

The Effect of “Natural Landscape” on Georgian Defensive Architecture (Case Studies: Mestia and Gori)

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This article retrieved from the research project of "Art and Civilization of Caucasus" and a field research trip, which was organized in 2013 by NAZAR research center.

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Abstract

Human being is selecting a place to settle, first of all could detoxify his physical needs. Also he has attention to the secondary needs (concernity) in this selection. Safety, food and clothing are the most important human needs in order to select the place of residence. Republic of Georgia had been considered by too many people over time because of the natural fertility to reside on Caucasus Mountains and its specific cultural landscape. Formation of settlements on the riverbanks and hillsides is due to the appropriate climatic conditions for farming, animal husbandry and sedentarization. Safety, the other human needs, is considered to choose the place of residence. If the selected place can't provide significant safety for humans and he don't be safe from the enemy's infestation, he will inevitably think to arrangements to compensate for shortages of security by architecture. Formation of the defensive landscape of settlements is the interaction between cultural landscape, natural landscape and historical landscape -as a result of cultural landscape and natural landscape- which has formed various types in different place of residence, according to variety of natural landscapes and historical events. Defensive landscape is inevitable part of cultural landscape of historical residential complexes and also is part of an evolution process of cultural landscape. Residential architecture with approach of defense has two distinctive types in Georgian cities. Defensive landscape is defined by the battlements in Tbilisi and Gori like several cities in Iran; coarse-grained, centralized and introverted. Against, it is defined by high stone defensive towers in Mestia and Ushguli cities; fine-grained and extroverted.

Keywords

Natural Landscape, Cultural Landscape, Defensive Landscape, Mestia, Gori.

Introduction

When humans are faced with the Nature, it becomes natural landscape and when he intervenes, it becomes cultural landscape; because human understands and evaluates the environment of his perspective over time, dwells in the natural context and seeks to provide shelter for himself. Early humans were occupied caves as settlements with minimal intervention in the nature. He got gradually out of the wet caves or mountain gaps, gave up his life style -being in caves- and started to live out of them. However, he held the cave-shaped and artificial settlements as a shelter in winter or crisis situations (Lang, 1966). Human chooses a suitable context for dwelling out of caves in the lap of nature and begins to build a house. He is not just a benefic more. He can plant grains himself rather than to find and feed from the grains and also he can foster animals instead of just hunting them.

Since the human livelihoods depend on sedentary, the formation of settlement complexes as one of the main appearances of cultural landscape started. Defensive landscape has always been an integral part of the landscape of the lands, since the formation of settlement complexes; because every society is more or less exposed to invasion by tribes' adjacent lands, depends on the quality of their living space, in terms of productivity, profitability and viability.

This paper is surveying the station of defensive landscape in the cultural context of Georgia country and also the effect of natural landscape on formation, evolution and its differences in this country and studying the of formation's reasons of two different types of residential architecture with a defensive approach influenced by the natural landscape (context of nature) of the region. In this paper, through studying the Georgian defensive landscape as a part of its cultural landscape, two Georgian cities, Gori and Mestia, are compared together and the role of natural landscape on the formation of its defensive landscape is explained in each cities.

Hypothesis

Defensive landscape of Mestia on the riverbank

and hillsides of mountains with steep slopes is not defined by battlements, rather high stone defensive towers scattered across the city play a defensive role in it. Mestia defensive system that constitutes the identity of the urban landscape is unique and derived from natural features, the geological context of the city and social conditions of its inhabitants. Stone beds and a shortage of agricultural land, is scattered population and also low population and large area of the city, makes it impossible to be enclosed. Defensive towers are replaced by defensive walls of the city which brings the unique landscape to Mestia.

Defensive Architecture, Affected by the Cultural Landscape

The evidence of early humans living on South Caucasus especially in Georgia country before the Paleolithic age is traced. Mesopotamian herdsman or poulterer people have settled in Georgia since the second millennium BC, when the Assyrian people were becoming stronger. Georgia residents had hunter and fisherman and food collector in the Neolithic age. They grew seeds too. Also animal training was part of their life in the Neolithic age in Georgia (Ibid). Thus, suitable context of this country inhabited many throughout history in its place. Georgia has a lot of towns and villages today which many of them are old settlements and historically developed. The formation causes of Georgia settlements is based on the basic needs of its inhabitants life; the multiplicity of rivers and easy access to them, fertile soil and agricultural lands and pastures for animal husbandry. The ups and downs of this mountainous country play an important role in the spatial organization of human settlements network and also river valleys is historically shaped the basic settlement pattern in Georgia. This country is clearly divided into two parts; east and west Georgia. These two parts are different in terms of climate, development conditions and human living features (Metreveli, 1993). Human residence in the fertile context of Georgia is formed by the feasibility of agriculture, animal husbandry and fishing capabilities and then leads to the emergence and spread of cities have survived

yet. Safety is one of concerns of human living in an area. He must protect himself against problematic factors such as tribal invasion and natural disasters. Human settlement on the natural context of Georgia is no exception. The country has attracted attention of numerous people, especially the Romans, Mongols, Ottomans and the Russians due to its strategic location in the vicinity of the Black Sea and the Silk Road. Swan people (residents) retreated into the Caucasus Mountains to protect their life and property against other tribes' invasion and took refuge in great mountains of that region to be safe from enemies (Bordkoff, 2014). In addition to wars, natural disasters -floods and landslides- happens alternatively in Georgia, threatens the safety of residents, forces them to have more tendency to emigrate and then makes a suitable situation to plunder the natives. Georgia defensive architecture is part of its cultural landscape. Residents of Georgia cities forced to build the type of architecture that enable them to defend themselves against enemies and provide the necessary security for their sedentary, dealing with nature and the historical circumstances of its own land. They make themselves secure by the construction of defensive battlements in most cities, and multiple high defensive towers in some other cities. This paper focuses on the study of two towns in Georgia; the city of Gori in Shida Kartli province and the city of Mestia in the Svaneti province. Two studied areas are some of the oldest human settlements in Georgia which had faced more attention and invaded tribes, so its inhabitants have differently kept themselves safe from enemies in each city; Gori through the establishment of a strong central government and Mestia by united citizens who were libertarian of mountains.

Mestia: Decentralized and Extroverted Defensive Landscape

Historical province "Svaneti" in Northwest Georgia today covers the central part of the Greater Caucasus. Svaneti is formed along the "Enguri" River valley and is the tallest Caucasus residential area where svans reside on it. The "Ushba" a high mountain with natural specific face can be seen

from almost all parts of the region and is one of the most important elements of the natural landscape is Svaneti. This province is divided into two smaller regions -upper and lower- in political and geographic divisions. The "Upper Svaneti" is known for picturesque landscapes and its architectural and historical treasures; Military and agricultural tools and numerous decorative objects have been found in this area, belonged to the second and first millennium BC (Okrostsvardze, Bluashvil & Gagnidze, 2014). Also, the Svanetian towers, one of the most famous medieval elements, built in 9- 12 centuries, are recorded by the "UNESCO". Mountains surround the area has sheltered it against hostile countries hundreds of years. Mountains of "Bali" separates the so-called "free" from "vassal" of the Svaneti and had kept libertarian of mountains safe for four-year period as a natural fort, against the oppression of the feudal who had lived in the western part of Svaneti in the 15th century (Metreveli, 1993). Mestia has been fit for human occupancy whole time; fertile soil and agricultural potential, suitable pastures for animal husbandry, the abundance of mineral springs and the granite and marble quarries. Mestia town, the administrative center of the Upper Svaneti, is in the "Mestiachala" River valley. The city is located about 130 km in the north of "Zugdidi" town, in the mountainous area of north Georgia. Natural topography of the land and steep slopes, kind of rock and impenetrable context, being away from the coastal cities, difficulty of traffic in hazardous mountain roads, specific climate features such as long cool and hard winters and also the shortage of farmlands, has been prepared special conditions to reside in the area. Thus, Mestia is considerably far from the nearest settlements around it. More moderate slopes of mountains beside wider valleys are habitable, after crossing the vast uninhabitable area. According to the natural conditions of Mestia, rural livelihoods depend on forests and other natural resources and firewood is their primary source of fuel for heating and cooking. These forests in addition to providing households income have a lot of benefits: securing the residents, preventing natural disasters, providing climate control and nutrient

cycling and contributing to the spiritual and cultural aspects of the region's residents (Kemkes, 2011). Agriculture is another source of Mestia residents' income. Although only 7% of the land is arable, about 99% of self-sufficient residents are employed in small-scale agriculture in Mestia, while 41% of farms in the Upper Svaneti were forested and forestry is part of the income of all residents (Bordkoff, 2014). Valuable natural resources such as mines, is another source of income in Mestia and Svaneti. Based on historical sources, "Gold" has been mined from river alluvium in Svaneti in the 18th and 19th centuries. According to the Greek and Roman histories about Svaneti region, a lot of gold mined by Barbarians in the Mountain Rivers of Georgia; because many rivers carry "Gold Sands" from the Caucasus Mountains. Recent geological studies confirm the existence of alluvial gold sands in Svaneti. Today, different types and concentrations of gold in Svaneti Rivers are so many that causes some myths about and the region is known as "the country rich in gold". The "Golden Fleece" is one of the myths. In addition, residents are profiting by the natural opportunity; The Natives was gathering alluvial gold sands by using a thick sheepskin from rivers (Okrostsvavidze, 2014). Thus, Svaneti was considered by geologists, adventurers and even enemies and the matter of plundering the region is inevitable every time. Mestia residents which were mostly farmers were living under the feudal system. They had thought different solutions to provide security in accordance with natural and geographical conditions against foreigners plunder. Also they appealed the specific types of architecture. Each family or a group of them had built their own equipments near a house; a stone watch-tower and a defensive wall around his land (Gilbert, 1992). Defense equipments had been located separately and scattered around the city, because the construction of a fort on the slopes of hills and valleys was not possible. Thus, strategic location of Mestia plays an important role in the creation of defensive landscape structure (Fig.1).

Defensive landscape of Mestia is in the form of high stone towers belonging to one or more houses

were built with distance from each other. Residents began to cut down forest trees, make farmlands and pastures for animal husbandry, build a house and defensive tower when the city formation had just been started. It seems that because of each family had shaped farmlands and livestock pastures near its house, new families did not able to enter other families' privacy to find a suitable region of residence over time. So houses were been located separate from each other. Also defensive towers were built in the vicinity of one or more houses (Fig.2).

The formation of settlements in Mestia was gradual and independent while they have not been formed under the auspices of a centralized state. Also, the capitation of land that households required was a large amount while some part of lands is unproductive in Mestia. Where the soil is hard and unproductive, the land is used to build houses and towers, and where the soil is fertile with a fit depth, it is used for farming. Houses are located adjacent to the "Mestiachala" River -rocky context- and farmlands are shaped at upstream of houses -arable slopes of soil- according to the aerial view of Mestia. In addition to the ground material, the east-west orientation of the river and the valley of Mestia is effective on choosing the location of residence, farming and forestry by residents; The northern slopes of the valley, faced to the south light, are suitable for living and farming while the southern slopes are forested (Fig.3). On the other hand, households were forced to build a special type of architecture against the matter of plunder. So Mestia defensive architecture is in the shape of towers which are scattered, decentralized and family based.

Gori: Centralized and Introverted Defensive Landscape

Kartli province of (the heart of Georgia State) or ancient Iberia in Greek and Roman historical sources is a region that Georgian central government was economic and cultural core in the early Middle Ages for many centuries. Gori city, the heart of the inner Kartli and the intersection of several roads, is the ancient core of city at the junction



Fig.1. Extroverted and scattered defensive towers, the main factor of legibility of the city landscape. Mestia, Georgia. Photo: Seyed Amir Mansouri, archive of NAZAR research center, 2013.

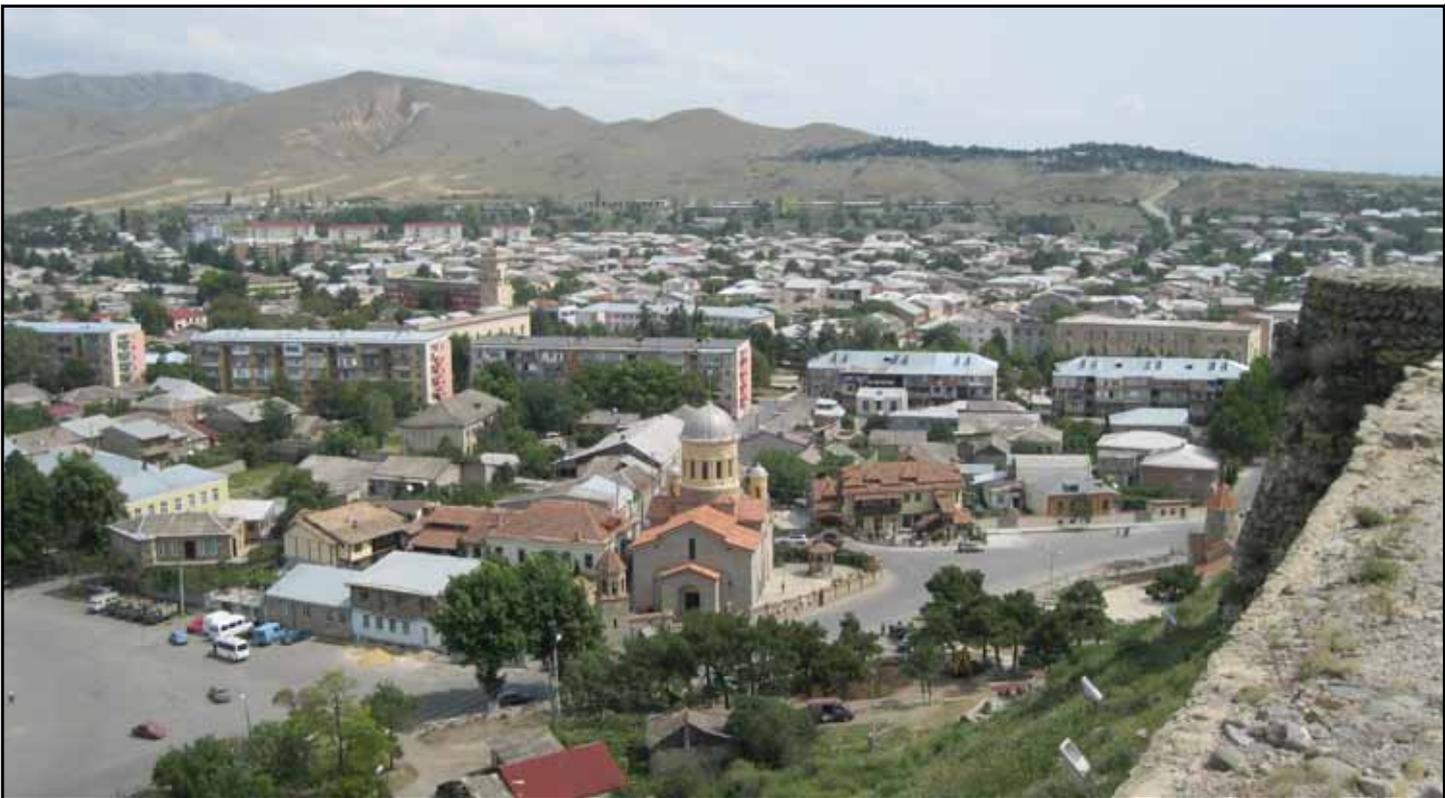
Fig.2. Resorting to defensive towers and providing security of the families in times of crisis. Mestia, Georgia. Photo: Seyedeh Fatemeh Mardani, archive of NAZAR research center, 2013.





Fig.3. The separation of residence and farming in the northern slopes and forestry in the southern slopes of the Mestia valley. Mestia, Georgia. Source: www.maps.google.com.

Fig.4. View of the city from inside Gori Fortress, which was built on the top of city. Gori, Georgia. Photo: Seyedeh Fatemeh Mardani, archive of NAZAR research center, 2013.



of the Kura (Mtkvari) River and the Liakhvi River. Gori Fortress, a strong guard for Kartli borders, was built on the rocks in ancient time (Fig.4). The city was one of fortifications of Georgian kings under the feudal system and one of the largest cities in Georgia (Amir Ahmdian, 1998).

There are prisons and castles in Georgia specially in Kartli, the heart of Georgia that show stories about military activities of the medieval noblesse which took merchants as hostage and prevented the invasion of foreign enemies (Lang, 1966). Kartli region was under the rule of a central government since the ancient time and its defensive architecture was being formed as a fort around each city. Each of Gori and Tbilisi, two cities of Kartli province, has a fortress was built and managed by the central government at the time. Residents were living within a defensive wall of the city and were spared from the enemies' invasion.

The formation of residential-cultural landscape in Gori has been under the centralized government. Also, the natural position of the city and its deployment in high level provided favorable conditions for the dominance against the invaders; set-

tlements built on the flat land and the mountains are around the city. It seems that Gori is spread in so flat and wide valley and its fortress is built on top of surrounding mountains and overlooking the city.

So, defensive landscape of Gori is integrated, castle shaped and introverted. In fact, both the natural landscape and the history are two main factors in the formation of defensive landscape of Gori similar to other cities such as Mestia (Fig.5). But the differences between two factors cause some changes in defensive landscape of both cities.

Table 1 studies the distinction of two types of defensive landscape in Georgia by comparing Mestia and Gori; Mestia in the northwest and Gori in the central Georgia.

Despite the differences between two types of Georgia defensive landscape, there are some similarities between them, that was not mentioned in the table; Dimensions and geometry proportional to the natural context, usage of local materials (stone, mortar and plaster), simplicity, purity and the ornaments' avoidance.

Fig.5. Gori Fortress; the integrated, centralized and introverted defensive landscape, Gori, Georgia. Photo: Seyedeh Fatemeh Mardani, archive of NAZAR research center, 2013.



Table1. A comparison between the defensive landscape of Mestia and Gori. Source: Author.

The City Defensive Landscape Specifications	Mestia	Gori
Shape of Defensive Architecture	Towers	Settlements
Typology	Extroverted	Introverted
Users	One or more families	The whole city
Physical Features	High Tower-shaped	Fort-shaped
Dispersion	Decentralized & Scattered	Centralized & Unified
Location	Beside each house	Top of the city
Construction & Operation Management	Family based	Central government

Conclusion

Ancient humans exposed to the prepared natural context to live in Georgia and could able to provide their necessities of life in many parts of the country. Security is one of the basic human needs to select settlements. Defensive architecture is the result of residents for living in the Georgia’s nature. So, in addition to the government type, defensive landscape is influenced by the shape of context of cities, settlements shape, how they spread, their density and many other factors. Natural landscape is effective on the formation of defensive landscape in Georgia settlements too. First, the selection of residential sites as a cultural practice is influenced by the type of natural landscape and also defensive landscape as part of a residential landscape is affected by the natural landscape conditions. Second, and more important, the natural landscape has been effective on how some foreign tribes invade and then affects the selection of defensive landscape pattern in settlements. The Georgia defensive landscape its cultural landscape and also different typologies of the defensive landscape in the country have been affected by differences of natural landscape in its communities. Comparison between Mestia and Gori in Georgia, gives us remarkable results; Gori such as Tbilisi in Georgia and like Bam, Khorramabad and many other cities of Iran has a legible defensive landscape; the fort of city is built in a position that makes the enemy attacks less successful. While there is no fort in Mestia and Ushguli and high stone towers organizes its defensive landscape. Mestia defensive towers are the residents’ response to the natural, historical and cultural conditions of their country; Individualism of the residents, the gradual expansion of the city, the city shape, the natural slope of the land and also some factors related to the culture, history and the nature of Georgia distinguish the landscape of its settlements.

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