Venetian defence in the Mediterranean: Nicosia’s city walls, Cyprus (1567-1570)

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Abstract

According to the developing defence techniques, the Venetian re-designed Nicosia walls in the XVI cent. to protect the city from the Ottoman attacks. The Italian engineers Francesco Barbaro and Giulio Savorgnan conceived the new fortifications dismantling the older ones and reusing the stones of many other buildings. The plan has a stellar shape with eleven bastions, hendecagonal, so to have the Cathedral of S. Sofia in the middle, as in the ideal city of Renaissance times. The upper half of the wall section slopes like a pyramid, a shape more suitable for the protection from artillery. The walls were built from 1567 to 1570, surrounded by a deep ditch, about 80 mt. wide, supplied with the water of the river Pedeios, deviated from its course across the city. During the IV Ottoman-Venetian war (1570-1573) the city was seized and captured by the Ottomans. The paper analyses the phases of the Venetian walls, considering the traces of the previous ones, by comparing them with other coeval polygonal fortifications, and with the indications provided by the treatises of architecture of the XVI century.

Keywords: Cyprus, Nicosia, history, architecture.

1. Introduction

The image depicted in the counter-seal of Hugo, king of Cyprus, in a donation to a religious order “In presentia Domini Hugonis Regis Cypri & Domini Eustorgii Nichossiensis Archiepiscopi”, (Pauli, 1783, n. CVI, p. 112, fig. pl. V, n. 47) documents the fortifications of Nicosia in 1217. Since ancient times everyone imagined the city as an inhabited place protected by walls, “urbs ipsa moenia sunt” saidy Isidore of Seville, the “urbs” is made by its defensive walls, distinguishing the meaning of urbs, built cities, from the civitas, the community of citizens. Therefore, today we can still identify Nicosia with its walls. The city was founded around 85 B.C. along the Pedeios River at the crossing of ancient Hellenic settlements with the name of Ledrae. In about 300 BC, the son of the Egyptian king Ptolemy, Lefkos, rebuilt the city, and his name is immortalised in the modern local
name of Lefkosa (Turkish) or Lefkosia (Greek). During the Byzantine domination (390-1191 A.C.) and the Lusinian one (1192-1489 A.C.), the city becomes the most important centre of the island. Nicosia is the Frankish name of the city, and is thought to have appeared in the late 1100s. Since ancient times the urban settlement of Ledrae occupied the hills surrounding the actual city, this settlement become the episcopal seat with the name of Nicosia and then capital of Cyprus only in the late Byzantine period (XI cent.). When Nicosia became the capital of the Lusignan kingdom it was only defended by a Byzantine castle. In 1368 king Peter I started the town walls which were continued by king Peter II in 1372. The inhabitants created a strong agricultural feudal system, various churches and monasteries are built and the city is furnished with fortifications. Nicosia was under the control of the Lusignans from 1192 to 1489. Three hundred years of Lusignan domination shaped Nicosia that it became the administrative and representative centre of a kingdom. The Lusignans tried to imprint on their capital the characteristics of a feudal town. The early Lusignan walling was unable to prevent the occupation of the city by the Genoese troops in 1373. The location of the Lusignan walls is not clear today but was interpreted with the ancient cartography. Long, vertical, high walls in the typical shape of mediaeval city with multi-storey square towers at regular intervals, some of which contained the town gates.

In Italy Venetian domination was extended especially in the North of the peninsula. Beyond the Adriatic on Istria, on Dalmatia, Albania and the Ionian islands. In the East belonged good part of Greece, the archipelago and the large islands of Candia and Cyprus. The island belonged to Venice from 1489 to 1571, but even before the annexation, in 1474, there was a superintendent and two Directors who attended the Queen Caterina Cornaro in public government. In 1489, the island is conquered by the Marinar Republic of Venice which aims to give more importance to the portal cities and decides to build new fortifications. The model of these protection walls comes from the classic models of the Italian renaissance: a circle of a diameter of 7 Km interrupted at regular 260 mt. intervals by eleven bastions of the same size and form, three gates which used to open at sunrise and close at sunset. These fortifications are still perfectly preserved nowadays.

![Fig. 1- The counter-seal of Hugo, king of Cyprus, showing the city walls, 1217, Pauli, 1783, n. CVI, p. 112, fig. pl. V, n. 47.](image)

The urban area of the city inherited by the Venetians was much wider and they reduced the town to one third of its original size.

The outside areas of the walls were transformed for defence purpose.

The new walls of the city were built according to the new architectural style, the developing defences techniques and the technological improvements during the Renaissance.

The creation of the new city walls and the diversion of the river to flow away from the city created the premise for considerable change in the ‘forma urbis’. In 1489 the Venetians were protecting the city against the Ottoman attack. The Nicosia city walls were rebuilt in Venetians period in 1570 by Italian engineers Giulio Savorgnano (1510-1595) and Francesco
Barbaro (1396-1454). Giulio Savorgnano was appointed superintendent of artillery and fortresses of the Venetian state, leaving Italy with 100 infantries and 10 broken spears. He was sent out to the Levant in the capacity of general in the army and governor of a fortress, his first appointment being at Zara in Dalmatia, whence he was removed to Cyprus and appointed Governor of Nicosia. He arrived in Cyprus to review the fortifications of the major cities. In August he starts the works of defences of Nicosia. The new walls were built with 11 bastions shaped undecagon regular, to install 125 artillery pieces. The defensive walls of Nicosia are considered by experts as one of the most beautiful fortresses in the world.

The aim of design a city walls was to construct in a short time and to be defended by available military forces. The Venetian walls are higher and larger than the Lusignan walls; the reason is the new technologies in that time.

The names of the 11 bastions are Caraffa, Flatro, Loredano, Barbaro, Quirini, Mula, Boccas, Tripoli, D’ Avilla, Costanzo, Podocataro. The names came from the Venetian officials and Cypriot nobles. After 1974 the city is divided for political reasons and Five bastions are in the North side (Turkish republic of North Cyprus) Caraffa, Tripoli, D’Avilla, Costanzo, Podocataro, and five bastions are in the South side which is the Democratic Republic of Cyprus (Lorini, Barbaro, Quirini, Mula, Bocca). Flatro is in the buffer zone, neutral land since the 1974, is controlled by the U.N. There are three gates, Paphos Gate (Porta San Domenico), Famagusta Gate (Porta Giuliana), Kyrenia Gate (Porta del Provveditore). The plan has a stellar shape like the fortress of Palmanova (Italy) and Neuf-Brisach (France).

The upper half of the section slopes like a pyramid was to prevent the damage from the artillery during the attack.

After the advent of the new war technologies during the Renaissance they started to build walls with a slope according with the physical calculation to reduce the force of the bullets.
Against the new artillery the mediaeval walls of masonry were useless.

The fortification had to be made of thick ramparts of earth, not only to withstand the fire of the attack but also to provide a wide platform for the cannons. The bastions are huge and solid but the curtain is low, the moat is not wide or deep enough for a dry ditch and there is no counterscarp visible.

They also have different height (2015 Venetian Renaissance Fortification in the Mediterranean, pg.47) “The rampart as designed by Giulio Savorgnano consist of earth, with a facing of stone half way up, its height forming a retaining wall for the ower portion.” (1918 Jeffery, p.27).

The diversion of the river is also an important factor for the construction of the walls.

The river's original bed, crossing the Lusignan town core, was forced to flow into a new artificial bed, deviating towards the north and then re joining its original bed further to the east. This major intervention must be primarily linked more to the desire to create an important axis crossing on the whole town, until this stage divided into two sectors joined only by bridges, rather than for defence reasons. The Pedieos River was surrounded outside the city to protect the residents from flooding and to fill the moat enclosure the new walls. River's long is in between 90 and 100 km. The diversion of the river was thought, during the war, in order to prevent the city from enemy attacks.

2. Comparison with the coeval literature

At the beginning of '500, with the introduction of new weapons and techniques of war it takes place a transformation of military architecture with a rapid evolution of the corresponding architectural forms.

Therefore, appears the new designs through the changes that took place in the art of war.
The important resolutions of this phase about the military architecture are the fortress, with its circular corner bastions, the overall lowering of the fort buildings, the increase of the thickness of the curtain, with the use of berms reinforcement. The design of the latest structure fortification had to deal with other physical laws. They had to consider the motion of the new projectiles fired from cannons, mortars, culverins falconets, with the use of heavier bullets of stone or iron. The new formal and constructive solutions of the sixteenth century military architecture were born. The bastion becomes the central architectural element in the new fortification system. The ancient literature shows us how the Geometry demonstrates the order to fortify the City. In the treatise of Giovambattista De' Zanchi (Del modo di fortificar le citta' 1515) he is talking about the circular shape is enhanced as the most suitable for the fortification and protection of a city. The main points of the treaty related with the stellar plan are the importance of the curtain and the relationship between the ramparts and the length of the walls, the corners that should be obtuse rather than acute to have a better control of the edges. The perfection of circular stellar shape requires a proportional relationship between the angles and the length of the curtains so that the position of the ramparts is used to the best.

The treaty was written before the Nicosia walls for this reason he is celebrating the plan with seven or eight ramparts. Bonaiuto Lorini (Firenze, 1537 (?) - Venezia, 1611) describes in Delle Fortificazioni (Venezia, 1597), the need for the engineer of a training effort aimed at all the technical and scientific materials. Lorini refers to Nicosia in the following words: "The fortress of Nicosia was seen by me two months before the Turks invested it, and everything about it seemed well considered. I observed that although of earth, it was the finest work of the kind that could be made. I was still more astonished at hearing of its construction by the illustrious Sig. Giulio Savorgnano, with the greatest ease, within the short space of eight months." The latter part of this statement is evidently incorrect as many of the accounts of the siege of 1570 mention the incomplete condition of the work when invested by the Turks." [Lorini, Venetia 1597 AD].

The new wall contained eleven bastions named after Venetian officials and Cypriot nobles and three gates. The heart shape design of the bastion was more suitable for the new artillery and gave better control for the defenders. In the treaty, we find the explanation of the main graphic constructions of plane geometry, basic for the necessary exercise of drawing. He shows the references of the measures that he will take the illustration of the architecture described. Initially the fortress will be formed with equal sides of the plan. The ramparts are
all equally distant from each other. Therefore, it will be necessary to draw the circumference in which circumscribe the fortress. Then divide it into many equal parts according with the number of the bastions. Florentine arm as well as the Venetian step are the measures used at that time.

Fig. 9- The pentagonal citadel of Turin designed by Francesco Paciotto (Pietro Francesco Tagliapietra) and his disciple Bernardino Paciotto (1564-1577).

The modern fortress was built to perfection but with an insufficient number of troops to control eleven bulwarks with which the city was fortified. Turkish demolished the Nicosia fortress despite the work was built at its best in just eight months by Giulio Savorgnano. Because of the limited number of defenders and sudden arrival of the enemy was impossible to be able to defend. “The fortress of Nicosia is the most beautiful and better understanding I have ever seen and manufactured in no time”. The Lorini criticism focuses on the length of Nicosia defenses comparing the walls with the capture of Famagusta and criticizing them for the same problem of the court defenses. The Ottoman cannons pounded away mercilessly at the walls of Lefkosia, but did not succeeding in destroying them. However, the Ottomans decided to dig mines that reached the walls from below in such a way as to make breaches in them. Lorini describes the geometric construction of the escarpment highlighting the fact of so many errors in some cases. No matter the size of the wall but the calculation of the slope is critical to soften enemy fire. He focused also on the differences between the previous fortresses. The bastion now is taking the place of the towers because the square towers were not safe for the easy way to destroy the edges.

The next step was the round towers but they also had a problem for the lack of safety behind the battlements. After experiencing the towers and having found imperfections, with the advent of new inventions they began to experience the bulwarks.

Fig. 10- The exagonal Grosseto city walls designed by Baldassarre Lanci (1565-1693).

Fig. 11- The Dresden Altstadt designed by Caspar Voigt von Wierandt and Melchior Trost, (1545-1555) as depicted in a map by Matthäus Seutter, 1750.

In the book of Giovanbattista Bellucci (“Nuova Inventione di Fabricar Fortezze di Varie Forme 1598”) he dedicates the first part to the geometry and the quality of the engineers because he can easily understand how to prevent the attacks from the enemy and
Fig. 12 The enneagonal plan of Palmanova, designed in 1593 by Vincenzo Scamozzi, 1598 (Biblioteca Nazionale Marciana di Venezia).

Fig. 13 Palmanova. Details of the wall between the Villachiara and Foscarini bastions, F. Besset de Verneda, XVII sec. (Archivio di Stato di Venezia).

what kinds of guards may be adopted. The primary importance of the plan, elevations and profiles works together with the math. He is talking even about the relation with the context using the compass according with the winds and the sun.

This revolutionary nature of both bastion and stellar city is attested not only in Venetian territories, like Palmanova, but also in the rest of Europe. The bastion front and the stellar city adopted according to the Italian manner in Spain and later successfully perfected by German, Dutch and French theorists.

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