

EXAMPLES OF RENAISSANCE ARCHITECTURE IN THE CITY OF LECCE (ITALY): THE KNOWLEDGE FOR CONSERVATION AND ENHANCEMENT.

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ABSTRACT

The study we are engaged in is aimed at recognising and knowing more about the architecture of the Renaissance, an expression of an important phase in the history of Lecce, even though this city has always been identified as the “city of Baroque”. Some particular examples of military and civic architecture of this period have been examined. The objects of interest to this study, are, in fact, a stretch of the city wall with bastions, a gate (Porta Napoli) which stands in the north-west, and, inside some civic buildings, decorative elements such as the “Catalan-style” doorways, of which there are many examples in the city. The geometric relief, the study of the materials utilised and the mapping of the decay have been carried out on the city wall and gate. Some information on the restoration work realised on the Porta Napoli in the XIXth and XXth centuries are also reported. The study of the “Catalan” doorways moved from a census which has led to the recognition and individuation of varying typologies according to the ornamental motifs. The geometric relief and the mapping of the alterations are illustrated on an exemplary case. All the information collected will go to make up a databank finalised towards the cataloguing of historic/artistic heritage and to supply a cognitive back-up for the surveying and monitoring activities, as well as for the programming of restoration and enhancement work.

KEYWORDS

Renaissance, architecture, Lecce, conservation.

1. INTRODUCTION

The architecture in the city of Lecce is dominated by the presence of constructions from the Baroque epoch, which have effectively relegated other architectural expressions of no lesser historic or artistic value to second place. An example of this is the architecture from the Renaissance period, which can be found both within and outside the old town centre, which constitutes the expression of an equally important phase in the town's history. These are constructions of a military (city wall with bastions, castle, gates), religious (churches and convents) and civic character (aristocrats' palazzos, villas, buildings for public functions).

The study we have undertaken aims at recognising and knowing these examples as well as documenting the materials used in them and their state of conservation. The specific objects of our study are in fact a stretch of the city wall, with the gate (Arco di Trionfo or Porta Napoli) which closes it off in the North-West and in the category of civic architecture, decorative elements like the “Catalan-style” doorways of which the city boasts many.

2. THE CITY WALLS WITH BASTIONS AND PORTA NAPOLI

2.1 Historical notes

The Lecce city walls and bastions were started in 1539 and based on a project by the military architect Gian Giacomo dell'Acaya; the work was only completed in 1554. The circuit of the wall, whose shape is polygonal, had a larger perimeter than that built in previous centuries; the architect dell'Acaya had the new wall built on only three sides, while on the fourth - between the San Francesco bastion and the castle - he thought it better to conserve the walls remaining from the previous fortifications which were still suitable for defence purposes (Fig.1). For the construction



Figure 1

divided into two registers by the horizontal cordon, above which there is a row of embrasures. The doorway measures 29.9 m. in length, 5.4 in width and 20.9 in height. It has an arched barrel-vault in the centre, which gave onto the old “weapons square”.

The barrel-vault is framed, on the prospect, by four columns surmounted by capitals and by a moulding on which the date of construction of the door (MDXLVIII) is engraved. At the top there is also a commemorative inscription in honour of Carlo V. The door is completed with a triangular gable, which at the base stands on four dadoes. On the inside of the tympanum you can see the Spanish royal arms flanked by couples of canons, trophies and suits of armour. The last part of the gable is surmounted by a cup with wide volutes linking with the brims of the tympanum. On the sides of the prospect there are some decorative elements and a horizontal cordon, which was connected with that of the bastion wall; in fact the isolation of the city wall gate goes back to 1934. The history of the restoration work on the door begins in the last quarter of the 19th century; the first *Maintenance and Restoration Project* is dated 5th July 1886. Amongst the work planned there was the “substitution of the four cornices of the pedestal and the painting of the entire body of the structure of a coppery Lecce stone colour, after the cleaning of the whole stone apparatus”. A second restoration project, in 1889, made two proposals: the first *Project for the Restoration of Porta Napoli in Lecce*, concerning works to be carried out only on the most ruined parts, the second *Project for the Restoration and Improvement of Porta Napoli in Lecce*, which aimed not only at restoration, but also at “transforming” the piers and the columns. Although we know about a Contract for Tender that indicates the work started in 1890, for this, like for the 1886 project, we have no documentary evidence to prove with any certainty which of the projected work was carried out. In 1934 the *Project for the Isolating of the Arco di Trionfo* was drawn up, which isolated the gate from the walls, and involved, also, some restoration work.

of the new city wall and bastions, the architect planned the substitution of the obsolete towers from the Middle Ages with imposing bastions to which he applied non-projecting sides. In correspondence with one of the more important stretches of the 16th century walls stands the most representative architectural element of all the walls: the “Arco di Trionfo” in honour of Charles V; it was built on the site of the old San Giusto gate, and later took the name of Porta Napoli. The latter was designed in about 1540 by the same architect dell’ Acaya and was completed in 1548.

There are still various stretches of the 16th century walls standing today; the most significant is the part which goes from Porta *Rudiae* to the bastion of San Francesco where the “Arco di Trionfo” was built. The walls vary in height from 11.5 to 6 m. and are about 4 m. thick on average, at the point of the sentry walks and 5 m. at the scarp. The wall which is still visible has a single horizontal cordon (*redendone*), while the bastions,

2.2 Constituent materials and state of conservation

The walls and bastions were built with a building technique of “a sacco” type (double curtain wall with internal filling). The external stone hanging is made up of horizontally lined regular ashlar bound by mortar; they are 0.3 m. thick, while the internal curtain wall, made up of irregular stones and ashlars, is of about 0.25 m. The internal filling is made up of calcareous stones of various dimensions (from just a few centimetres to some tens of centimetres), held together by a mixture of lime and earth. The masonry of the gate has a structure made up of regular ashlars lined horizontally. Samples of stone have been taken from the ashlars of the gate and the bastion walls, in correspondence with the North-West face of the bastion. In this same stretch, samples of filling mortar from the “sacco” and from the joints were also taken. From a mineralogical and petrographic study of thin sections of the samples taken, the stone of the walls and the gate is a biocalcarenite from the Miocene age (“Lecce stone”) outcropping in Salento and widely used in local historic buildings. It is a homogenous and fine-grained material, composed of fragments of

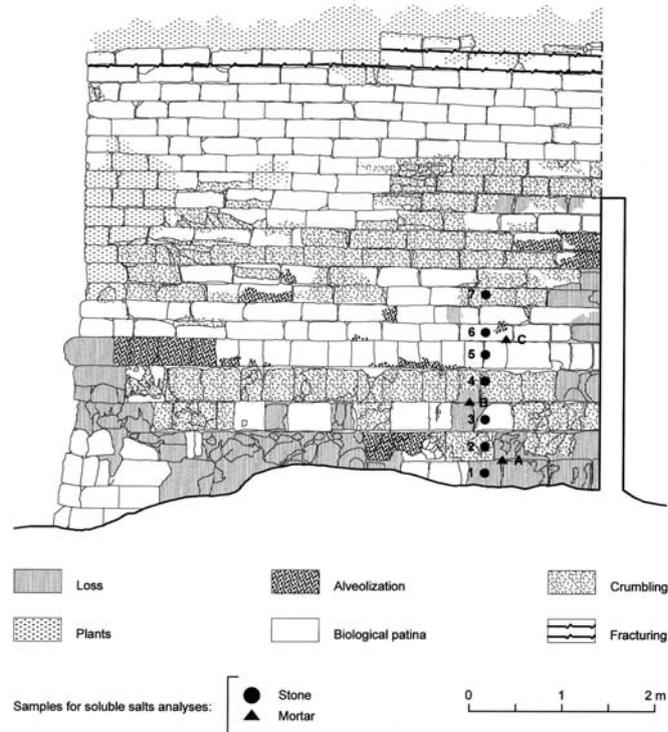


Figure 2

microfossils with calcareous shell, slightly cemented by a fine carbonatic cement. Because of the poor cementation, as well as its porosimetric characteristics (high porosity and a prevailing presence of pores of small dimensions), this material has low durability, above all in terms of saline crystallization processes, the main cause of deterioration in the region of Southern Italy. The mortar in the joints between the ashlars in the wall is made up of a binding agent based on lime and an aggregate made of plenty of quartz and fragments of bricks. The mortar also contains many scattered lumps of limestone, visible even to the naked eye. The mortar in the internal filling is made up of a little lime as a binding agent, often in the form of big lumps; there is earth widely spread in the lime. The aggregate is made up of fragments of Lecce stone of varying dimensions (from about 0.55 mm. to a few centimetres), granules of quartz, fragments of calcareous shell, fragments of bricks and earthy lumps. In both types of mortar the DRX analyses have shown the presence of only calcite and quartz.

Table 1

samples	cond. (μ s)	ions (weight %)								
		F ⁻	Cl ⁻	NO ₃ ⁻	SO ₄ ²⁻	Na ⁺	NH ₄ ⁺	K ⁺	Mg ²⁺	Ca ²⁺
1	51	0,02	0,12	0,23	0,18	0,06	0,03	0,11	0,03	1,09
2	60	0,01	0,18	0,63	0,13	0,10	0,03	0,12	0,04	0,84
3	76	0,01	0,45	0,91	0,10	0,23	0,07	0,21	0,08	1,18
4	64	0,01	0,37	0,66	0,10	0,19	0,04	0,14	0,08	0,78
5	62	0,02	0,21	0,29	0,14	0,09	0,02	0,08	0,07	1,11
6	53	0,02	0,09	0,12	0,14	0,05	0,06	0,06	0,07	0,81
7	56	0,01	0,16	0,11	0,09	0,08	0,01	0,12	0,03	1,29
A	82	0,02	0,48	1,20	0,15	0,25	0,06	0,23	0,09	0,92
B	101	0,02	0,73	1,24	0,23	0,25	0,04	0,17	0,28	0,93
C	71	0,02	0,29	0,36	0,36	0,11	0,03	0,15	0,19	0,76

The general state of conservation of the walls is rather compromised, even though the degree of deterioration varies from stretch to stretch. The most widespread deterioration is due to the presence of plants which develop, almost uninterruptedly, along the whole length of the crowning-piece of the wall, including the merlons.

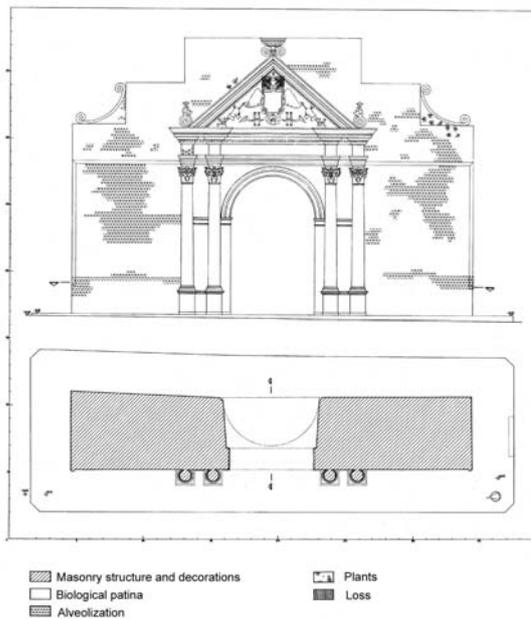


Figure 3

analyses of these latter were made by Ionic Chromatography; the results are shown in table 1. As can be seen, the presence of soluble salts is not negligible; the most abundant anionic species are nitrates and chlorides, followed by sulphates while K⁺ is the most present cation (the high amount of Ca²⁺ is not significant, in that is also due to the contribution of the carbonatic constituent of the materials). The concentrations of soluble salts have the same values from the surface until 2 cm. depth inside the wall. The presence of nitrates is probably due to the anthropic pollution, while

The vegetation present on the sentry walkways is even more well-developed and includes plants with trunks. The scarp part of the wall and, in some sections, the part above the horizontal cordon, almost as far as the crowning-piece, is widely affected by serious erosion, crumbling - which in many cases leads to a withdrawal of the surface of the ashlar - and alveolization. In some zones losses can be observed, probably due to the complete crumbling of material. On the stone surfaces which are conserved better, there is a notable presence of lichens. A representative mapping of the morphologies of decay referring to a stretch of the bastion (North-West face) is illustrated in figure 2.

In the same stretch, along a vertical reaching 2.4 m. about in height, some samples of stone materials and mortars were taken, with the aim of verifying the presence of soluble salts. The

the chlorides could arise from the marine spray. The distribution of the soluble salts in the different areas of the walls will be investigated by a widespread sampling in the next steps of this research.

The state of conservation of the gate (Fig. 3) is undoubtedly better than that of the walls. These conditions are probably due to the special maintenance work of 1889 and 1934. The most common pathologies are alveolization, erosion and crumbling, whereas in some points in the basement area, though covered by plaster, detachment can be seen.

3. "CATALAN-STYLE" DOORWAYS

The city of Lecce boasts numerous Catalan-style doorways decorating the entrances of aristocratic palazzos. The epoch of the construction of these decorative elements goes from about 1530 to 1580; the design matrix can be traced to some examples present in various zones of Southern Italy (Naples, Capua, Palermo, Syracuse, Bari, etc.).

From a census carried out inside the old centre we found 26 doorways (Fig.1); they can be divided into three typologies on the basis of their different ornamental motifs:

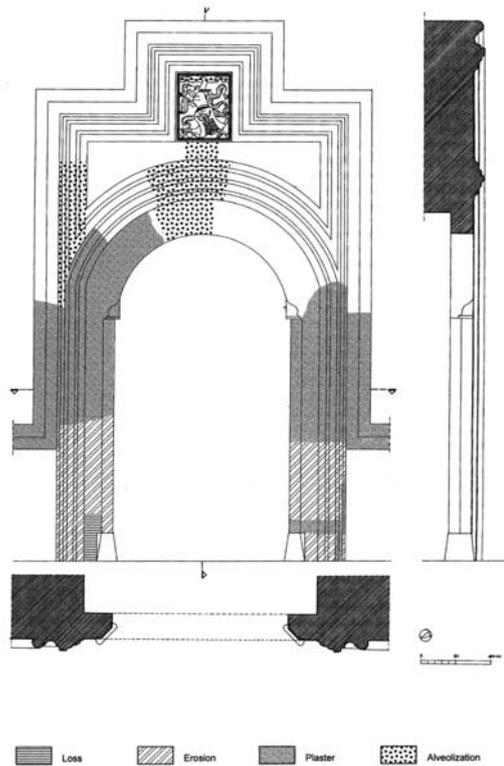


Figure 4

of the material, which often destroy the original features, in particular in the moulding of the cornices and the coats-of-arms characterised by rich sculptural flourishes. These morphologies of decay affect essentially the parts made in "Lecce stone", while those in "carparo" mainly suffer from problems of erosion. In the better-preserved parts, light orange-brown colouring can be observed. One case study, relative to a doorway (*Palazzo Giustiniani*) built in 1550 and representative of the conditions of deterioration previously described, was examined by us; it is

TYPOLGY A. Doorway with low curve arch and noble coats-of-arms engraved in a rectangular cornice folded or rectilinear down to the footing. Some of these doorways have a window placed high up.

TYPOLGY B. Doorway with low curved arch engraved in a rectangular frame, folded or rectilinear as far as the footing, with balcony above.

TYPOLGY C. Doorway with low curve arch engraved in a rectangular frame, folded or rectilinear, as far as the footing, with a noble coat-of-arms in the centre of the arch.

They were made from local stone; some of them are in Lecce stone alone, while others have the footing area made of a material which is calcarenite too, but of greater durability, and known locally as "carparo".

Owing to the characteristics of poor durability of the constituent materials, as well as to the state of neglect of many of the buildings in the old town centre, the doorways are usually in a bad state of conservation. They are almost always covered in a layer of not very coherent black deposit, which is more noticeable in the zones where the decorations are less projecting. The deterioration pathologies which most compromise the conservation are alveolization and crumbling

illustrated in the relief design in which the diverse morphologies of deterioration present on the stone's surface are represented (Fig.4).

4. RESULTS

Some examples of the architecture from the Renaissance epoch inside the city of Lecce (a stretch of the city wall with bastions and the gate which was once connected to this, the "Catalan-style" doorways inside the noble residences) have been made the object of this study. As far as regards the walls and bastions and the gate (*Porta Napoli*), the cognitive study was carried out by means of geometric relief, the study of the constituent materials and the mapping of the deterioration. Some preliminary analyses of the soluble salts present in the walls were also carried out. In this first phase of research, considering the vast perimeter of the wall, the most significant stretch from the point of view of extension and architectural elements inserted into the wall (city gate and bastions) was examined. The historical research for the reconstruction of the restoration and the transformations undergone over time was limited to *Porta Napoli*, while the research into the walls is still being carried out. The study of the "Catalan-style" doorways entailed the collection of documentation aimed at the recognition and knowledge of such objects. After a census, never previously carried out, we went on to a geometric relief and the study of their state of conservation. We have illustrated in this work an exemplary case, while a systematic study embracing all the doorways individuated is still being carried out. All the information collected and that still being worked on comes together in a databank which constitutes a cataloguing tool for the constructions in question and also gives cognition back –up inherent to the history and the degradation, aimed at the survey and monitoring of architectural organisms, as well as at the programming of restoration and enhancement work.

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