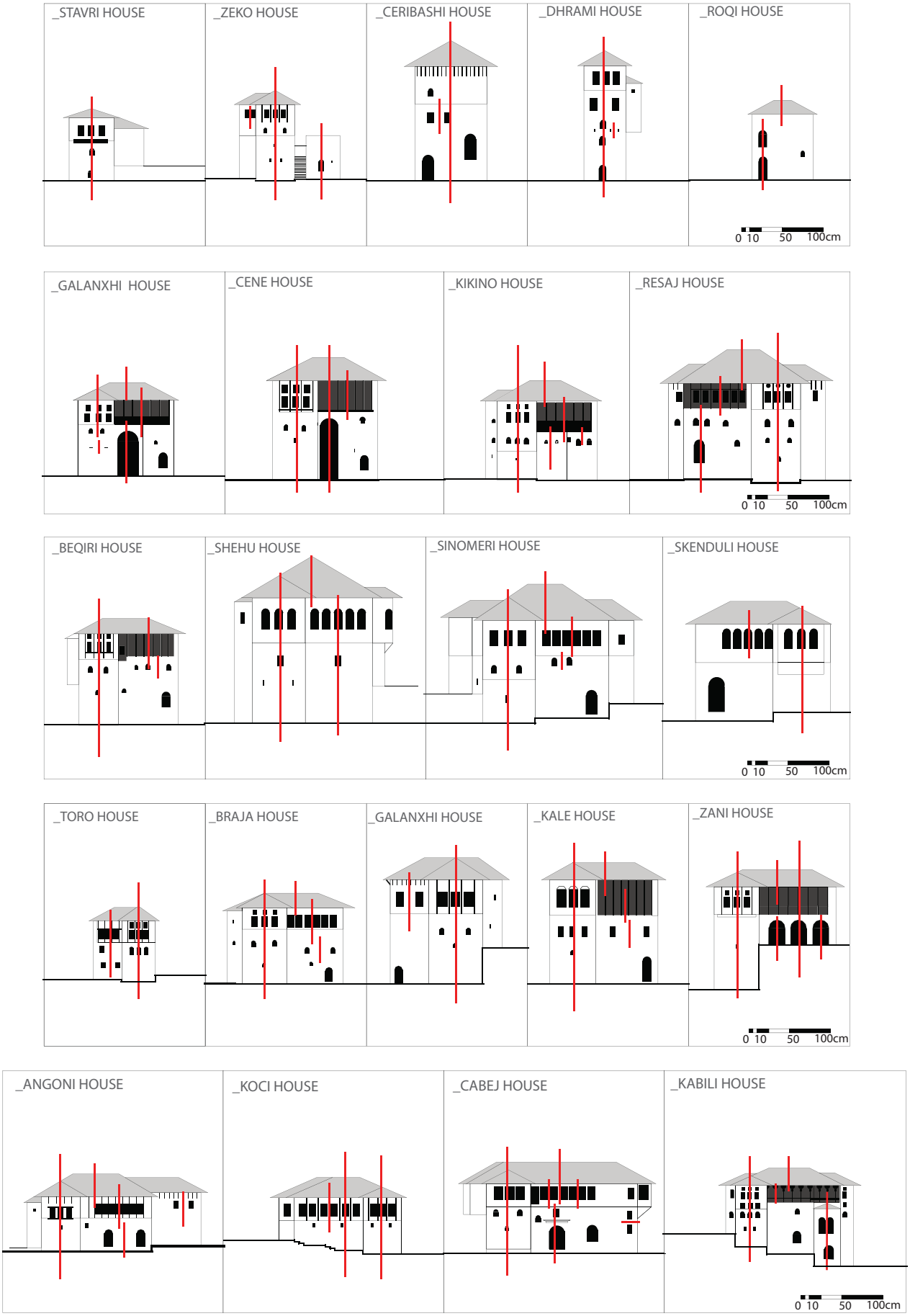


Fig. 134, Analyses of local symmetry in building facade. Symmetry enable legibility and order of the view of urban landscape within the complexity of buildings forms. Parts of the buildings result structurally connected with each other and contribute in visioning the image of the city as a whole. (source: author's)

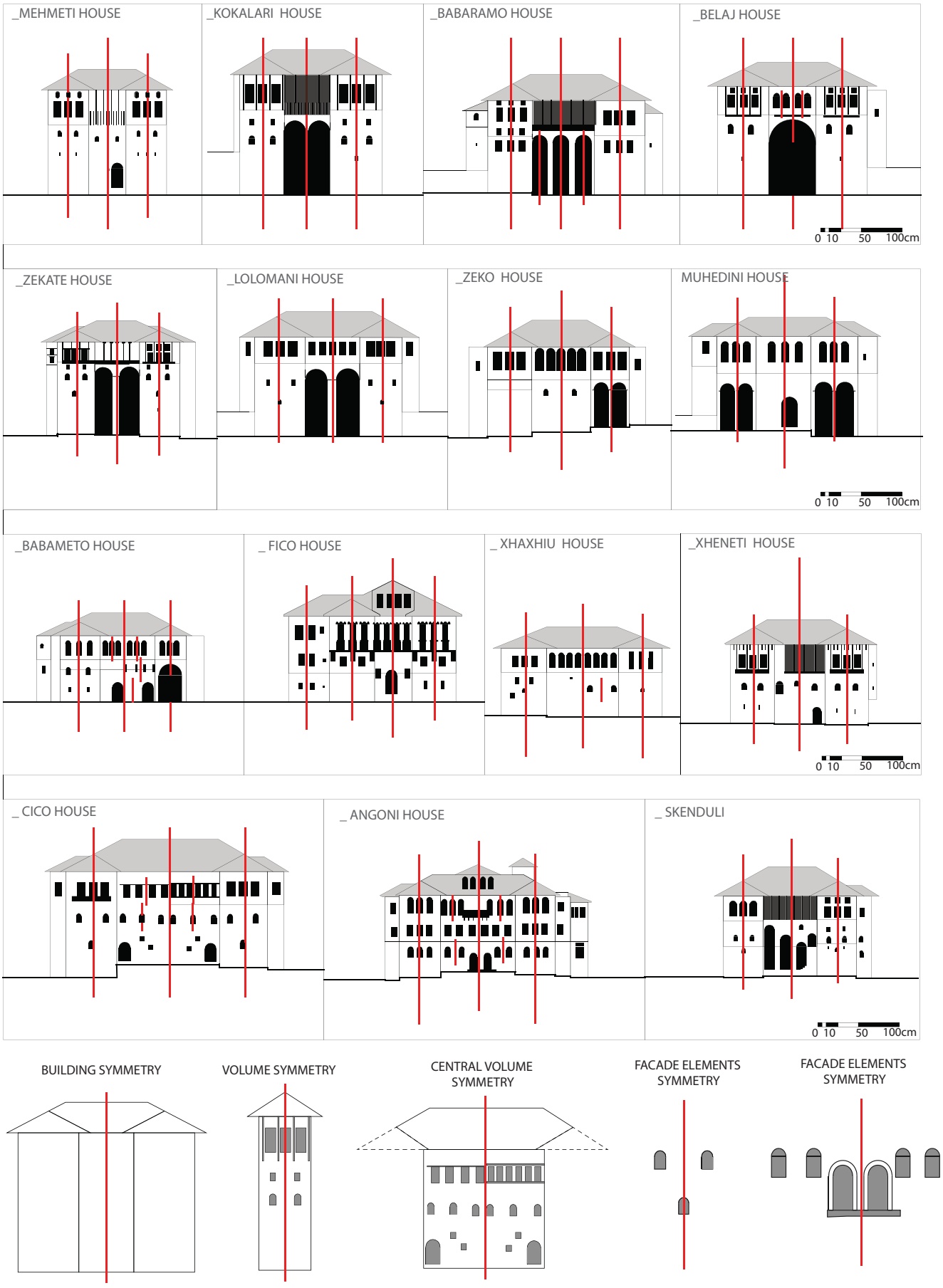


Fig. 135, Analyses of local symmetry in building facade. Three type of local symmetry: buildings symmetry, volumes symmetry and combination of facade elements. (source: author's)

a. volume symmetry; b. significant façade elements; c. secondary façade opening and their details
2. L or U housing types, present multiple local symmetries (3-5) in building's façade referring to previously three main levels.
Volumetric symmetry referring to the total form of the building is present in the first and third type, while considering the single volumes that compose the various buildings types, they present symmetry related to the upper level windows position, local symmetry of design elements of the facade such as aggregation of windows, doors, which on their side present also local symmetry.

Therefore, employing local symmetry in the building design instead of total symmetry, can serve to create order and enhance the aesthetic quality of the urban landscape. In building's façade symmetry happens at different scales and creates various levels of hierarchy. This nested hierarchy supports the various centers and reinforce them contributing in the coherence of the overall design. In contrast to an overall symmetry in which the sight is concentrated in the axes, local symmetry provides beauty in various point of the visual frame. Accordingly, in case of new interventions in the margins of the historical area, by using local symmetry objects can be integrated visually in a continuous overall image of the city and offer a coherent view as they constitute centers enriched inside by other smaller centers in a hierarchical definition. This hierarchy enable visual correspondences between the various centers which reinforce the idea of the city as a semi-lattice structure, where parts are interconnected at different levels creating a "living" [95] image.

4.1.5 Gradients

In the urban landscape of Gjirokastra the presence of gradients is visible and significant and is mainly given by the houses façade. It plays an important role in the overall arrangement of the single house façade, especially in the evolved typology which due to its dimension and quantity of elements used to offer more place for the

95 This term was used by Christoper Alexander (Alexander 2002) with regard to the structural complexity of a visual frame which present a dynamic and complex system of relationships between different elementary entities and at the same time have order, presenting an interconnected structure at different levels of scale.

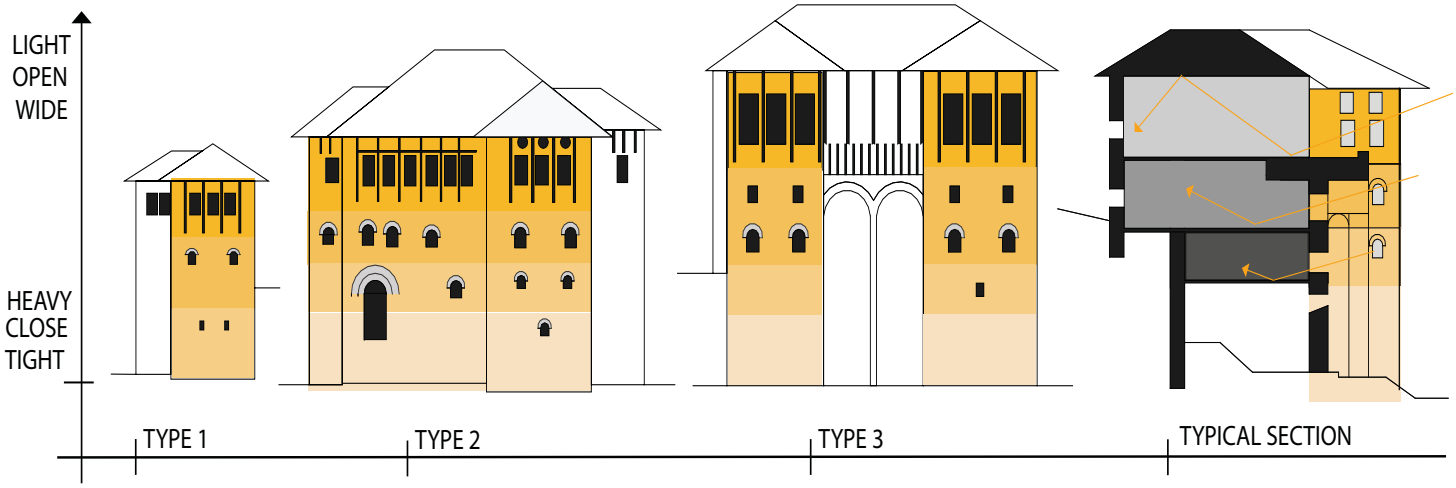


Fig.136, Gradients of windows size, spatial dimensions, openness and light quantity in Gjirokastra dwelling based on e three main house typologies (source: author's)

Fig.137, The presence of a) openings gradients and b) light gradients in Gjirokastra landscape (source: photo's by the author)

gradient to be visible.
The main volume of the house starting from the basic type presents in the main façade gradated openings which become larger in the upper part. (fig.136)This is valid also for the other facades, although not so highly perceptible. This gradient determines also a gradient of light of the inside space which corresponds to a specific destination of each floor. The upper part of the house, which is more lighted is the most livable area, holding the guest room while the lower floors accommodate sleeping rooms, the kitchen or various storages. Moreover, the high of each floor gradually increases in correspondence to the most livable spaces and correspond to the gradation from the ground floor to the upper level of the buildings (fig.137).
This logic is extended also in the L and U type. Space differentiation and graduation are present in all the types of buildings. Openings, as well, reflect a vertical increase in their dimensions, excluding entrance areas. Together with enlighten of the buildings masonry from the base to the top, with in some case the use of light material such as wood, it creates a gradual lightness of the building it selves in the upper part. These gradients are mostly evident in larger and complex buildings as they serve to create a layer of order in the building façade which reconnects to the larger order of historic city image considered as a whole.
Therefore, in order to achieve an integrate image of the historic city as a whole, it's important to use gradients in the design of houses. This can be extended also

to other buildings typologies and in a more moderate way in all buildings facade, expect those parts that present openings that give access to the buildings, like in the case of the bazaar buildings which have wider openings in the ground floor, or “kullas” that lack the *hajat* as entrance for animals.

4.1.6 Positive space

The open space in the city of Gjirokastra, as a typical ottoman urban model, is formless and organic at the first sight, at the point to be perceived as a chaotic urban mass. Nevertheless, it presents a picturesque character made up of a variety of vistas and episodes and at the same time present a certain continuity and coherence given by the repetition and combination of certain patterns.
In the main roads, there is a dynamic in the perception of space, and its related not only to the changing limits of the road through enlargements and intimate entrance spaces, but also to the way various elements such as walls, green, building’s façade are positioned in relation to the perspective visual frame created while walking through the space. Their position in fact influences the dimensions of space perception, the visual openness, control or the sense of compression, focus points or centers, contrast, etc.
The rich magma of urban space (Cerasi, M., 2005) is made up of a continuous network which presents a hierarchy in the main roads being much more rich in terms of visual variety. By analyzing the main roads of the historic area it’s possible to

Fig.138, Analyses and representation of positive space in Gjirokastra main neighbourhood roads. Nolli’ map of perceptiual positive space (source: by the author)

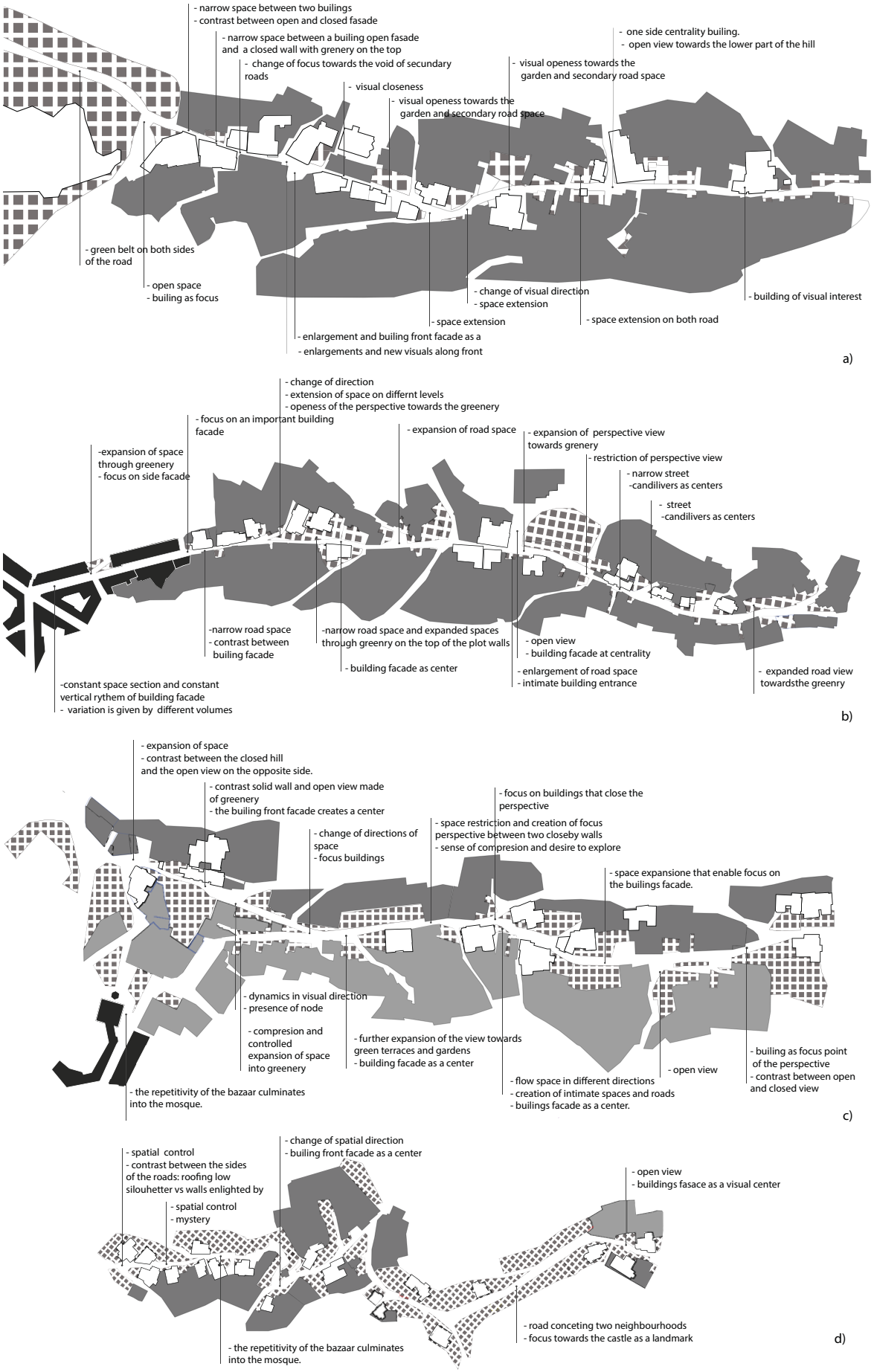
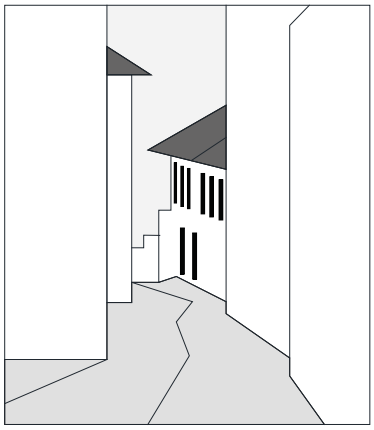


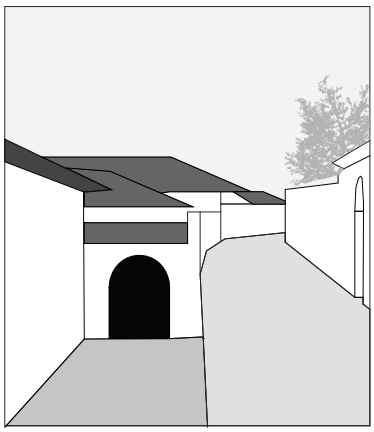
Fig.139, Analyses and representation of positive space in a) Pllake, b) Hazmurat , c) Palorto and d) Dunavat neighborhood. (source: by the author)

The postive space of the road is defined by **the contrast** between the **full builings back walls and plots** and the intersting main fasade of a builings as a **focus point.**

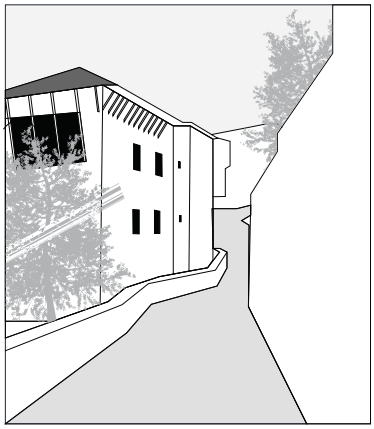


The postive space of the road is defined by **the contrast** between the **continuous and sinuous mass of the walls** that define the road perimeter and t**he light presence of the greenery** on the top of plot walls.

The postive space of the road is given by **the intimate level of roads which give access to the builings. The contrast** between the roofs at the eye level and the opposite highest level of the walls animated by greenery creats

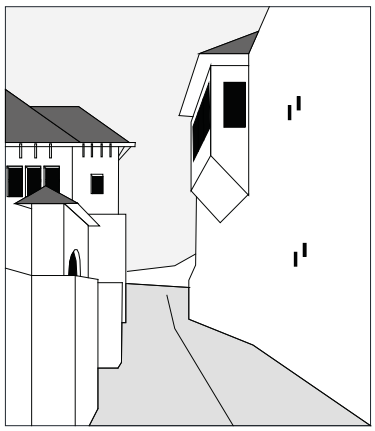


The postive space of the road is given by **the contrast** between **the full plot wall or the closed builings side facade** and the perspective view of **the front fasade of the house,** which creates **a focus point.**

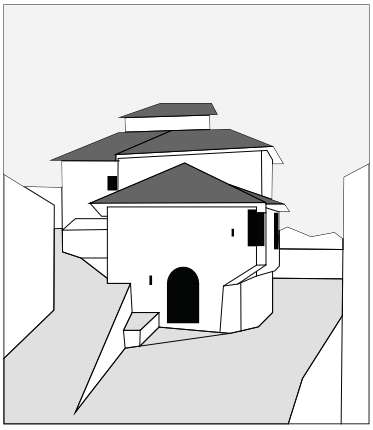


The postive space of the road is given by **the presence of various centers such as: Builing front facade, andilivers, greenry as mediative element, enlargements and intimate entrance.**

The postive space of the road is given by the presence of **centers at various levels** which animate space. Plot e**ntrances, outside volumes, graded levels of walls and roofs** create a positive perception of space.



The positve space of the road is given by the exposed builing fasade which costitute a visual center. This center is a focus point that interrupst the perspective and divides it on two sides enhancing the sense of order and mystery.



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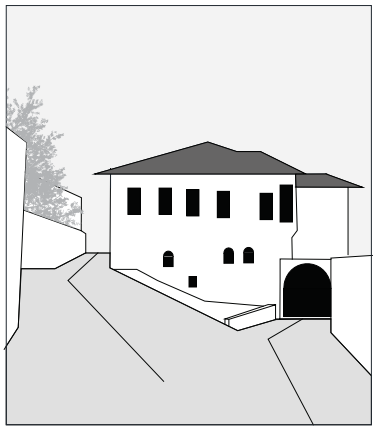
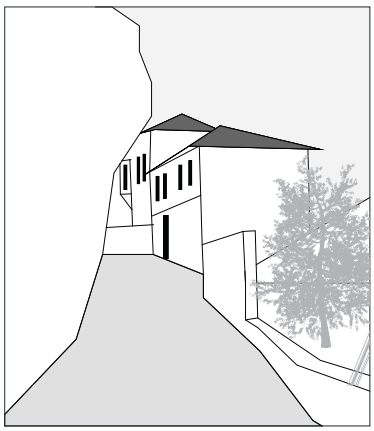
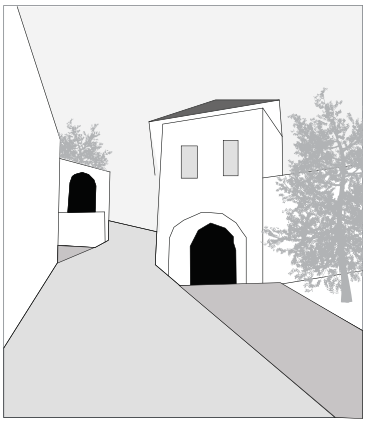


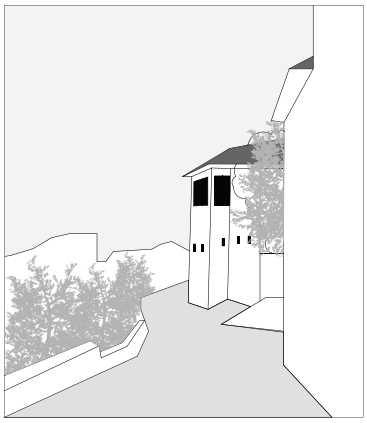
The postive space of the road is given by the constrat between the **compact and continuous mass of the rock** on one side of the road and **the graded composition of builings volumes alternated by greenery** on the other side.



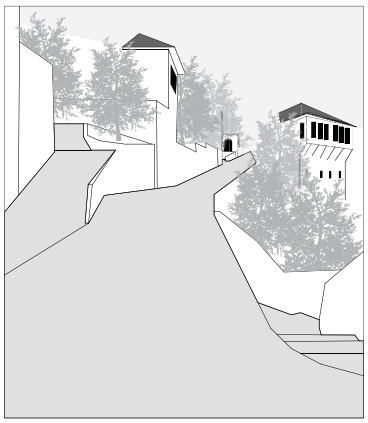
The postive space of the road is given by the repetition of good shapes like the entrance doors togeter with enlargements that create intimate spaces on opposite sides of the road. Green variations round them such enhance also the positive effect.



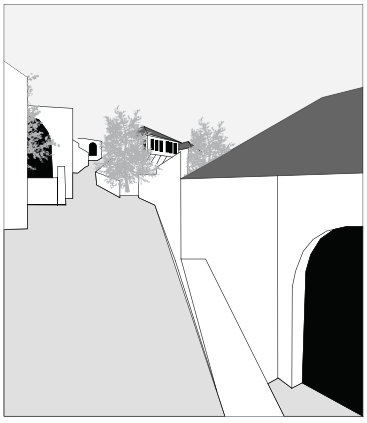
The postive space of the road is given by **the contrast between the green low side of the road,** which opens the view and various buildings front facade oriented towards the view which costitutes centers, animated by greenry, stairs and characteristic front openings.



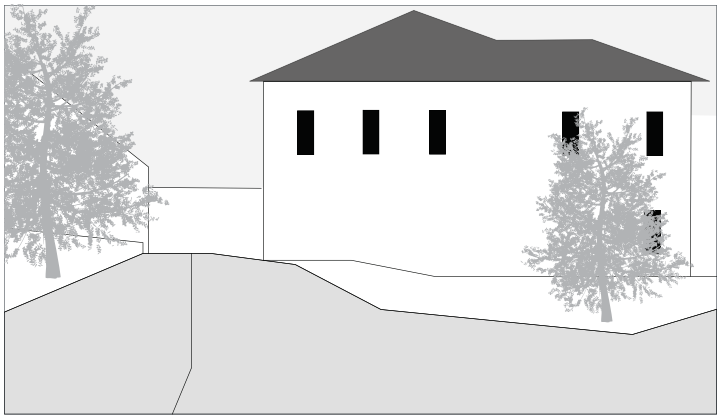
The postive space of the road is given by the extension of the road at different levels **and the presence of distant centers alternated with greenery which creates mystery and enhance at the same time the desire to exploration**



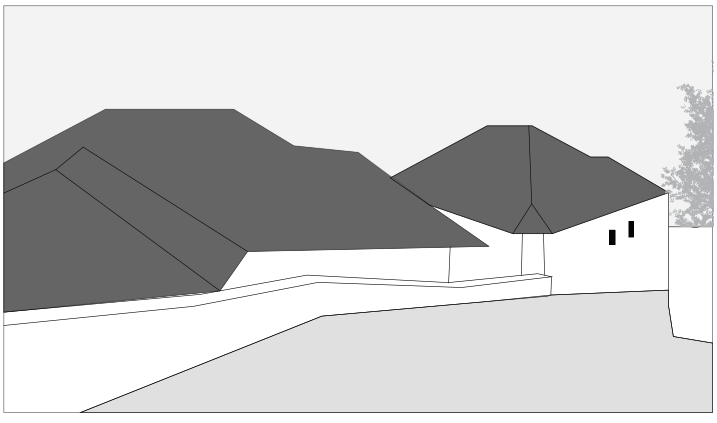
The postive space of the road is given by **the repetition of good shapes like the entrance doors** together with **enlargements** that create intimate spaces on opposite sides of the road. **Green variations** round them such enhance mystery and the desire to explorealso the positive effect.



The positve space of the road is given by the **exposed builing fasade which costitute a visual center**. This center is a focus point that interrupst the perspective and divides it on two sides enhancing the sense of order and mystery. In addition, t**he lack of other focal elements** focus further the sight to this builing. On both sides, greenry enhance mystery and the desire to took the side roads and to explore.



The postive space of the road is given by **the contrast between the two sides of the road: one opened view,** re-calling the silouhette of the maountain through the roofs at a foot level and the other **closed** through the use of countinuous walls animated by greenery in the upper part.



The postive space of the bazaar is given by the rythmic **repetition of vertical openings and the variations of builings volumes in hight** which contrast the slope curve.

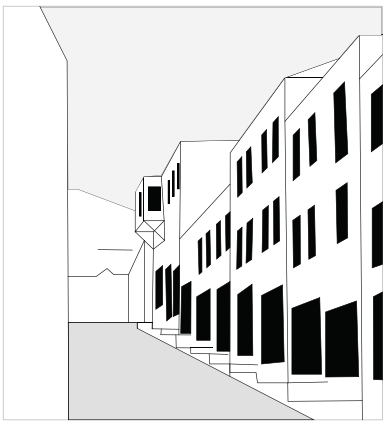


Fig. 140 Analyses of typical perspectives views of Gjirokastra roads that highlight the presence of positive urban space. (source: author's)

understand the dynamics of vistas. Spatial perception is not static. Instead it changes while going through the space, presenting characteristics such as: narrowness or compression and wideness of visual, the change of patterns and enlighten of the visual limits from stone to clay, from building to void, from the main building façade to less important back parts etc (fig.138), which challenge the observer.
Depending on the orography, each neighborhood main road of the historic center present certain peculiarities.
Pllakë neighborhood main road, present a more compressed space with a limited perspective. Therefore, focus elements are mostly related to protruding volumes or important gateways, which were meant to demonstrate the social level of the family. The presence of greenery along the road which comes out from the yards, balances the sense of compression, opens the perspective and invites to a more dynamic space (fig. 139,a),.
Hazmurat neighborhood, starts with the linear profile of the bazaar made of repeatable aligned volumes with a vertical regular rhythm of openings in the façade, still dynamic due to different heights. The residential area, in contrast, presents various visions of the road due to enlargements and creation of intimate space, changes of direction and road undulation, nodes and cross roads at different levels. Still visuals on both sides of the road are more balanced as the road is on the ridge, and the eye searches for attractive elements and centers on both sides (fig. 139,b),.
The main road of Palorto neighborhood, in contrast, have a more open perspective towards the valley and is more closed on the hillside. Buildings front facades being mostly oriented towards the view are visible one side of the road, while the other side is closed by the back facade of the buildings, by yard walls or in some cases is totally opened to the panorama. Perspective in this example is not balanced, but is mainly made of contrasts between the two sides. One which is higher and present a more open and prominent architectural character and the lower side which is more extrovert (fig. 139,c).
Dunavat neighborhood presents a similar space which in addition is alternated on both sides as the serpentine road changes orientation to adapt to the terrain. The contrast in this case is more pronounced due to the steep slope and the high difference of level between the road and the buildings in the slope direction (fig. 139,d).
Nevertheless, in all the roads situations there are some typical perspectives that reflect positive space (fig.140):

1. Buildings as focus points of the road perspective: Narrow road with building facade as focus, building façade as a center which blokes the view and serves to determine changes of the visual direction.
2. Contrast between the two sides of the road: Open and articulated façade or gateway vs closed yard wall; open and articulated façade vs void or greenery; etc.
3. Levels of intimacy along the road: enlargements or extension of road space in different dimensions, levels, form and orientation,
4. Architectural details as centers of different nature on the sides of the road that create distinction between the two parts: main house façade, protruding volumes, important gateways, balconies or kamare etc.
5. Good shapes repetition alternated on both sides of the road: gateways repetition, buildings main façade repetition, stairs repetition etc.
6. Repetition and variation of buildings is a continuous linear series. (bazaar area)

These perspectives are the result of the articulation of typical sections which have in themselves the potential to create positive spaces. Sections can be classified based on the way the various elements composed are articulated between them (fig.141, 142, 143):

1. Space between two buildings.
a) The space is defined by buildings that have the same high and orient the side or the back façade towards the road.
b) The space that is defined by buildings which have different high, at the point to open the view from one side and perceive the roof silhouette.
c) The space is closed by buildings on both sides and suspended volumes on the top.
d) The space is defined by buildings on both sides and enlarged at certain points through important gateways that give access to the house yard.
d) The space is defined by the presence of terraced building, in which is incorporated the “odajashta”.

2. Space between buildings and house yards.
a) The space is extended towards the house yard and greenery
b) The space is extended towards the house yard with the greenery but its limited by the building which is set close the yard wall.
c) The space is pushed and oriented towards the house yard due to the suspended volume of the building but is limited by the building which is set close the yard wall. Thus, it remains a mostly closed perspective.
d) The space is pushed and oriented towards the house yard due to the suspended volume of the building.
e) the roads space is extended physically creating and intimate entrance to the yard and is extended toward the green yard.

3. Enlargement of road space outside the continuous road profile in two ro more levels
a) due to the slope of the hill, the road space is extended in two levels one of which contain a building with storage defined by a sustaining walls b) which can become baluster for the upper path.
c) due to the slope of the hill, the road space is extended in two levels to reach the access to the upper buildings. Usually the view from the upper part towards the opposite side of the road, is extended due to the presence of green yards, d) and in some cases is further enlarged by the intimate entrances to the yard. e) In case the lower part is limited by the building side façade, the road space result as extended on the other direction towards the house yard.
f) the road space is extended in more than two levels due to the steep terrain reaching the house entrance the entrance to the yard in different directions.
g) the road space is extended in more than two levels due to the steep terrain to reach the ground floor of the front building. This section offers visibility to the close by house yard or h) to the first floor plan of the house close by.
i) extension of the road space on one side to secondary roads that bring to intimate house entrances.
j) extension of the roads pace in two levels that run in parallel and give access to the yard entrance door.
k) extension of the road space in one side toward an open view through greenery

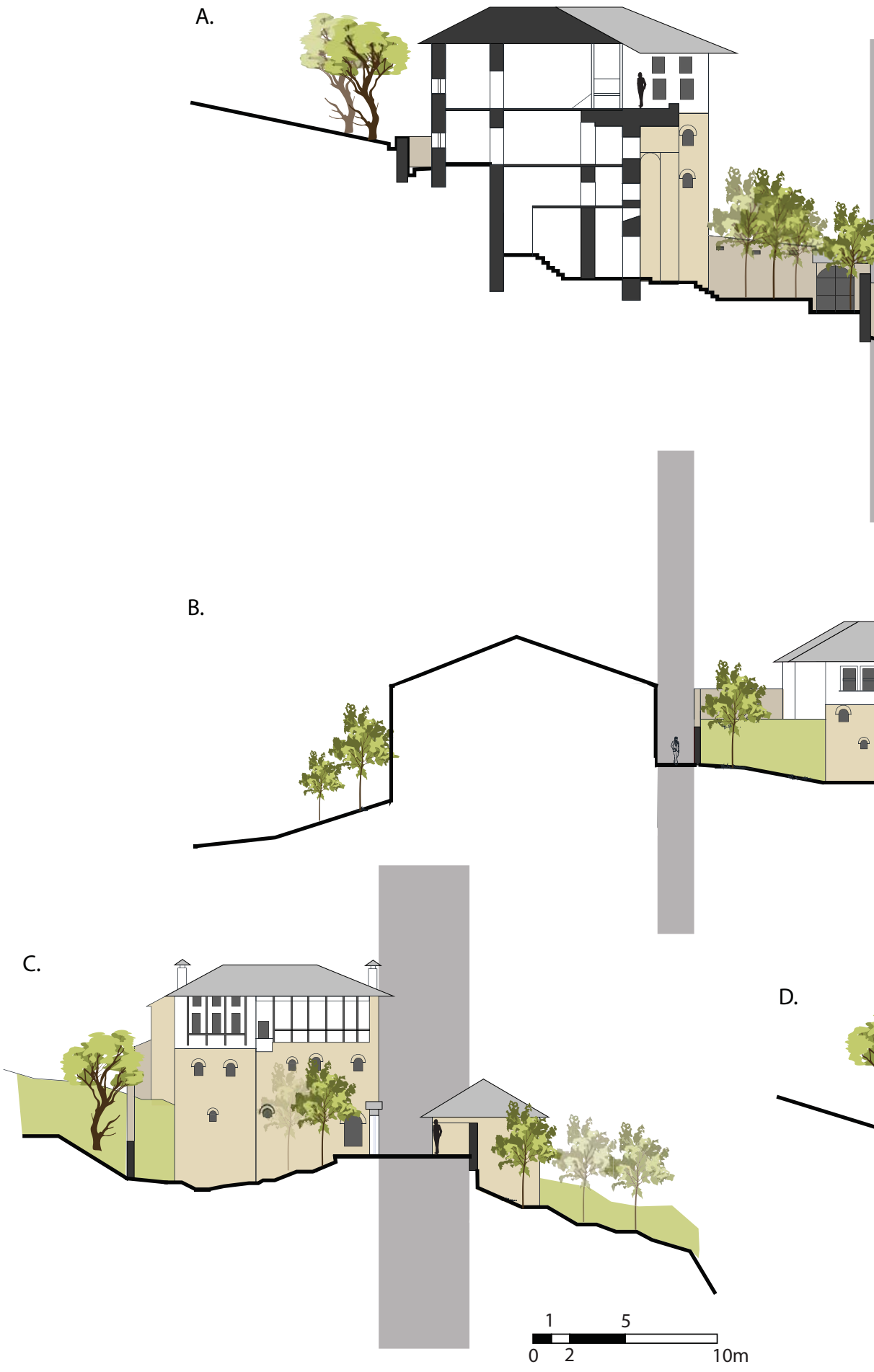

A.
B.
C.
D.
1
5
0
2
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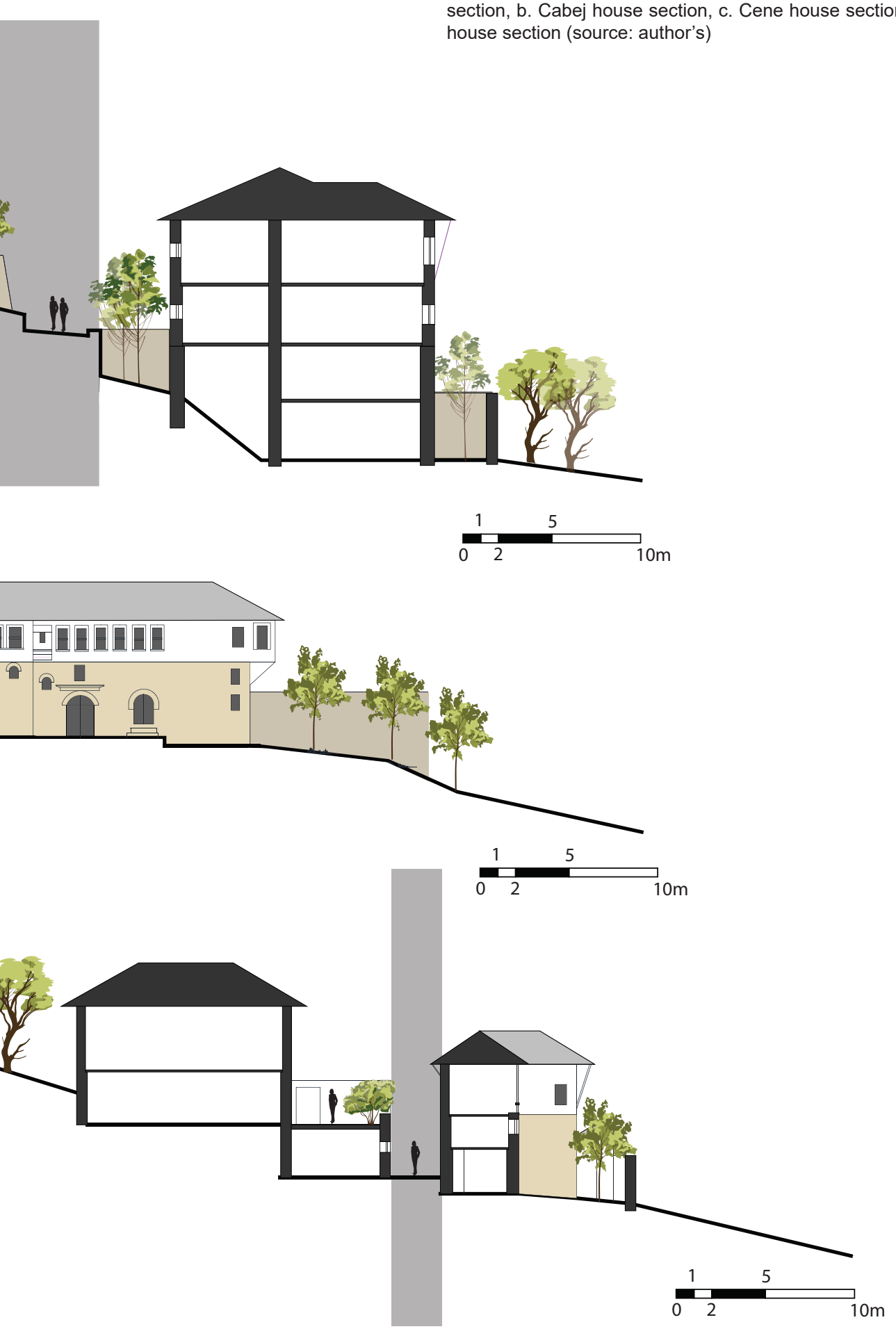
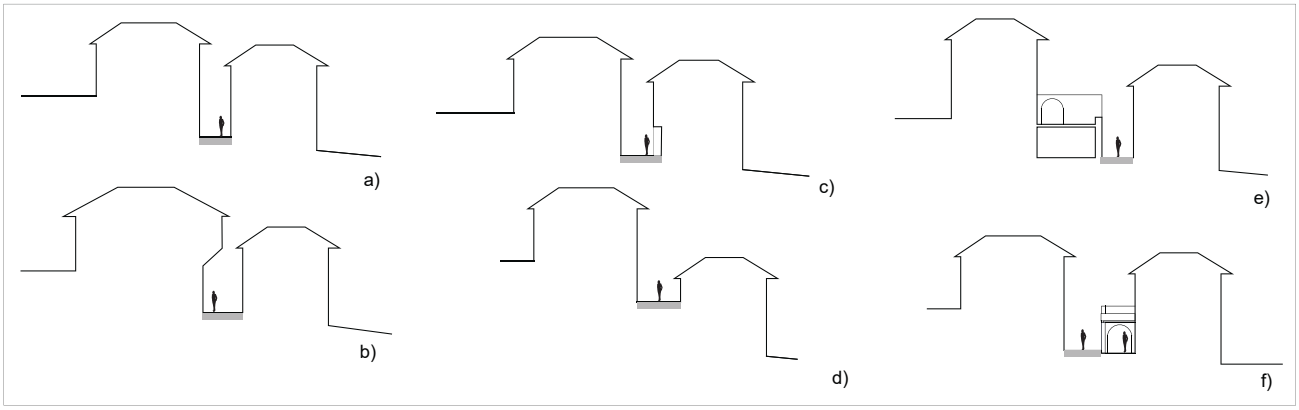
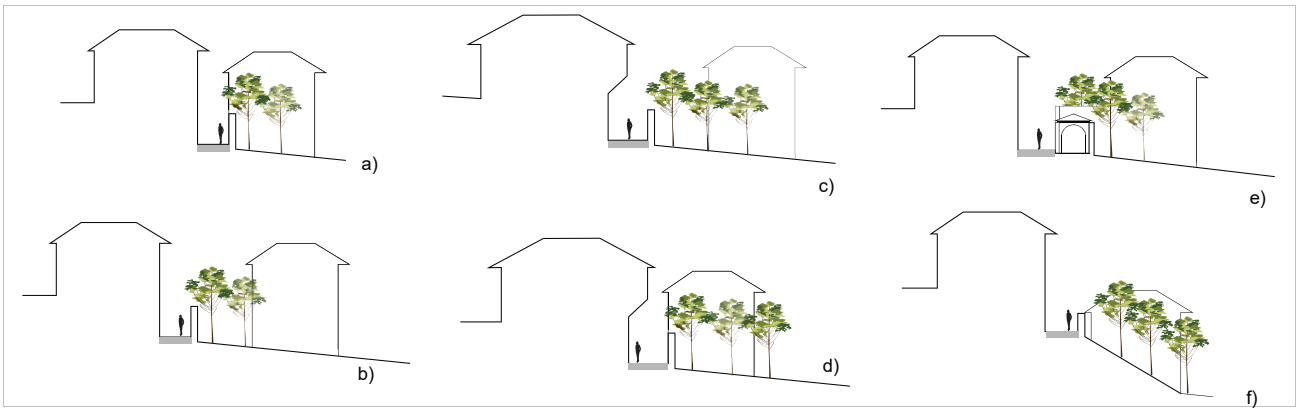
Fig.141, Positive road sections in Gjirokastra: in a. Zekate house section, b. Cabej house section, c. Cene house section, d. Toro house section (source: author's)



1. ROAD SPACE BETWEEN TWO BUILINGS



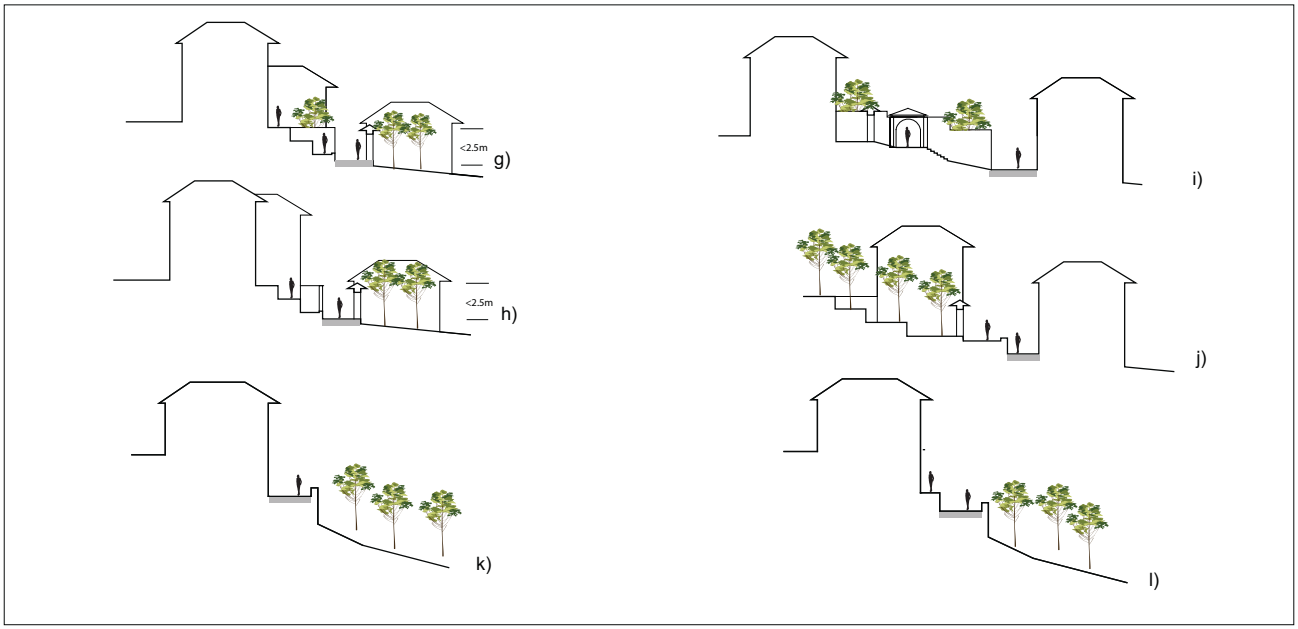
2. ROAD SPACE BETWEEN BUILINGS AND HOUSE YARDS



3. ENLARGEMENT OF ROAD SPACE OUTSIDE THE CONTINUOUS ROAD PROFILE

Fig.142, Analyses of typical sections of road "positive space" in Gjirokastra (source: author's)

3. ENLARGEMENT OF ROAD SPACE OUTSIDE THE CONTINUOUS ROAD PROFILE



2. ROAD SPACE BETWEEN TWO HOUSE YARDS

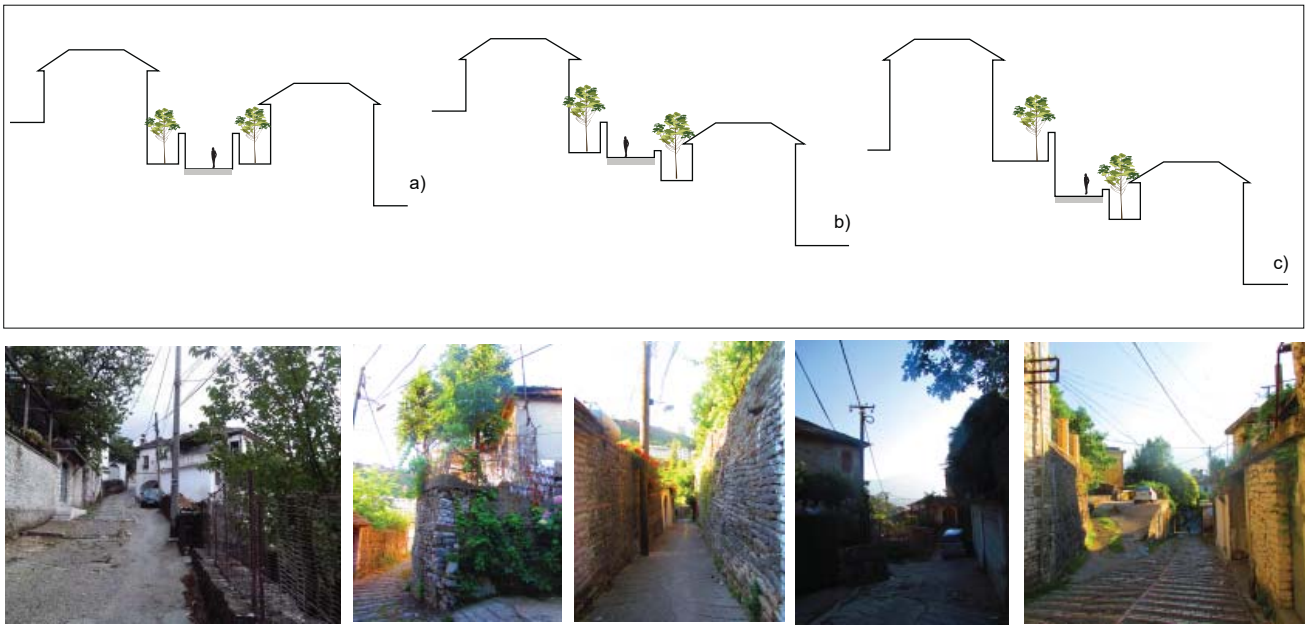


Fig. 143, Analyses of typical sections of road " positive space" in Gjirokastra (source: author's)

that grows on the level of the eye or in a lower level. L) the road space can run in two or more levels having a more complete view.

4. Space between two house yards.
The positive road space between two yard houses can be defined in three main sections according to the difference in high between the three planes:
a) the road plan and both yards are almost on the same level and pace preent and equilibrium and symetry
b) one of the house yards is in a lower level compared to the other two, which create visual orientation towards the open perspective.
c) the yard and the road are on three different level, which orients further the sight to the opened view.

In conclusion, the positive space in the historic center of Gjirokastra is primary referred to the dynamic perception of space. Characteristics of this dynamicity are evident mainly in the main roads, and are less pronounced in secondary or more intimate roads. This feature is defined as a constant elements given by the definition of characteristic perspective views and typical sections which constantly change offering a continuous and coherent spatial perception, still variable and dynamic.

4.1.8 The void

Gjirokastra houses although are very closed externally, usually present in the main façade a deep void. This is evident in some building of the historic center except Pllake neighborhood, which is the oldest and the poorest in terms of architecture development. Deep voids, in fact, are mostly present in developed houses typologies and are related to evaluated architectural elements such as an open cardak, hajat or the presence of kamare. These voids represent buildings main focus points which create order and calm and permit to understand the complexity of the rest of the façade. In the overalls image of the city, they contribute in creating order and visual coherence as they are perceived as centers which due to the similarity of form and scape are interrelated visually with each other (fig. 144). In addition, this coherence and visual interrelation are given also by the house yard doors which represent voids almost of the same scale. Thus both on them, emerging as voids in contrast to the build mass or the continuous roadside curtain becomes important element in the definition of the historic city image as a whole, as they do not only emerge on a small scale but contribute also in the definition of order in the larger scale of the city and connecting through coherence the small scale with the large scale.
By the analyses of selected case studies (houses and yard house doors) it possible to define according to the typology the use of voids in architecture and urban scale. Hence there are four main categories of voids (fig. 145, 146, 147):

1. Perpendicular building type “void”
The simplest house types are usually very closed. They lack the open space of hajat and cardak. The main opening is the entrance door, which constitutes a significant void compare to the almost full façade. In this typology voids can be found in the front facade or on the side, is highly visible in a panoramic view and less in the road space perception.
Thus, in a similar typology is recommended the use of void contrast with the façade mass and the creation of a hierarchy between the void of the entrance door the

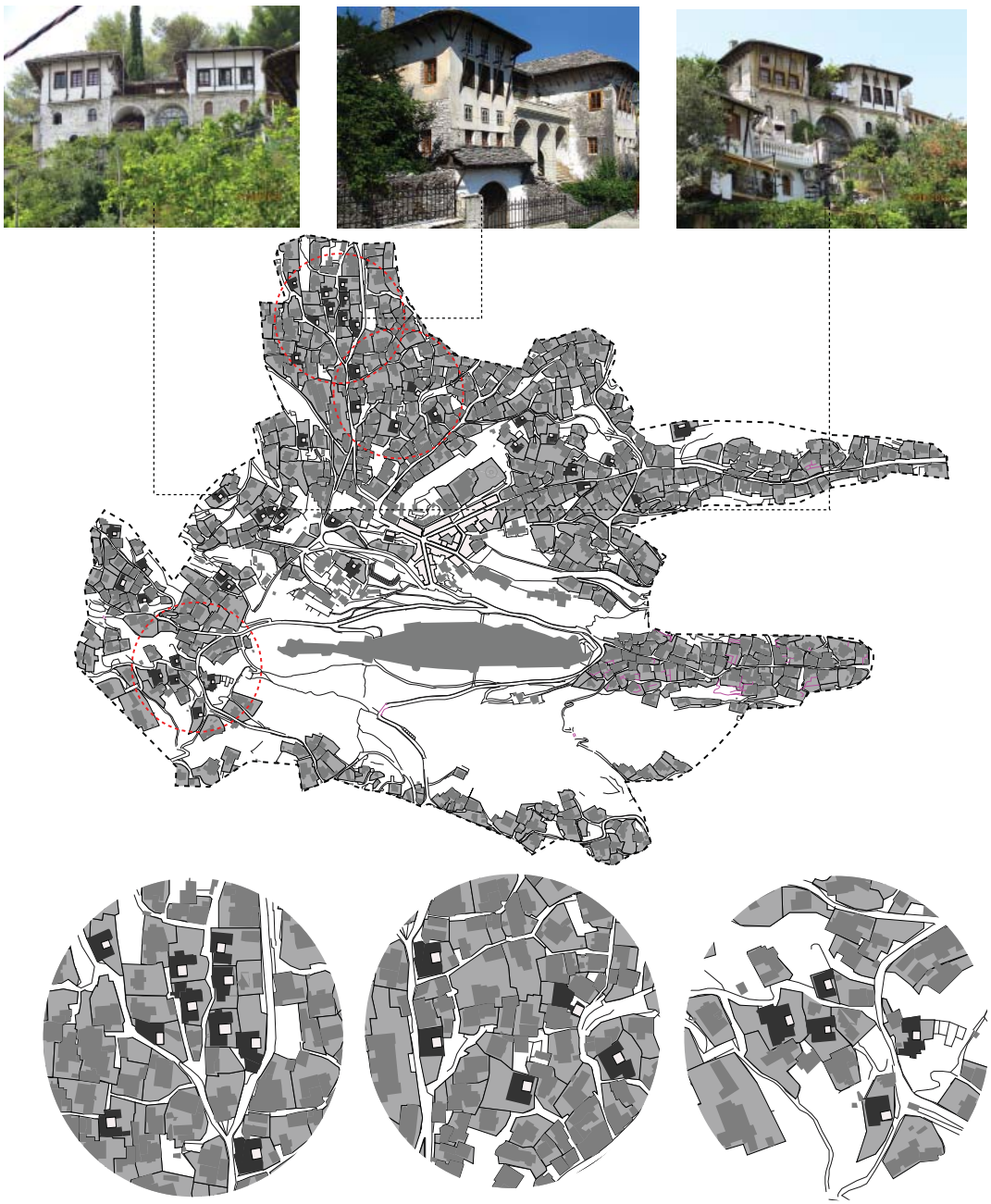


Fig. 144 "Voids" distribution in the historic urban morphology of Gjirokastra. (source: author's)

other façade openings. The void, in this case, is rectangular or arch form opening with the domination of vertical dimension.

2. L type building void.

In L typology there are various types of "void" which can be applied. In the simple's model, the void is represented by the hollow space of the cardak, which is excavated internally. Its preserved as a rectangular shape which celebrates the core part of the house which determined the relationship between inside and outside. In fact, it's the only opened space of the house. In other cases, the void creates also a portico which is limited to the kamare or is extended to the along the receding façade. Having a different shape, one rectangular and the other arch form, they are perceived as two focus points and in the case are extended with the same length they are perceived as a unique big lateral void. Thus, in a similar typology is recommended at least of one void, an upper continuous balcony or a portico. Both of them can contribute in

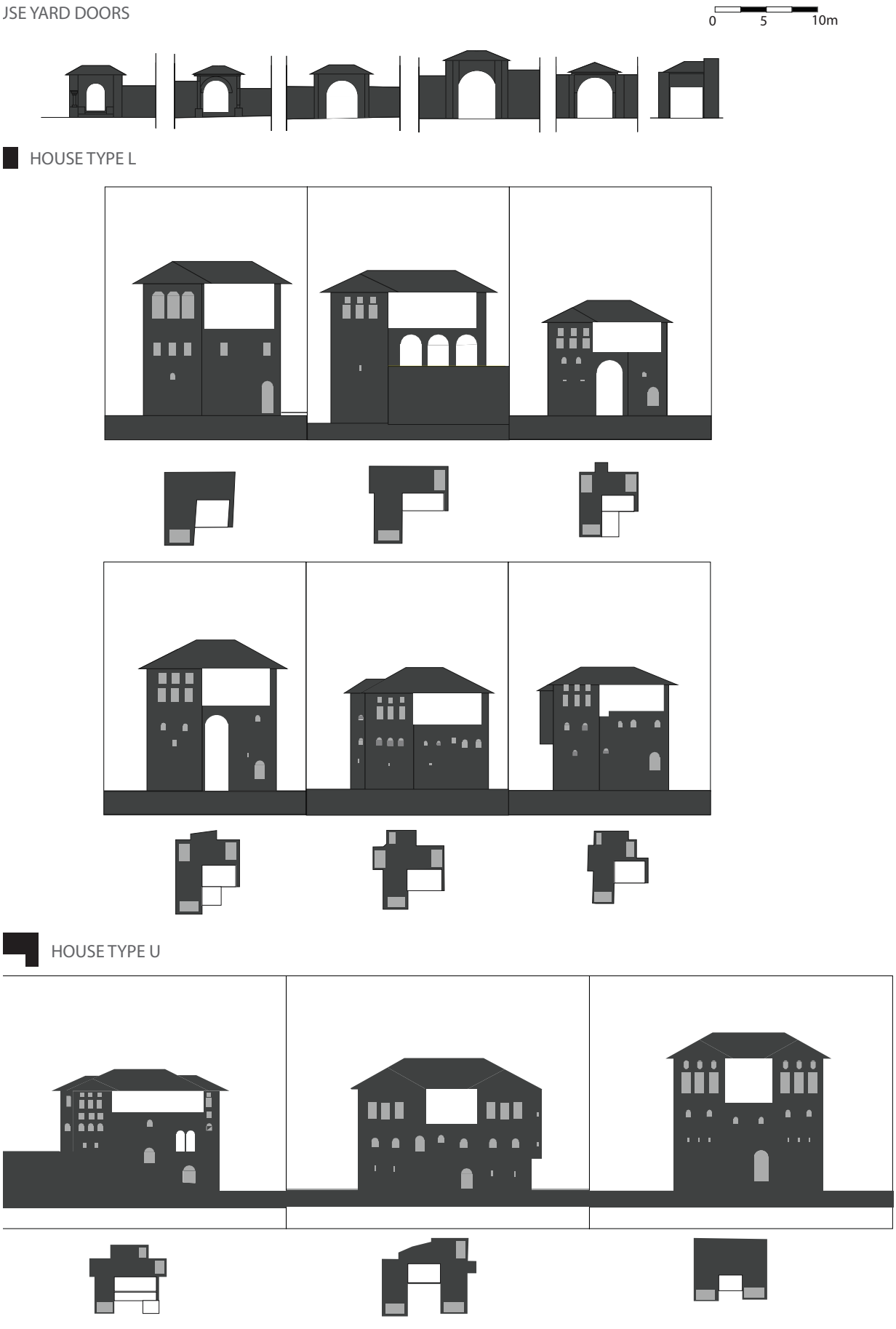


Fig. 145 , Analyses of signif cant voids in house yards' doors of Gjiokastra and house facades according to the typology. (source: author's)

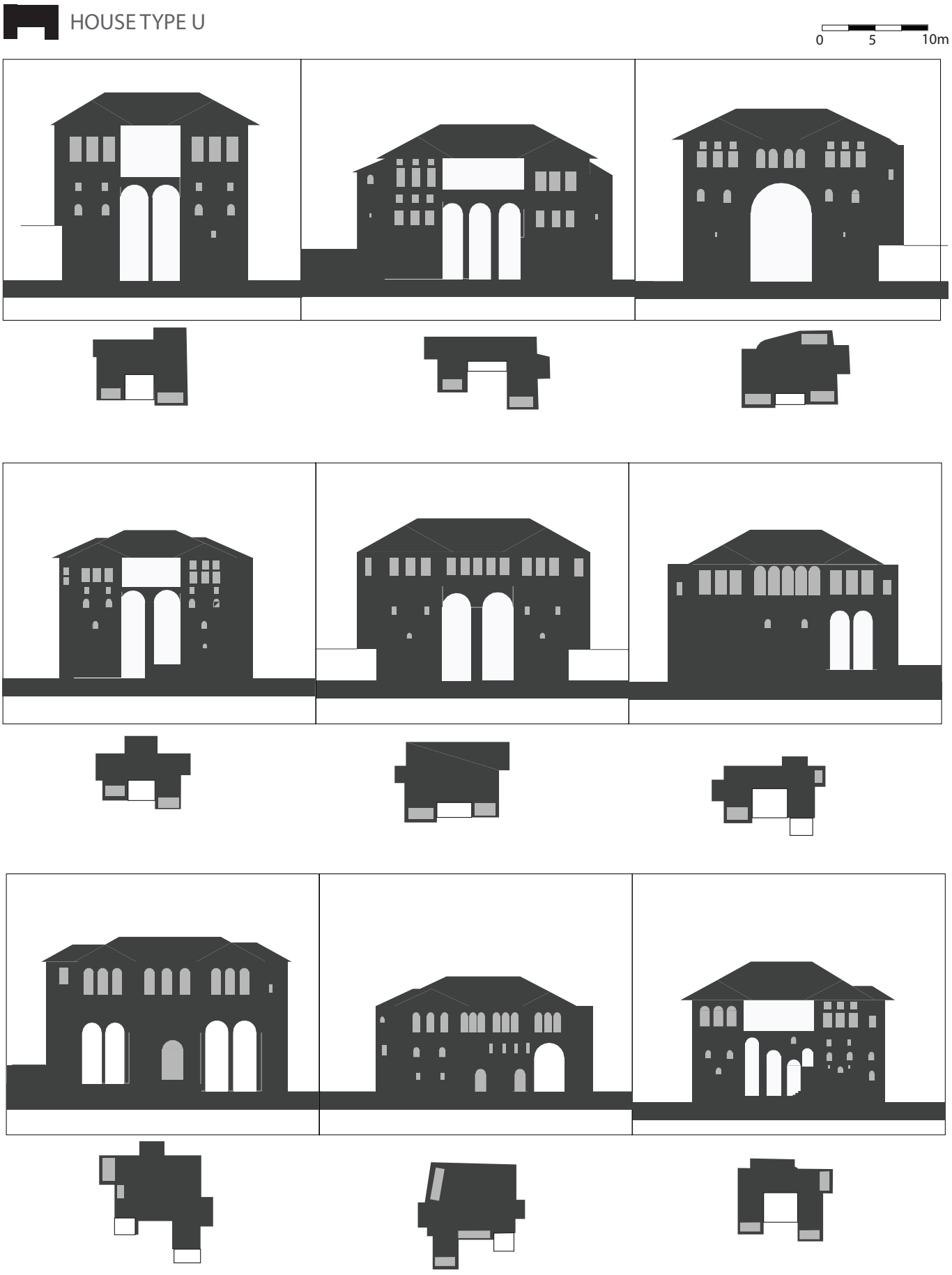


Fig.146 Voids in Gjirokastra building's facade. Visual interrelation or structural relation between the main voids in Gjirokastra house facade. (source: author's)

new houses typologies to adapt them to today's need of light and more communication between the inside and outside space.

3. U type building void.

In U type buildings, the void can be a central symmetrical element which highlights the central core of the building or emphasizes the side volumes. It is usually related to the use of the house and to the fact that the first type is mostly used in one family house with central entrance, while the other highlighting the role of the side volumes, put into evidence the possible division of the house in 2 family branches. The presence of both types can offer also various possibilities also for the adaptation of this element in multiple family dwellings. In addition, it expands the number of possibilities to be adapted to nowadays use, as it creates the possibility to open the ground floor and use it for living purposes. For the form, geometry, and dimension of these openings, we must referee to the parameter defined by the specific geometry and proportion constant (Chap.4 point 2.).

4. Voids of the yard entrance door.

Gjirokastra houses usually present large house yard doors. In fact, wealthy families were distinguished by the outside door dimensions and monumentality. Thus, they have been considered as highly visible elements of urban space. By an overview and analyses of a series of house yards, it's possible to identify two main typologies; rectangular entrances, which are smaller and arch form entrances which are the most monumental. In both cases, they do not only represent a void in the visual frame of urban space but also create and interconnection through form, proportions, and dimensions with the void of the house. Thus, at the urban scale, the image of the city presents order not only between voids in the house facade but is extended also to other similar elements in urban scale such as voids along the house yard walls.

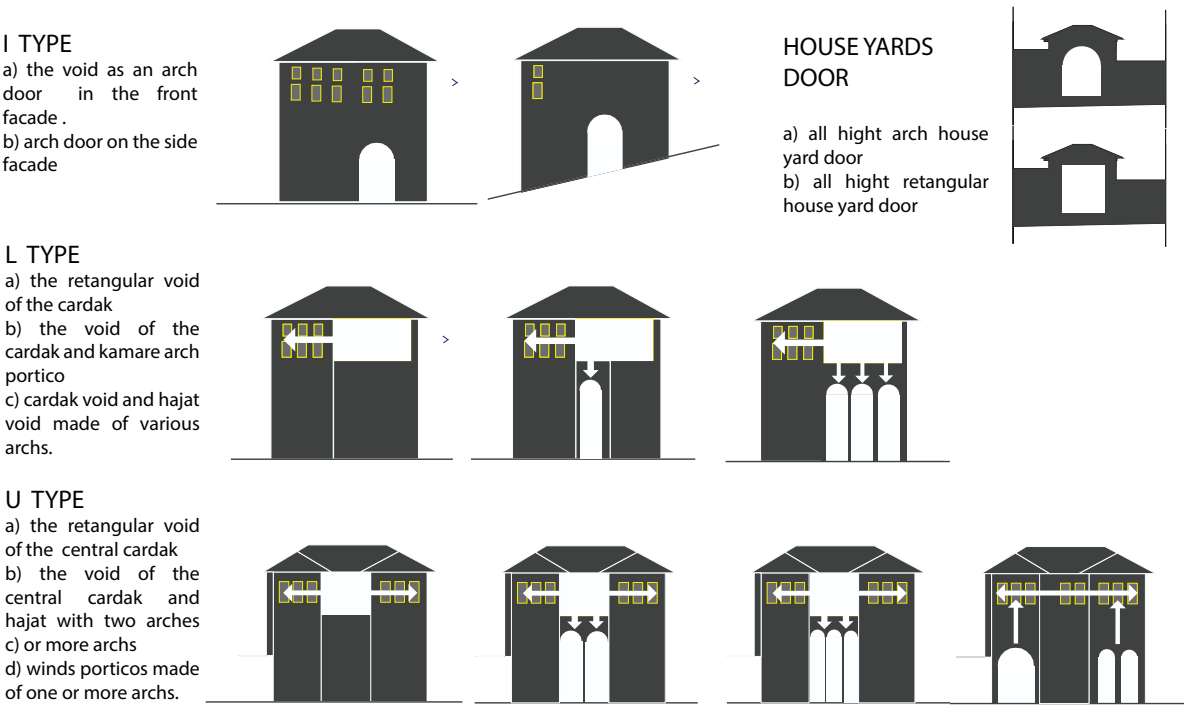


Fig. 147,Orientation guidelines on the use of "voids" in Gjirokastra houses according to the typology and in house yard doors. (source: author's)

In conclusion, in order to integrate the residual margins of the historic city with the historic center, its recommended to use voids as elements of urban landscape which visual interplay with the existing historic part and create visual coherence, continuity, order and stimulate the exploration of architectural and urban landscape complexity.

4.1.7 Color and texture

In the urban landscape of Gjirokastra by survaying visually various build patterns, its possible to distinguished and classify four main colors and textures: the roof, the masonry walls, plastered surfaces and wooden frames. Architectural surfaces in Gjirokastra are mostly made of stone and only partially are covered by white plaster and colorful frescoes (Botticeli,G 2006). The roof as well is made of local stone which is basically carbonic, black stone or silicat (Ferracuti, Ospitali, 2006). However, the stone used for the roof is quite different in particular referring to color and texture effect. The roof stone (from flish rock) (Riza, E., 2004) is silver and darker and tiles are made of thin separate rectangular plates put one over the other. The masonry is made primarily of ivory or white color limestone as its usually whitewashed. Plastered surfaces are usually whitish and in many cases painted with frescos. The use of wood in the house façade (in window frames, as structural element sustaining the roof, as decoration etc.) is usually posed in contrast with the architectural surface. Riza (2004), when discussing the materials and techniques of construction of Gjirokastra house highlights the presence of fir, poplar wood and in

Fig.148,Visual integration of roof color and texture in new design. Existing and possible proposed design of the rood in the residual area (or buffer zone) (source: author's)

a small amount other types local woods.

By the analyses of different houses, it possible to reach understand rules of colors and texture use and to reach some conclusions regarding image conservation in new design in the residual area (fig. 152, 153) Herein, there are four main color and texture elements:

1. Silver surfaces.

In existing traditional buildings in the historic center, roof surfaces are perceived as gray or silver due to the use of dark limestone and their texture is given by the geometry of stone plates. Thus, it's important to use similar tiles tonalities in new buildings or to upgrade existing ones (those which have not historical values). In addition, the recommended tiles to use are plain tiles with similar dimensions of the traditional ones. In view of new environmentally sustainable interventions, and clean energy production, photovoltaic roof shingles, can be installed having minimal impact on the image of the roof as there are various types which can be camouflaged with the dark grey material and texture of the roof. (fig. 148,151)

This black or silver stone is used also in the road pavement creating further contrast

Fig. 149 Buildings massonery material and texture samples made of limestone (source: author's)

Fig. 150, Visual integration of masonry surfaces. Existing massonery facades and possible proposed design facade colors or materials for in the residual area (or buffer zone) (source: author's)

with the building surface. In some cases its alternated to while stone. This color and alternated texture needs to be dominant also in residual areas.

2. Ivonry and limestone color tonalities in external architectural surfaces

Masonry walls have a whitish color and a particular texture given by the stone view face. This feature is mainly used in house basement and ground floor and is extended also in the back facade. There are also cases in which almost the whole architectural surface is made of face view limestone, which creates contrast with the plastered part and the roof. From builing to building there can be slight changes of color which depend on the type of limestone. In fact, according to specific geological studies (Merxhani, Mamani, 2012), there can be found in three different colors: - Gushepellumbi (peagon neck) (the color is released by the oxyde of copper that can be found in this layer) ;

- White matte (the color is released by magnesium oxide) ;
- Red (the color is released by the oxyde of iron, Fe2O3).

Nevertheless, the walls are usually whitewashed and are perceived with very light tonalities of ivory. (fig. 149, 150)

Referring to the three main building typologies, there is a tendency in evolved types to cover larger buildings surfaces with white plaster compared to simple types. In fact, the simples' types are usually totally made of stone and only in some cases the upper level is partially or totally plastered. L and U typology are more articulated and

dynamic in terms of color and material use. In these typologies plaster and masonry are fused within the same building façade intersecting various levels and establishing new balances between the basement made of stone and the while plastered upper part. This line of contact between the two results as a line in movement.

Thus, it's important for new constructions to maintain similar tonalities of external color. In case of limestone use, the texture must be extended in horizontal lines or must have small granules. Otherwise, the plaster of the basement should be of ivory tonality (based on the palette of colors of the masonry wall) in order to distinguish with the white plaster of the upper part. It must also be present in the basement and back facade and refere to the rules defined by the anlyses.

Fig. 151 Plastered surfaces and structural, complementary or ornamental facade elements of Gjirokastra houses posed in color contrast (source: photos by the author)

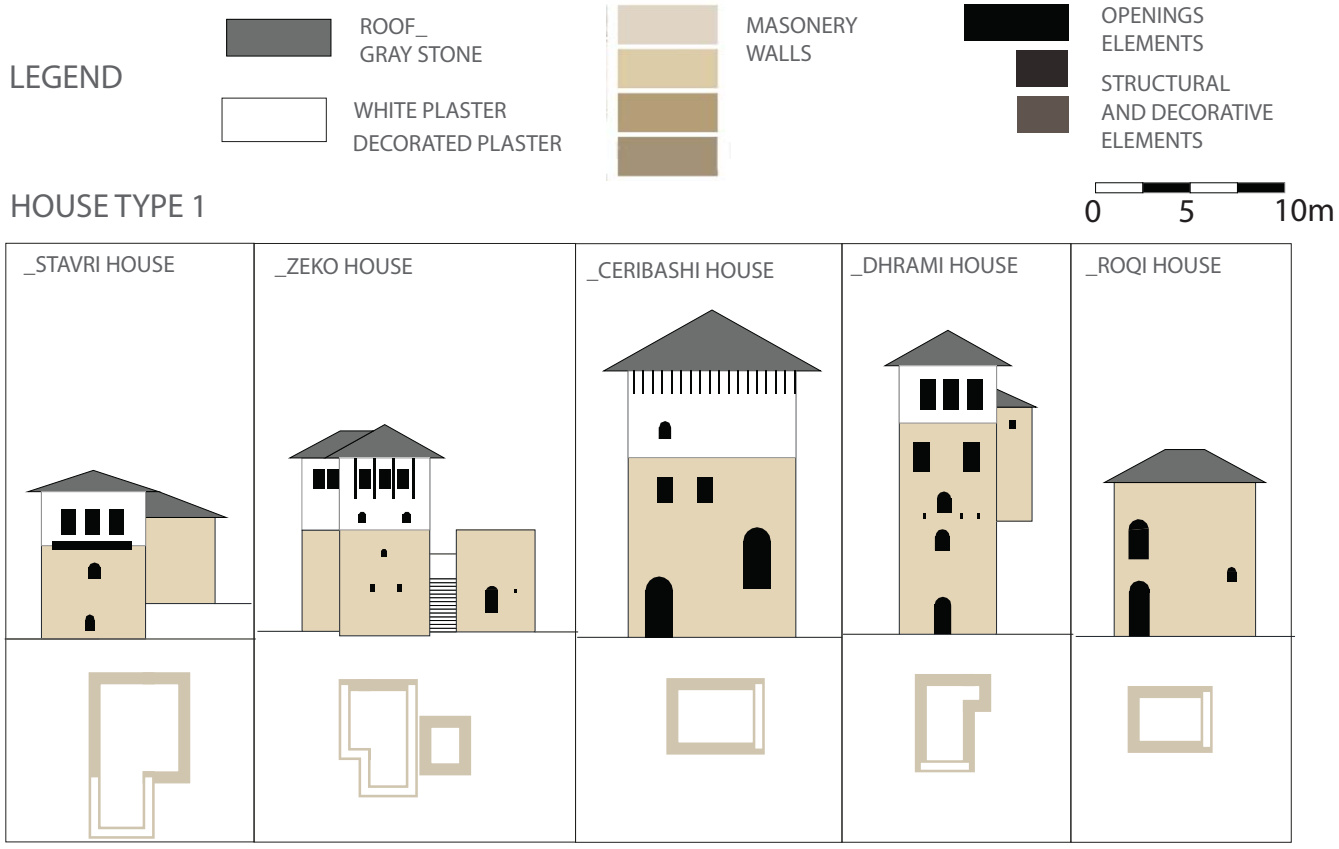
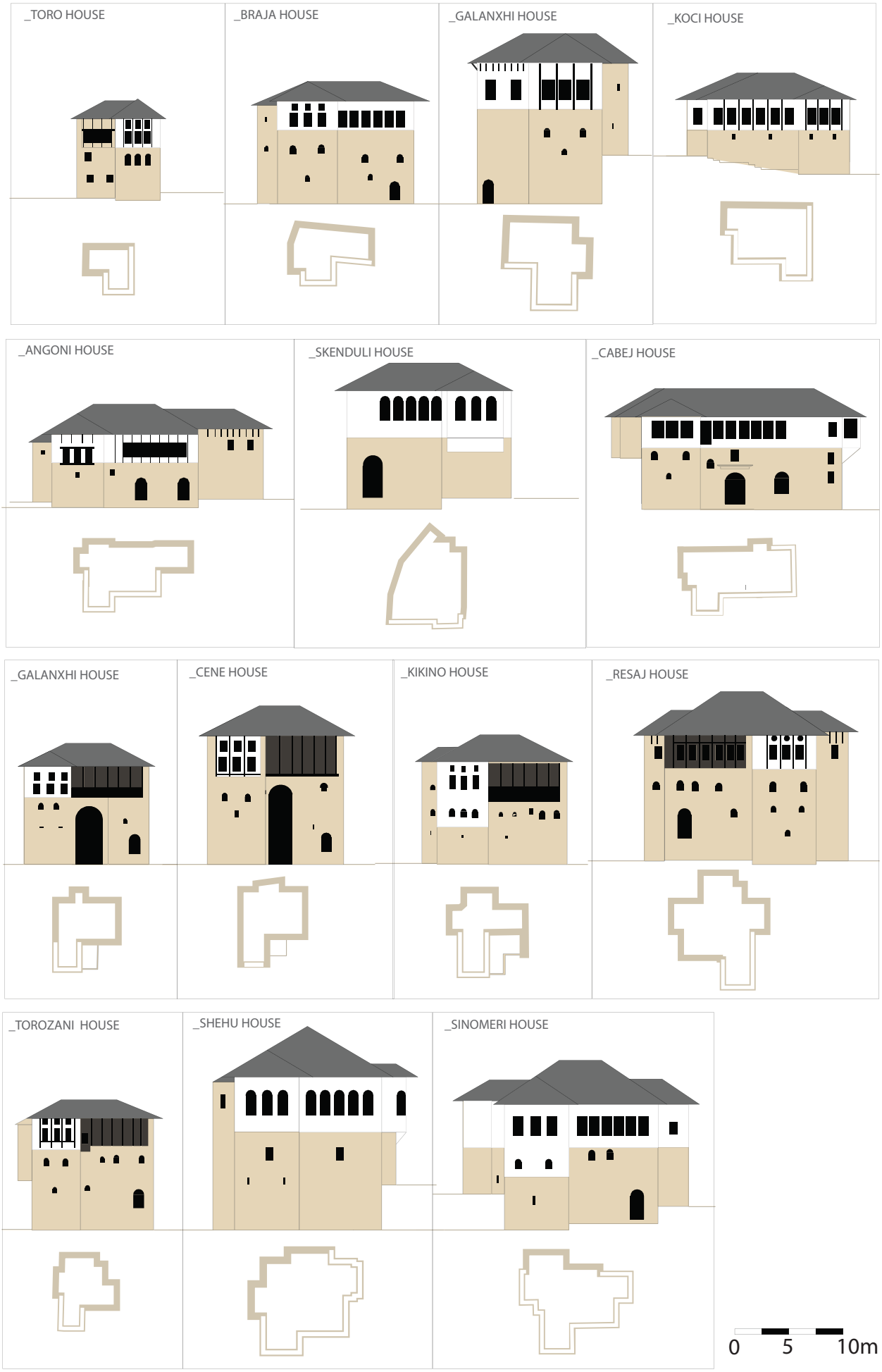


Fig.152. Analyses of color and texture perception in Gjirokastra house accoring to the typologies. Main facade and schematic (source: author's)


_TORO HOUSE
_BRAJA HOUSE
_GALANXHI HOUSE
_KOCI HOUSE
_ANGONI HOUSE
_SKENDULI HOUSE
_CABEJ HOUSE
_GALANXHI HOUSE
_CENE HOUSE
_KIKINO HOUSE
_RESAJ HOUSE
_TOROZANI HOUSE
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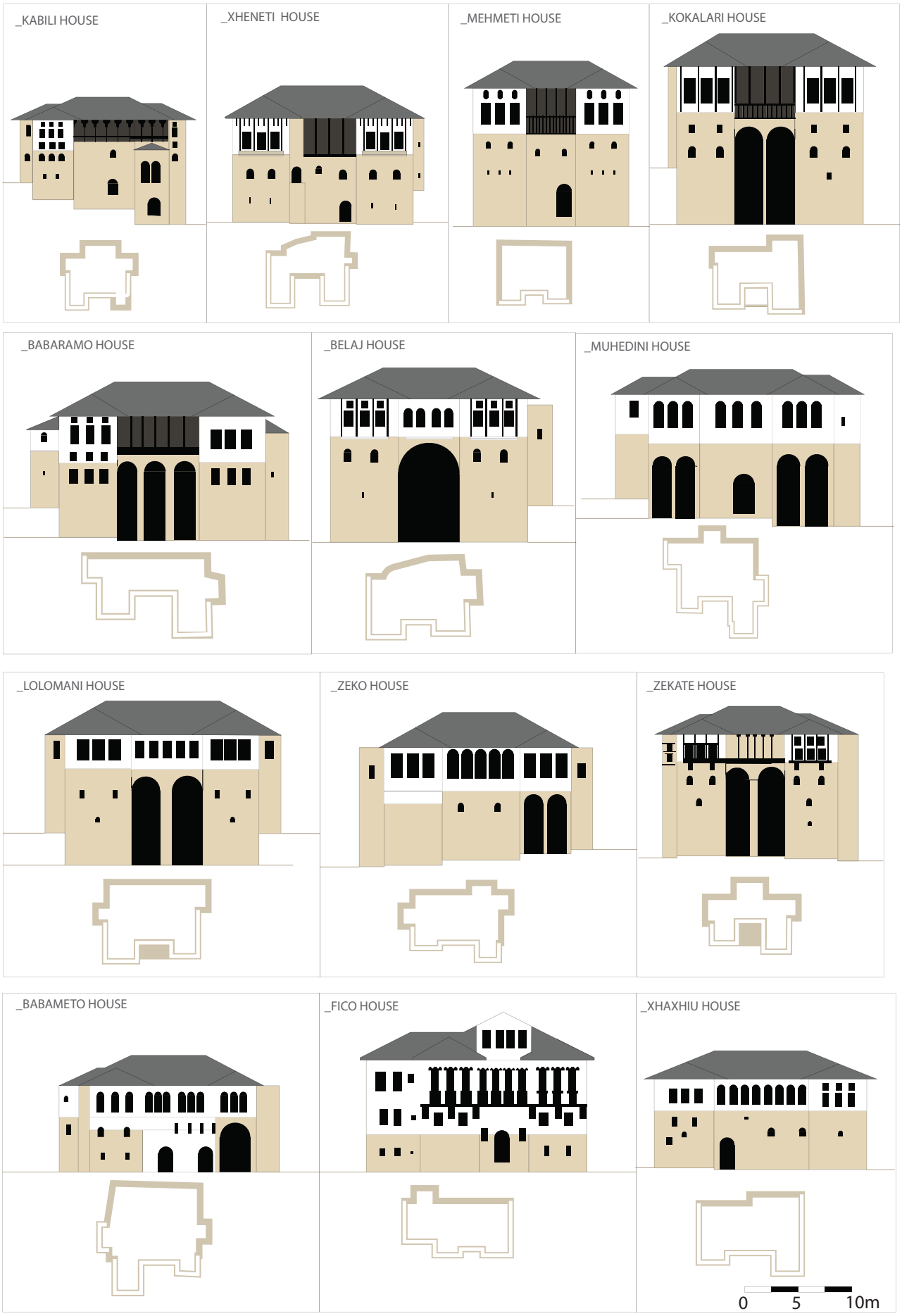


Fig. 152 Analyses of color and texture perception in Gjirokastra house according to the house typologies (source: author's)

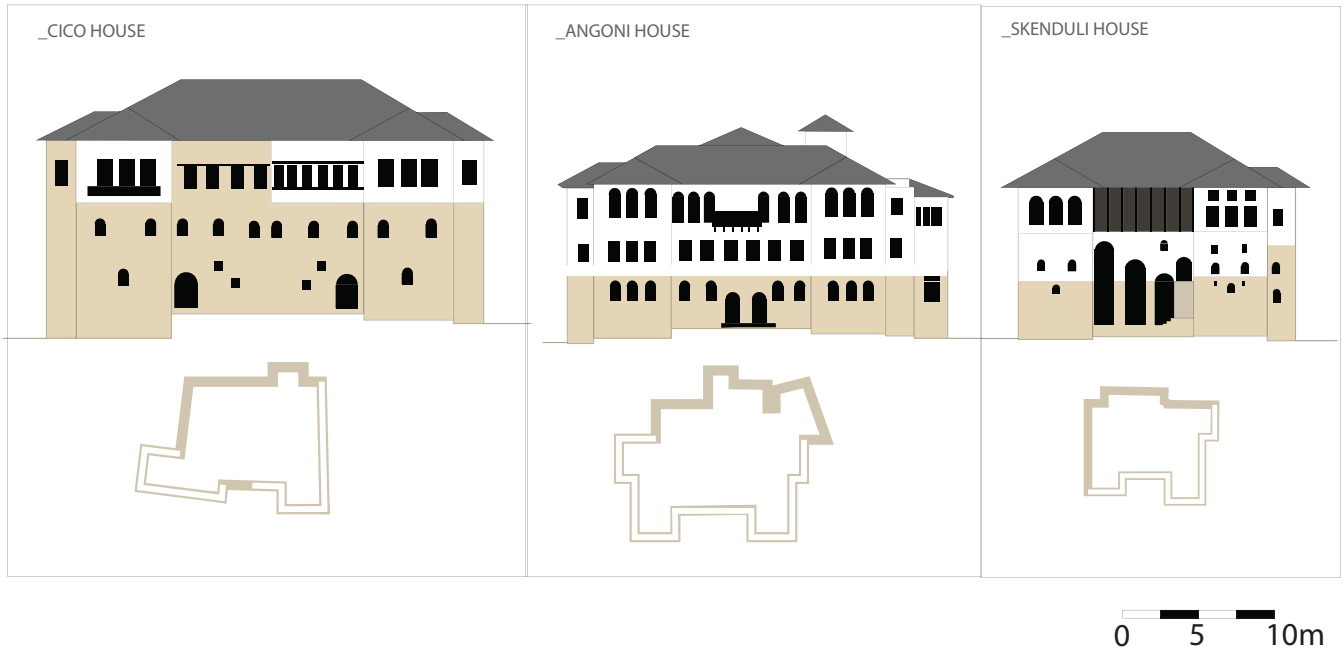


Fig. 152 Analyses of color and texture perception in Gjirokastra house according to the house typologies (source: author's)

3. White plastered surfaces.

White plaster surfaces are usually used in the upper part, in the main front and in the sided of the building. The simples, perpendicular typology present white plaster parts in the upper level, excluding the back facade. The additional side volumes not always present a while strip in the upper part. Thus its considered an optional choice. The second and the third typology present as well large plastered surfaces of one or two upper levels, and goes around the sides of the building, following the front main volumes.
The back of the building, which is not exposed to the view is left mainly as a visible stonework. This contrast is important also in the perception of the road view as the two sides of the road are treated differently: the front façade present a while strip while the back one is a continuous visual stone surface.
Thus in case of new houses or upgrade intervention in the residual are, white plastered surfaces can be used in the upper part of the builing, in its front facade. This can be extended also on the sides or can reach lower levels, leaving at least a contrast with the ground floor. In addition, if it bends the volumes, its prefered to be used at different levels in order to be grouped visually with the basement part as dynamic patterns. Plaster serves also to highlight certain volumes proportions that are reconected visually with other builings facede. Therefore, its important to use it not only as a color, but also as an element splits the volume of the house into smaller proportionate volumes and contributes in creating "levels of scale" (See. Chap. 4.3)

4. The color of structural, complementary or ornamental detail elements.
In the façade of Gjirokastra houses, there are also some complementary elements of small dimensions. They can be classified in:
1. Opening frames, shutters and window nets and
2. Additional structural elements such as struts that sustain the roof.
Windows and doors frames are made of wood. The wood type and the wood color for architectural elements, (such as doors, windows,) was selected depending on the position and exposure to atmospheric agents or functional activity. (Merxhani,

Mamani, 2012). The windows are generally made of pine, but the shutters, which are closed in bad weather to protect the window, are made of chestnut or beech. The outside doors are generally made of beech, oak or chestnut. The windows net is made of steel. Nevertheless, this is not the main issue. All detailed elements can have the above-mentioned wood tonalities in order to be set as visual background for the architectural surface (fig. 150,151).
In conclusion, in order to achieve visual integrity of the historic city of Gjirokastra, it's important to use similar color and texture patterns in new interventions in the residual area around the historic center, because color reflects the character of the city as a whole. Therefore, interventions in the margins of the historic city should be in line with the 4 main color and texture cathegories identified in the historic center.

4.9 Desing constants of K. Lynch's primarly visible urban elements.

The legibility and imageability that constitute the primary parameter of evaluation of the image of Gjirokastra according to K.Lynch are expressed through five visible elements: paths, edges, districts, nodes, and landmarks. The first two has been largely discussed in view of "positive space" (See Chap 4.7). Districts in the case of Gjirokastra are easily distingushed as separate neighbourhoods following determinate topographical and landscape conditions to which new interventions should respond. New interventions in fact in both of the cases should be oriented according to the isohypses, with the main facade toward the view and only buildings which are set close to the main road can change the orinetation , to better respond to the character of the road and eventually having direct access from the road. (See Chap 4,1).
Nodes and landmarks need to be further adressed in order to consider them in the design of the margines of the historic center as important features that enable a continuous legibility and imageablity of the historic city as a whole.

Nodes

The chaotic urban structure of Gjirokastra finds its reference points in the nodes. Nodes are remarkable places due to significant visual elements, to the expansion of space compared to the narrow roads and to the intimate dimension of neighborhood common space. In Gjirokastra we can identify various types of nodes (fig. 154):
1. Unique node. Unique node is a particular space that constitutes a central area in the city and is mostly related to public activities. In the case Gjirokastra, this node is part of the central bazaar. It has a uniform treatment which derives from the repeating rhythm of the single shops easily legible and contrasting with the pronounced volume of the buildings that dominate various road perspectives and constitute memorable landmarks. (fig. 155a)
2. Primarily nodes. Primarily nodes are important crossing spaces in the main paths
3. Intimate nodes. Intimate nodes are cross paths in the inside parts of urban tissue that usually form intimate common spaces which give access to multiple buildings.
Both of them are characterized by some features that make them legible and remarkable (fig. 155).

1. Contrasting node. This node is characterized by the contrast between full and void (buildings and the surrounding open space or green space), geometry and organic treatment, porous and linear space. It usually characterizes the space around

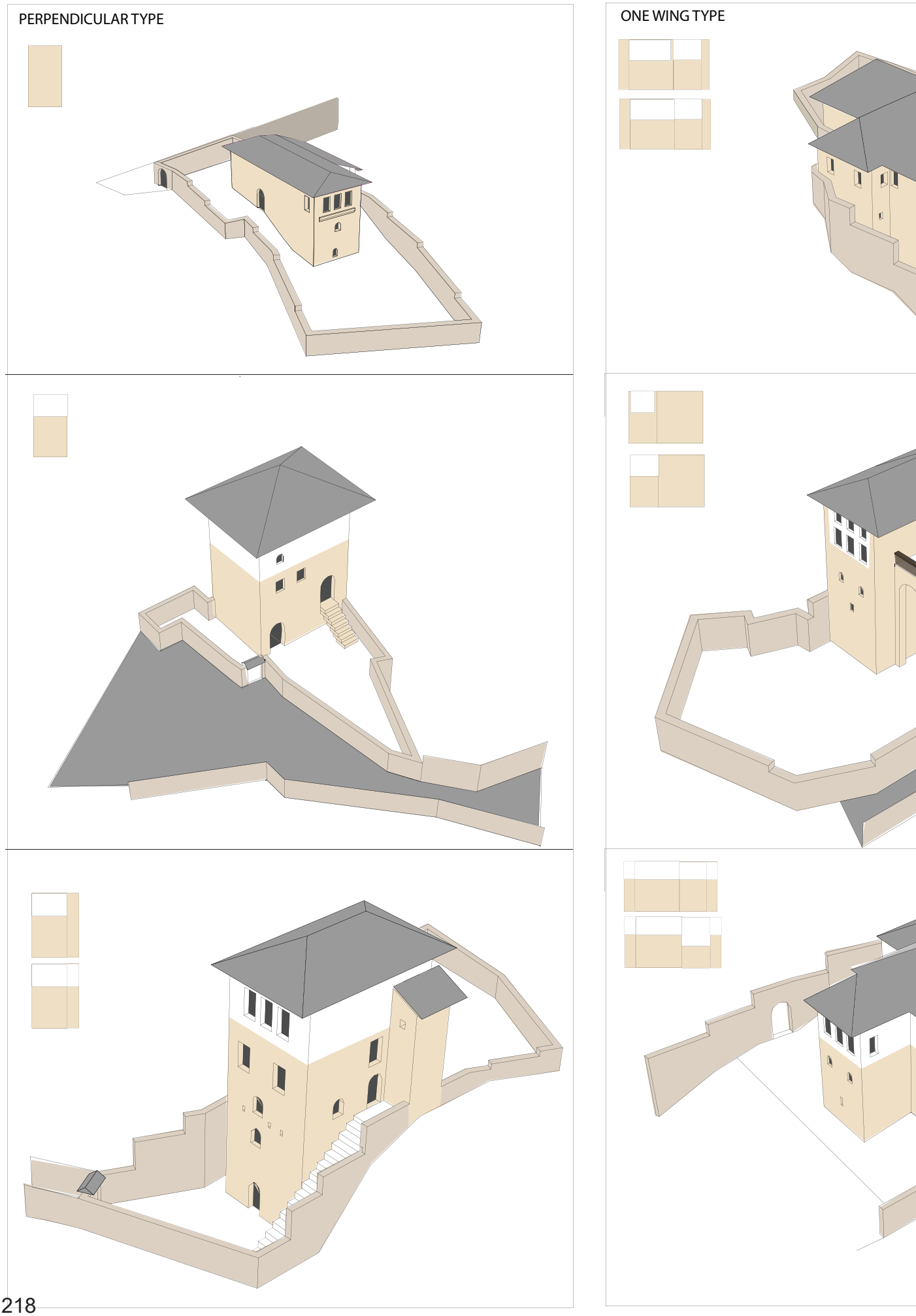
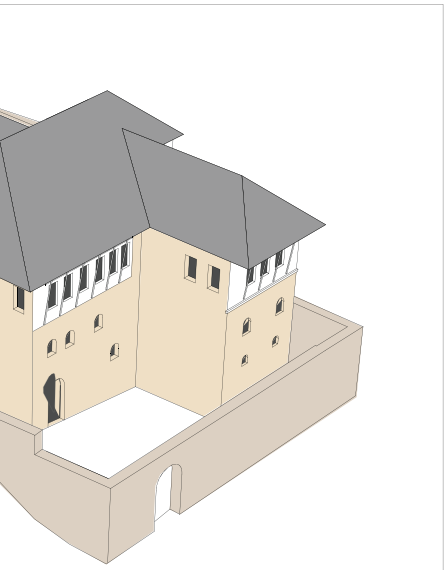
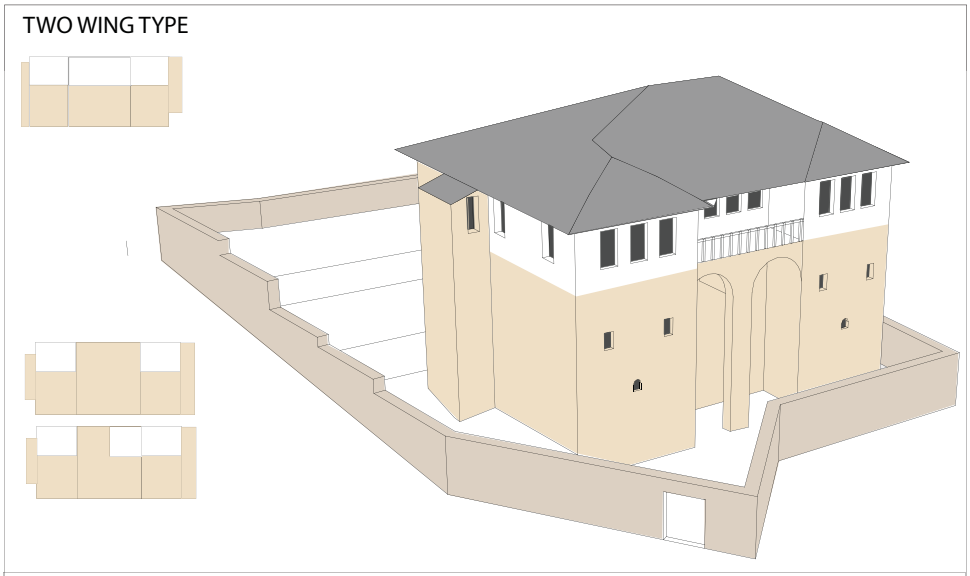
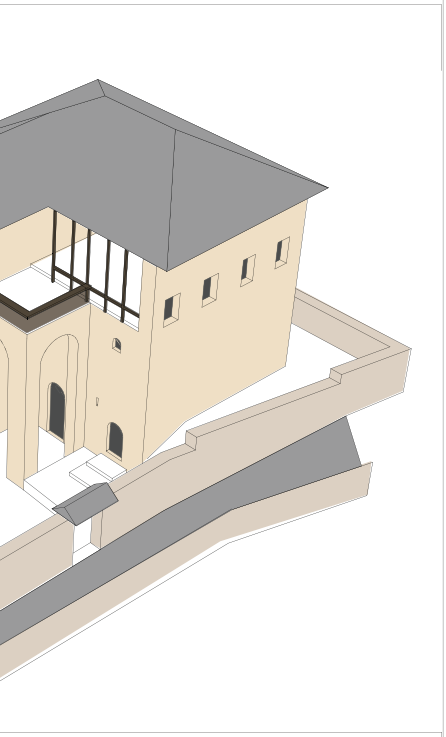


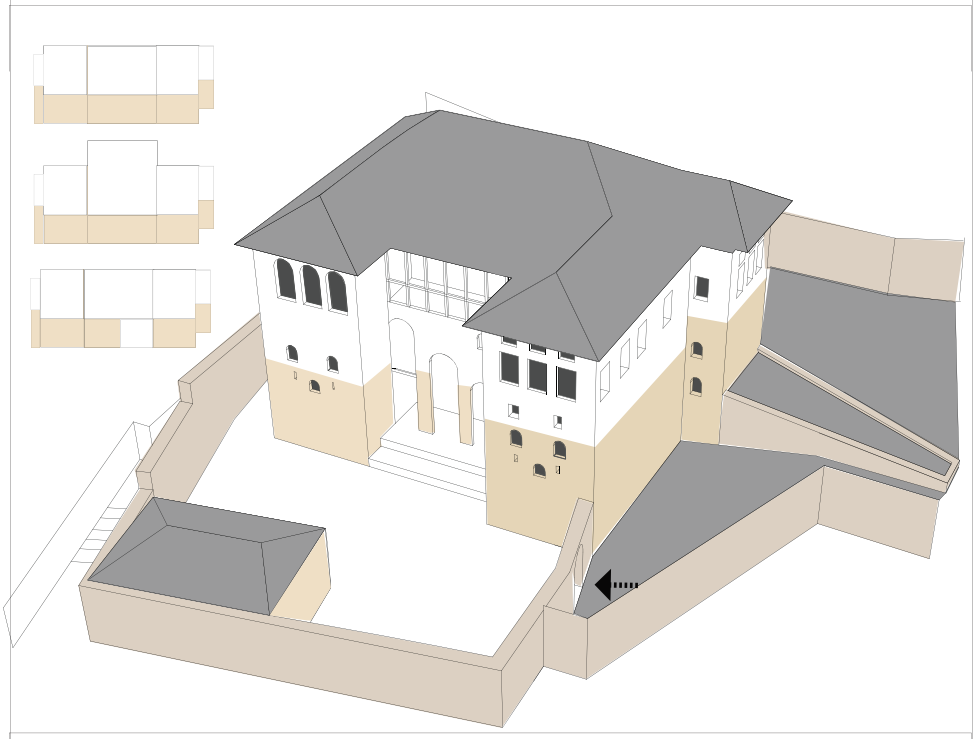
Fig. 123, Analyses of color and texture in Gjirokastra house according to buildings typology. (source: by the author)

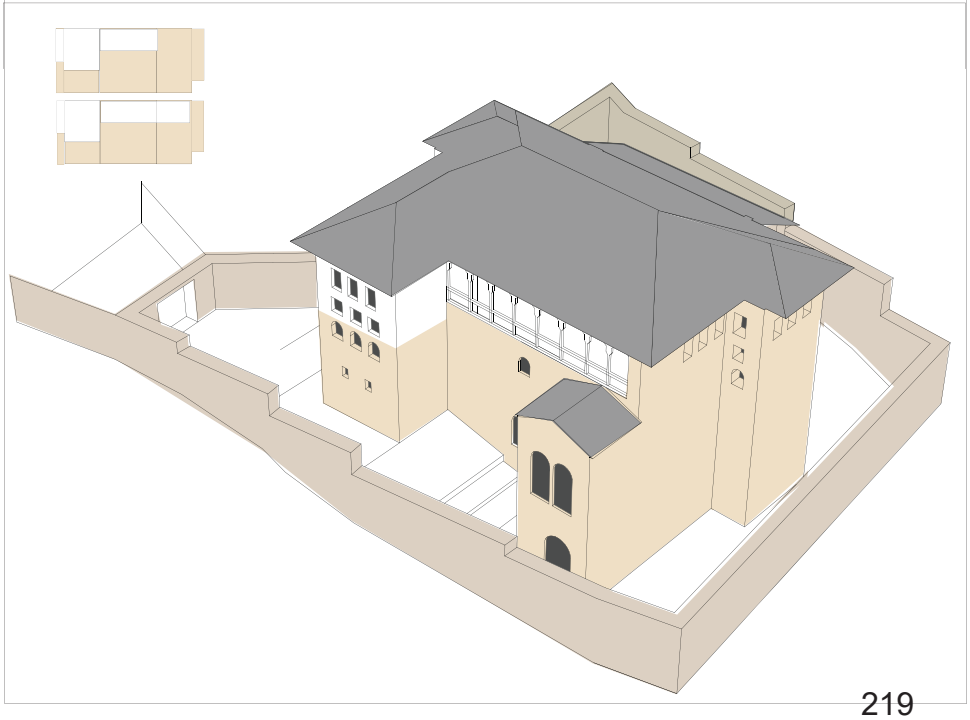


TWO WING TYPE









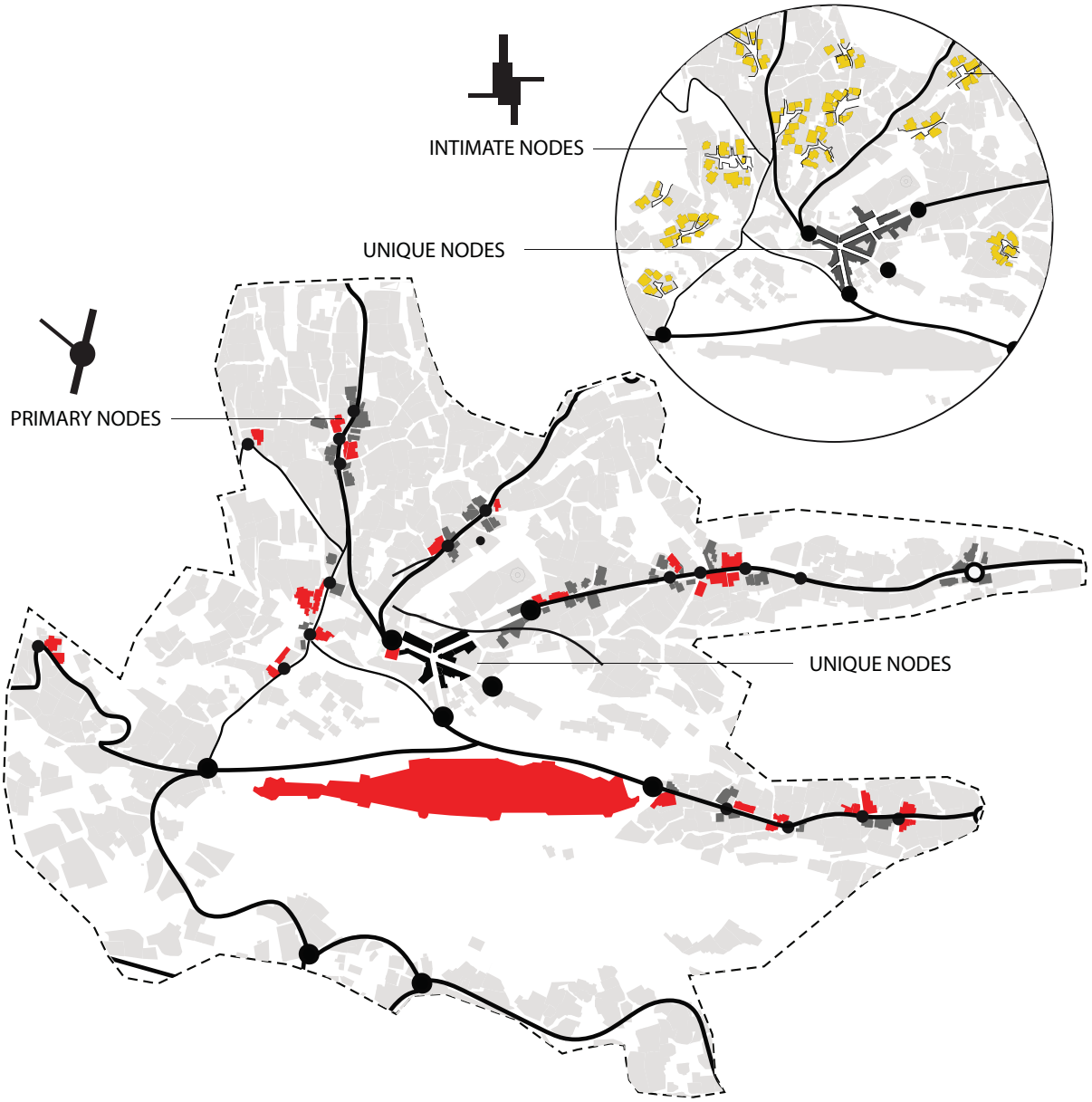


Fig. 154 Reading Gjirokastra historic center through three types of nodes: unique, primarly and intimate nodes (source: author's)

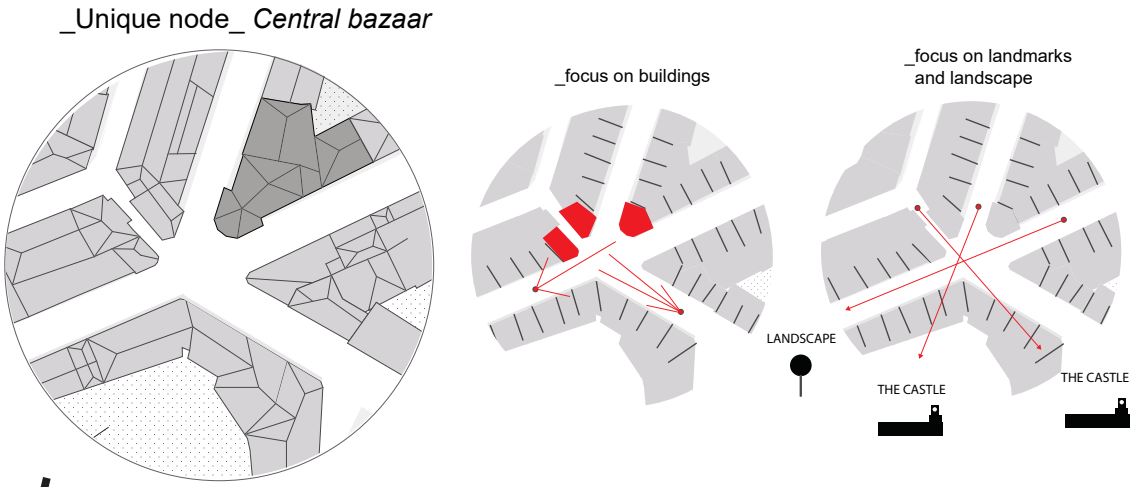
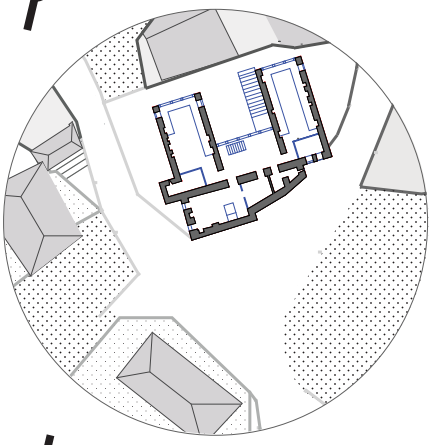
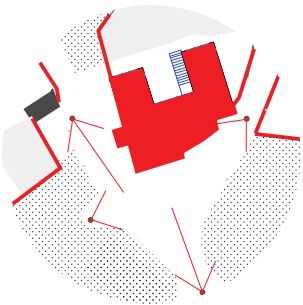


Fig. 155 Analyses and def nition of Gjirokastra nodes characteristics (source: author's)

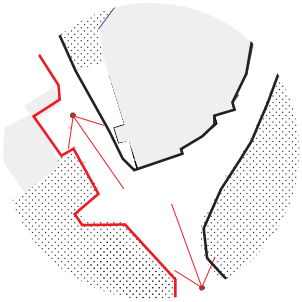
_ *Contrasting _ focus node*



_ Building / greenery
_ closed / opened

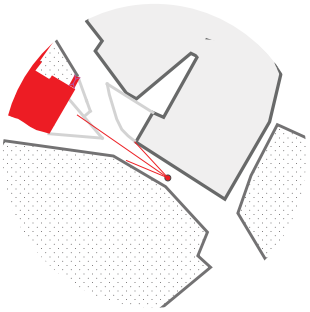


_ Regular / wavy road space

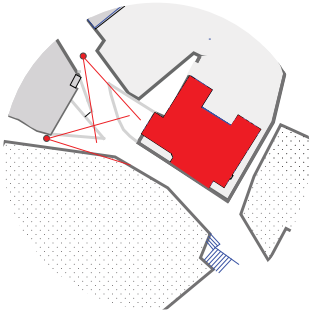


_ *Focus _ contrasting node*

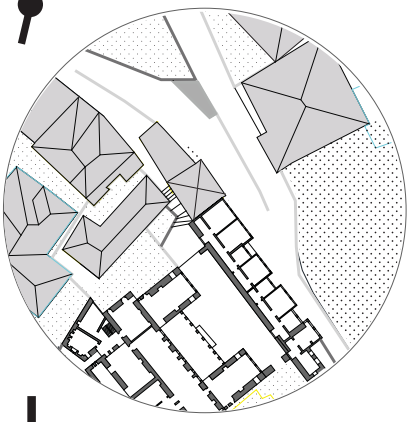
_ focus on important buildings facade
_ narrow perspective



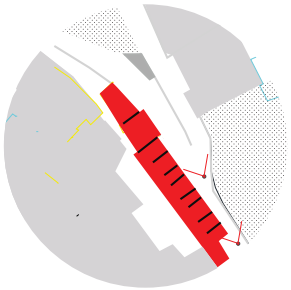
_ focus on important buildings facade
_ contrast with greenery and limit walls



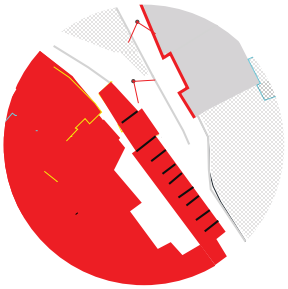
_Dynamic focus/ contrasting node



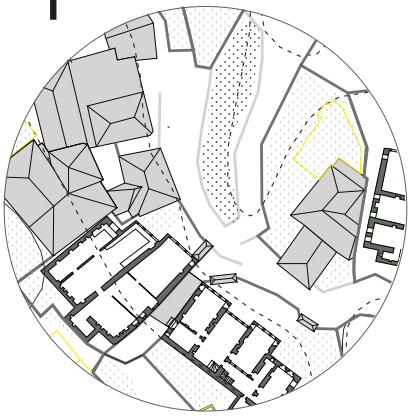
_dynamic perception of builing facade



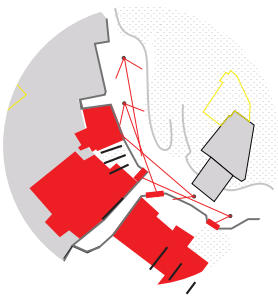
_focus on builing facade by the change of perspectives
_dynamic greenery perception



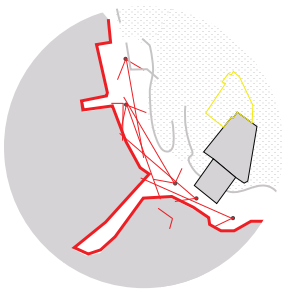
_Dynamic focus/ contrasting node



_ Building curtain gradual perception / greenery (panoramic view)



_articulation of walls and planes / organic continuous



the nodes.
2. Focusing node. The focus node is usually related to important building facades or entrance door which due to architectural details and various levels of scale result as highly attractive compared to the simplicity of the back facade of other surrounding houses.
3. Dynamic node or a node that urges movement. The vision in perspective of an important building facade which constitutes a strong center that urges movements towards it. Similarly, the view of an open, dynamic space from a narrow road space urges the desire to move towards it.
4.Nodes that create gradual visual movement. The presence of a large space in front of a series of buildings almost in a line creates a gradual memorable view of the node. Thus, nodes as orientation point and spots that generate imaginability should reflect similar ideas related to the perception and memorization of space. (fig. 155).
The features that characterizes nodes in the historic center are important to be considered also when designing in the margins. In fact, new objects inserted in the nodes should take into consideration the various perspectives envisioned from different directions of paths. In order to be legible and to urge imageability they should present at least one of the following features: focus elements, contrasting elements, dynamic objects perception and rhythmic or gradual legibility.

Landmarks

Gjirokastra can be read through five main landmarks, which are concentrated in the northern part of the castle: the castle itself, the tekke complex on the northen hill, the Fantazia hill and the central panoramic balcony, the mosque and the Angoni house complex. Both of them are related to particular panoramic points and are defined in the logic of visual perception. The castle lays on the main hill, Fantazia hill and the obelisk are the most dominant parts of Palorto neighborhood, the mosque is located on the highest part of the bazaar and the Angoni house is located in the main perspective of the bazaar, at he feet of Teqe neighborhood. They are mainly realted to the topography and represent panoramic points opened to the view (fig. 156).
The southern and eastern part of the historic city, due to its continuous decay and incompatible new interventions, does not present significant build landmarks, although it has many potential panoramic points. Therefore, this highly visible panoramic points given by the topography can be used as an occasion to propose landmarks. The new objects should be oriented accordingly to show their most articulated façade to the outside view, while the public space in this area should have direct access to the open view, in order to reconnect to the other landmarks. These new landmarks in the marginal area are meant to become attracting points extending the visual interest to explore not only the historic center but also the residual area, reconnecting the historic city as a whole.

In conclusion, the recommandations for the design and transformation of the decaying margins of the historic city of Gjirokastra realted to typical paths, edges, districts, nodes, and landmarks discovered in the historic center can facititate in builing up not only the relationship between humans and the urban environment by enhancing the legibility af the marginal area, but also enabling the creatinon of a mental image (Lynch 1976) of the historic city in its totality.

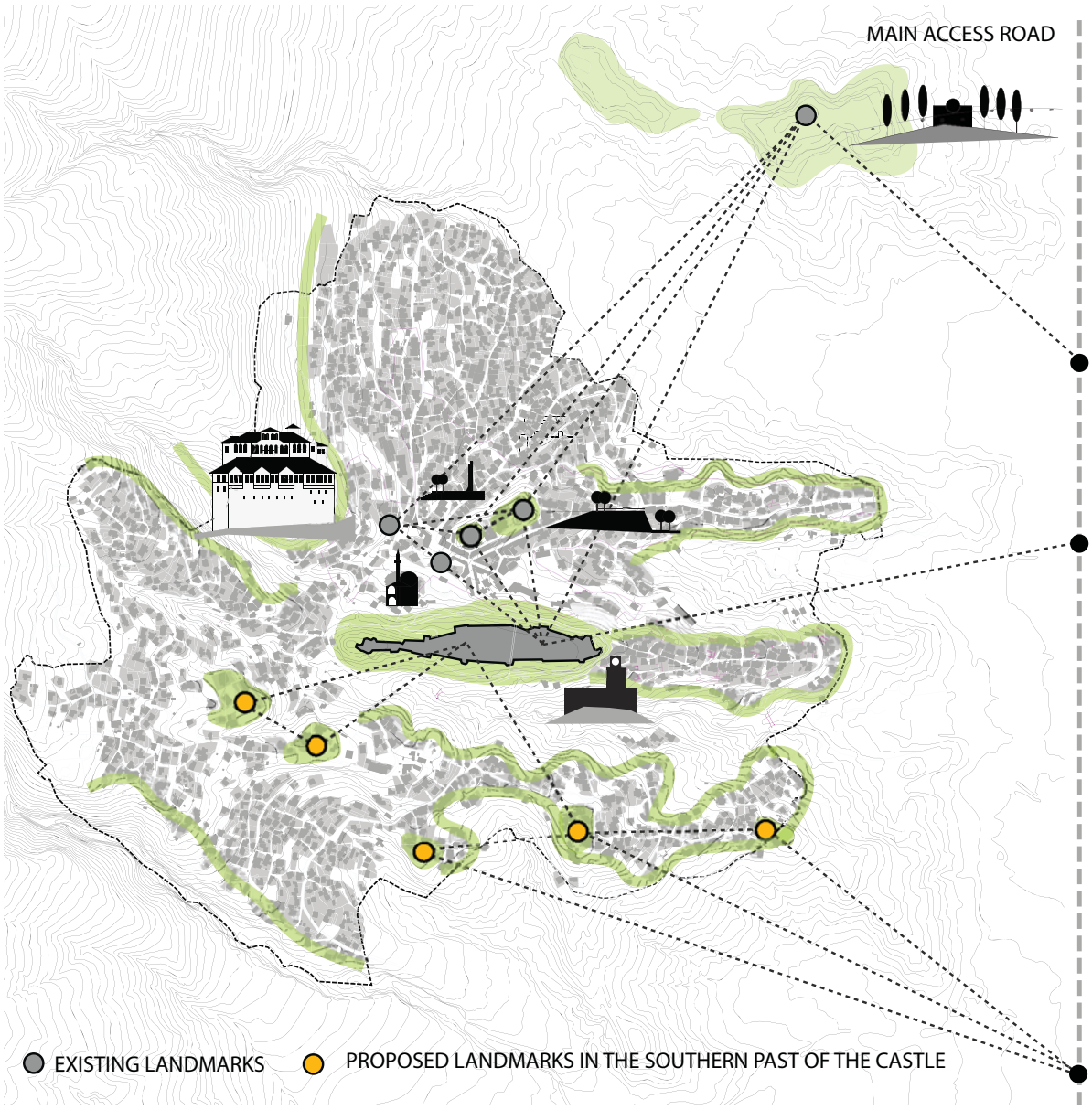


Fig. 156 Analyses of existing landmarks and proposed panoramic areas in the margins with potential to become build landmarks (source: author's)

CHAPTER 5
CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion and recommendations

Nowadays, historic cities in Albanian context, are losing their visual integrity. Numerous new or upgrade interventions have caused a gradual decay of the margins of the historic centers and this is reflected also in the visual integrity of the historic city as a whole. Incompatible interventions reflect a chaotic image made up of separate fragments which do not fit with each other visually and are not set in harmony with the historic center. Therefore, the historic urban landscape needs to be protected by defining a series of guidelines and recommendations that guarantee its safeguard as a whole by proposing objective criteria be implemented in the decayed margins. These parameters are meant to extend the quality of the historic center in the fragile margins in order to integrate them with the historic city. These approach considers as basal component of the historic city sustainable development, the role of visual sustainability.
The legal framework in our country, when considering new interventions in the protected residual areas around the historical centers although aims to conserve the historical city image by emphasizing the importance of interventions “in harmony” with the visual and morphological characteristics of the historical center, do not provide objective parameters to assess this harmony. In fact, the problem of new interventions and transformations of the historic city, in particular, referring to its residual margins, is that there are insufficient tools to deal with the problem of visual integrity and coherence with the historical context.
Accordingly, as a final result, this research tries to determine a series of constants that characterize the historical city image which will constitute the parameters of evaluation of its visual sustainability and will be used as tools for new interventions in the decayed margins.
Starting from the concrete case study Gjirokastra and based on a theoretical background on visual perception urban design theories (mainly Ch. Alexander, C.Sitte, G. Cullen and K. Lynch), this research build a methodology of analyses of the visual quality of the historic city through a series of objective parameter which are meant to be constant elements in the historic city and which constitute its image as a whole.
Taking as a case study the historic center of Gjirokastra, the final outcome of the thesis is the representation of the synthesis of Gjirokastra image through a series of constants which ca be used as tools in the design of the residual area. These constants are Massing, Geometry and proportions, Levels of scale, Local symmetry, Gradients, Positive space, Void, Color and texture, K. Lynch’s primarily visible urban elements.
These dominant proprieties characterizing the historical urban landscape define the landscape character and can be considered as a synthesis which can be applied to new interventions respectful and consistent with the morphology and spatial organization of the historical city.
Some of this parameters, and others defined in the general theoretical background can be used to access other historic cities of villages in Albania and in a broader context.
Hence, a series of recommendations and guidelines can be given in correspondence to each constant. Some of them are directly related to buildings design such as Massing, Geometry and proportions, Levels of scale, Local symmetry, Gradients,

Void, Color, and texture, others are mostly considered as structural parameter such as the characteristics of paths, edges, nodes, landmarks and districts, and others still are urban design recommendations on the spatial character and the arrangement of buildings and yards in relation to the static of dynamic perception of space.

Recommandation on builings

1. Recommendations on the build mass

- *Consolidation:* In order to consolidate the margins of the historic city reconnecting the build mass as a whole, new buildings in the residual area should be included inside the existing build perimeter, protecting the surrounding natural landscape features. Therefore, voids inside the residual area are encouraged to be built in order to create a compact build mass, similar to the historic center. They are recommended to respect the actual limits of the of historical city development. This research on the safeguard of the historic urban landscape envision an idea of a compact city, avoiding the consuming of free areas around, which in some cases serve to put into evidence certain landmarks.

- *Scaling between buildings:* Buildings are recommended to be gradually scales in relation to each other in the direction of the slope and they should have direct view at least in the upper part of the main façade. This gradial scaling reflects the terrain slope and put into evidence through graduation the silhouette of the hill. In addition, graduation allows for the buildings to catch the light and open the upper part of the facade to the view.

- *Appropriate densities:* Each neighborhood has its own density given by the particular conditions of the terrain. Therefore, steep terrains have a high density of building, while neighborhood such as Palorto has a lower occupation of land in favor of huge house yards. The same logic must be applied to the residual areas.

- *Orientation based on the topography and natural landscape:* Orientation of the building must follow the isohypse lines and the main façade must be oriented towards the panorama. Only buildings that constitute the main road can slightly change their orientation.

- *Build mass/ buildings silhouette*: Buildings should preserve in plan and high the scale of existing houses, without exiting 4 floorplans and a maximum high of 15m including the roof. In case of use of simple house typology, the building mass needs to have a vertical extension, which means, the dominance of vertical dimension. Therefore, buildings should present a main volume with a vertical accent (see. Chap.4.1). The slope of the roof should be preserved within the limits of 22-34 degree. This is valid also for all types of roofs. Roof form should respond to typological models defined in this study. Additional volumes added should be smaller compared to the main one and positioned in the back.

In one wing typology, the building should be defined by the combination at least of two volumes: one with a vertical accent in terms of proportions and the other one shifted backward. Still, variations under the same type can be given by small volumes attached to the back of the main ones, to animate the view still preserving the same mass, or by lower volumes in front of the shifted part.
In two wings typology, the three main volumes should have a vertical accent by their own. The central one can be shifted backward. Even in this case, smaller volumes can be added on the side and on the back, without disturbing in terms of dimension

the three main volumes.

2. Recommendations on buildings geometry and proportions

Geometry and proportions in plan
-In the simplest house type, the geometry of the plan should be regulated by golden ratio proportion. The shortest side must be 400-650 cm giving space for a single room. In case other volumes are attached they must be smaller in size in order for the main volume to dominate.
-In one wind type of house research recoments three main type of plans: plans based on rectangular shape, plans based on the golden ration proportion and composite plan made of one main part which is based on either rectangular or golden ration proportion and smaller attached volumes bases also on this geometric figures (square and golden ratio).
- Likewise, the geometry and proportion of the two wings typology plan is defined by the inscription of volumes within a square, a golden ratio rectangle, or proportions of (1:1, 2:3, 3:4), middling (2:4. 4:9, 9:16) and long ratios (1:3, 3:8, 1:4) and the free addition of significant smaller volumes.

Geometry and proportion of the main building façade
In the perpendicular type the main building façade must have a vertical extension, starting from the use of square and triangular roof, to the whole façade inscribed in a square, to multiple squares overlapped, as well as golden section or Albertian proportions. The width of the façade can reach from 400-650cm.
In the L type, the façades should be based on square or golden ratio proportion as basic forms, and its parts must be inscribed in this proportions. Similarly, U type house façade and its parts must respond to square, or golden section proportions combined between them.

Roof form, geometry, and proportions
Roofs shape must be based on the following basic typologies: hip roof, mono-pitched and orienting the gable towards the main façade. The slope of the roof should vary from 22-34 degree.

Façade openings geometry and proportion
Openings in the upper floor
- Openings in the upper façade must have a vertical accent with the proportion between the high and the width that goes from 1:0.3-1:0.7. Openings dimensions go from 50-120cm in high and 30-60 of width and in case of arch windows from 75-110cm in high including the arch and 30-60 of width.
- The composed opening must be posed to each other in the same vertical axes. The proportions of this opening considering them both are 1:0.2-1:0.4 between the hight and the width, with a height of 150-315 cm and a width of 50-90 cm. This kind of windows can be used in buildings with big dimensions (3-4 floor high).

- *Cardak* or open balcony can be read through a modular system which extends verticality, with a proportion that goes from 1:0.2-1:0.45. Their high can reach up to the high of the upper floor, while the distance between them must be between 40-80cm. In case they are closed, the vertical extension is highlighted by grouping windows of 4, 6, 7 and 8, which recall the same proportion of the open space.

-In the rest of the façade can be used also single windows, which present almost the same vertical extension.

- Openings in the intermediate levels must be more balanced in their dimensions, but never having a horizontal extension. Rectangular windows must vary their high from 40-150 cm and the width from 40-100cm, arch windows vary their high from 40-110 and the width from 35-70cm, while double coupled windows can have almost the same proportions but due to their grouping extend the verticality of the façade, and are usually used in two floors.

- The ground floor façade of Gjirokastra house must have two types of openings very different from each other in proportion and size: small windows (fëngji) and doors. Fengji dimension varies from20-90 cm in height and 5-25 of width, while windows (arch or rectangular form) vary the width from 30-65cm and the high from 50-110cm. They proportion must be set between 0.5-0.75 (of high and width). Doors can vary their dimension from 80-200 cm of width and from 160-380 cm of high. Their proportion reaches the level of 0.35-0.6 between high and width.

- Another design element that is present in the façade of evaluated typologies of traditional houses are the arcades that run through three different floorplans up to the upper level of the façade, aggregated in one, two, three equal parts, or in case of more arcades they can be composed in a freeway in the central part.

3. Recommendations on the use of “Levels of scale”

The main house façade must present from three to five “levels of scale” passing through the following facade elements:
1. The silhouette that highlights the connection with the mountains silhouette as a higher level of scale
2. The division and distinction in two or three main volumes (the silhouette is divided into smaller parts). Division can be set through color or shifted volumes.
3. The differentiation and fragmentation of these volumes in geometric patterns (each part is subdivided into other parts). Division can be set through color or shifted volumes.
4. Windows composition according to precise proportion rules (see the constant of “Geometry and proportion”)
5. Details and texture through which windows are described as centers. This detailes is recomanded to be simplified. They can be set in contrast with the wall, still being simplein their shape.

4. Recommendations on the presence of “Local symmetry”

Local symmetry must be used in the design of the house façade. In the simple’s house typology, local symmetries there must be at least 3 scales: a. main volume symmetry; b. significant façade elements symetru such as doors, windows; c. secondary façade opening and their details. L or U housing types must present multiple local symmetries (at least 3-5) in building’s façade referring to previously three main levels. Local symmetry is encouraged also to be used in the yard perimeter (for example the presence of twind doors, windows or other details).

5. Recommendations on “Gradients”

The basic volume of the house starting from the basic type must present in the main façade gradated openings which become larger in the upper part. This is valid also for the other facades.This logic is extended also in the L and U type. Openings must reflect a vertical increase in their dimensions, excluding entrance areas.

6. Recommendations on “Void”

1. Perpendicular building type “void”: In the simplest houses the void must be represented by the contrast between the entrance door and the almost full architectural surface. In this typology, voids can be found in the front facade or other facades depend on the orientation towards the road. Voids can be caved rectangular or arch-form entrance doors.

2. L type building void. In L typology there are various types of “void” which can be applied. In the simple’s model, the void is represented by the hollow rectangular space of the card, which is excavated internally. In other cases, the void can be created through a portico as part of the kamare or is extended along the receding façade.

3. U type building void. In U type buildings, the void can be a central symmetrical element which highlights the central core of the building or emphasizes the side volumes. In both typologies, for the form, geometry, and dimension of these openings, we must referee to the Recommendation no.2.
4. Voids of the yard entrance door. House yards constitute also urban voids. They can be rectangular or arch-form and present a strong contrast with the road perimeter walls.

7. Recommendations on “Color and texture”

Regarding color and texture use as elements defining the visual character of the house, we must refer to four main rules:
1. Roof surfaces must be perceived as gray or silver. In addition, we recommend the use of plain tiles with similar dimensions of the traditional ones which are also flat.

2. House external walls must be perceived with one tonality and must have the texture given by the stone view face. It must be used in-house basement and ground floor and should be is extended also in the back facade. There are also cases in which almost the whole architectural surface can be made the same material. From building to the building there can be slight changes of color within the same tonalities.

3. White plastered surfaces. White plaster surfaces must be used in the upper floor of the building, in the main front of the building and can be extended also to the sides.
The simples, perpendicular typology must have white plaster in the upper level, excluding the back facade.
The second and the third typology must present as well large plastered surfaces of one or two upper levels, and goes around the sides of the building, following the front main volumes. The back of the building, which is not exposed to the view can be left on the visible stonework.

4. The color of structural, complementary or decorative house facade elements

(such as 1. Opening frames, shutters and window nets and 2. Additional structural elements that sustain the roof) must use wood or metal color tonalities, setting contrast with the walls light colors of the walls.

Recommendation on urban space definition

The urban morphology and in particular urban space and its constitutive elements (such as road space, yard walls, external doors, road façade, greenery) depend on Massing, Levels of scale, Positive space, Void, Color and texture and K. Lynch's primarily visible urban elements.

1. Recommendations on the safeguard of natural silhouettes

- Protection of landmarks: Landmarks and panoramic points of view such as the castle with its clock tower, the tekke complex and "Fantazia Hill" need to have a protected area around. Thus, it's not recommended to build nearby. The castle has its own hill in which we do not recommend to build. The Same recommendation is valid also for the hill in which is set the tekke complex.

2. Recommendations on the "Levels of scale"

The fractal dimension of roads: In Gjirokastra are actually present four main road typologies: 1. the larger and most regular one is part of the central bazaar; 2. A large but organic road is the typical neighborhood backbone,3. secondary roads that spring up from the main neighborhood road and 4. tertiary roads that give access to other inside buildings and create intimate spaces.

1. This road is limited to the bazaar area
2. Primarily road is in average larger ones and presents a slope plan. In the historic city of Gjirokastra, they are historically defined as backbones of each neighborhood. They are present also as a continuation of the residual are and must have a similar section and pavement treatment.
3. Secondary roads connect in an organic way to primary roads, following terrain configuration. They spring up in different sections and direction. In some cases, they can be alternated with stairs. They can be enlarged or constrict depending on terrain conditions and relationships with the house yard entrances.
4. Blind roads have a smaller section, are more organic, can present stairs and usually have yard walls on both sides being related only partially or diagonally with building's facade.

3. Recommendations on the "Positive space"

Urban space must be dynamic with the possibility to present various vistas along the road. This must be related also to the different road sections offered. In fact, various elements such as walls, green, building's façade, stair, road level are combined differently from section to section. This variety must be stimulated.
In fact, all roads design must provide some typical perspectives that reflect positive space:

1. Buildings as focus points of the road perspective.
2. The contrast between the two sides of the road: open-closed, treated façade-modest façade, full- void, full- green etc.
3. Presence of levels of intimacy along the road given by enlargements or extension of road space in different dimensions, levels, form, and orientation.
4. The use of front facade on the road or perpendicular to the road, in order to be perceived in a perspective view. The suggested architectural details can be main

house façade, protruding volumes, important gateways, balconies or kamare etc.
5. Good shapes repetition alternated on both sides of the road: gateways repetition, buildings main façade repetition, stairs repetition, intimate space repetition etc.
6. Repetition and variation of buildings is a continuous linear series. (bazaar area)
In addition, we recommend also to use in an alternate way of typical proposed road sections (see fig. p.), which can guarantee the development of a continuous positive space.

4. Recommendations on “Void”

In urban space, the void is given by the contrast and depth created between the house yard wall and the house yard entrance. Having a similar shape compared to the void of the building’s facade, these elements enter in resonance and contribute together to enhance the visual quality of the city. Void, in this case, can be rectangular or with an arch-form and present similar dimensions and proportions to the analyzed voids in Chap. 4.7.

5. Recommendations on “Color and texture”

Road pavements proposed must use a similar color compared to the historic center in which dominates the silver color. In case of new pavement material, its recommended to use minimal textures, with linear stripes or even the total lack of patterns. Yards walls must preserve a similar texture and color given by the use of local material avoiding the whitewashing in order to create contrast with the building facade. Walls can be articulated with other materials (ex steel, tin etc.), preferable semi open and with elegant design lines, or greenery.

6. Recommendations on the design of “nodes”

- Research suggested to consider based on the importance of road section and the potential to transform certain crossroads, primarily potential nodes and intimate nodes.
- When proposing a new design in the nodes surrounding area to take into consideration the following principles of design related to the main visual perspectives:

Create contrast between the closed parts and the void (buildings and the surrounding open space or green space), geometry and organic treatment, porous and linear space.
Create focus points or objects. Focus points can be important building facades or entrance door which needs to be oriented towards the visual perspective.
Create dynamicity inside the node. Propose buildings which present a complexity that is read step by step and is not embrace in a sight.
Create objects that need to be gradually perceived due to gradation, large extension, levels of scale etc.

6. Recommendations on the safeguard of “landmarks”

- The definition of new potential landmarks in which to propose important buildings. The new objects that can be erected in those areas should be oriented accordingly to show their most articulated façade to the outside view, while the public space in this area should have direct access to the open view, in order to reconnect to the other landmarks.

5.2 Implications and suggestions for future research

Research suggests a methodological approach that put into evidence the visual quality of the historic city of Gjirokastra decoding constant elements and principles in order to use them as patterns for new interventions in the residual area intending to adjust and preserve the historical city image as a significant component for a sustainable development. The result is practical tools and a guideline for professionals and institutions to intervene in a sustainable way in this particular context, but is valid also for other historic cities nationally and internationally.

The synthesis of the historic urban landscape of Gjirokastra will constitute the basis of the design of the residual area. In fact, inputs given at the end of the research are meant to be tools and instrument that an architect and urban planner should integrate during the design process, but also professionals of the Institute of Monuments can use to objectively judge the compatibility of the project with the historical city image in order to base it on legal criteria regarding the required “visual harmony“and morphological reference.

However, these tools in some cases need to be further legally defined as in this research are only given guidelines and recommendations. Hence, it opens up suggestions for a more technical and legal work on a proper landscape plan for these cities. In this regard, a more detailed material is needed, especially regarding urban space, as in this case on the contrary to houses, the proposed synthesis of road space is based on the visual selection of typical morphological road sections, without considering a larger measured sample of road sections.

In fact, this work can constitute the basis for a landscape plan of historic cities. In addition, the methodology used can be applied in other historic cities, and an in-deep study can be done on the visual characterizing elements of Albanian historic cities or villages, but also other historic cities worldwide.

Referring to the case study of Gjirokastra, as an important historic heritage in the Balkans, an interesting research can come out also by comparing the urban morphological visual constant between the various Ottoman cities in the Balkans, Epirus Region cities and the Mediterranean cities seeking the influence of close by cultures in the formation of Southern Albanian cities and Villages and putting into evidence local singularities, in order to better understand its precious value both for ottoman and European culture.

Moreover, this research opens up further research on the adaptation and possible transformation of existing building types based on contemporary living needs, with respect to the external visual parameters defined in this research. Thus, new houses types can be proposed which preserve on one side certain formal characteristics which contribute in the visual integrity of the historic city as a whole, and on the other side are more flexible and adaptable to contemporary needs. Further applied design research can be oriented on the development of buildings types which embody these parameters of visual quality and urban landscape plans based on urban landscape approach.

LIST OF TABLES AND FIGURES

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VKM Nr. 619, datë 7.7.2015 Për shpalljen "*Qendër historike*" të një zone në qytetin e Gjirokastrës dhe miratimin e rregullores "*Për Mbrojtjen, Konservimin e integruar dhe Administrimin e qendrës historike dhe zones së mbrojtur n ëqytetin e Gjirokastrës*".

VKM, nr. 30, datë 20.1.2016, Përshpalljen e qendrës historike të fshatit Vuno dhe miratimin e rregullores për administrimin e saj të zonës së mbrojtur përreth.

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VKM, nr. 29, datë 20.1.2016. Për shpalljen e qendrës historike tëf shatit Dhërmi dhe miratimi e rregullores për administrimin e saj e të zonës së mbrojtur përreth.

VKM, nr. 32, datë 18.1.2017 Për shpalljen e qendrës historike të qytetit të Përmetit dhe miratimin e rregullores për administrimin e saj të zones së mbrojtur përreth.

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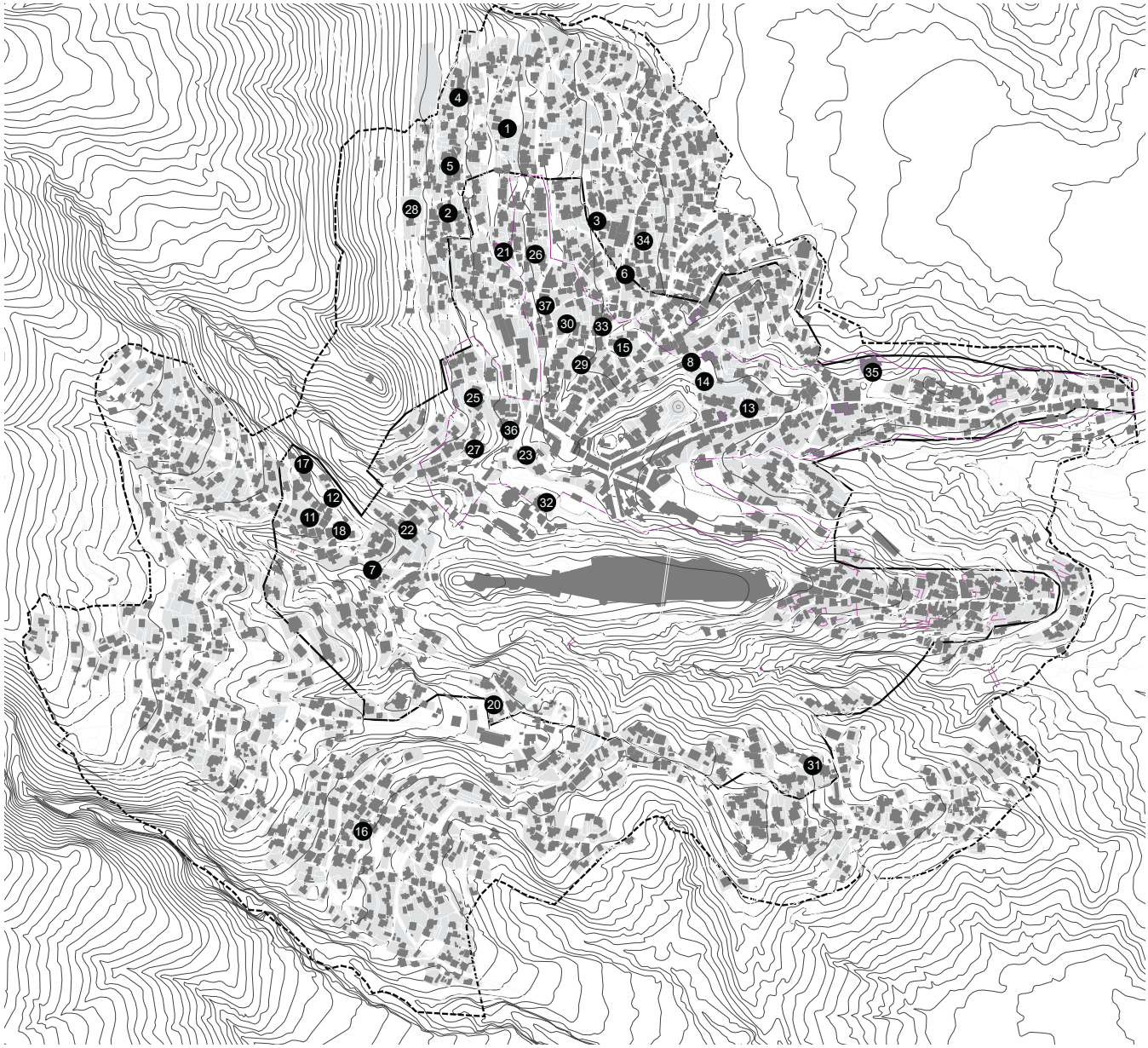
Appendix 1. List and location on map of the analysed residential buildings



Location in map of the listed builings (source: author's)

List of selected and analysed residential builings according to typological classification

Perpendicular type
1. Stavri house
2. Zeko house
3. Ceribashi house
4. Dhrami house
5. Roqi house

One wing type
6.Toro house
7. Braja house
8. Galanxhi house
9. Kala house
10. Zani house
11. Angoni house
12. Koci house
13. Cabej house
14. Galanxhi 2 house
15. Cene house
16. Kikino house
17. Resaj house
18. Beqiri house
19. Shehu house
20. Sinomeri house
21. Skenduli 2 house

Two wing type
22.Kabili house
23. Xheneti house
24. Mehmeti house
25. Kokalari house
26. Babaramo house
27. Belaj house
28. Zekate house
29. Lolomani house
30. Zeko 2 house
31. Muhedini house
32. Babameto house
33. Fico house
34. Xhaxhiu house
35. Cico house
36. Angonate house
37. Skenduli house