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THE STUDY OF MEDIAEVAL ARCHITECTURE FROM AN ARCHAEOLOGICAL PERSPECTIVE

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Résumé: L’ÉTUDE DE L’ARCHITECTURE MÉDIÉVALE DÈS L’ARCHÉOLOGIE. Depuis les années 80, à l’Espagne on s’étudie l’Architecture historique dès la perspective archéologique. Jusqu’à ce moment, les études historiques sont objets exclusifs de l’histoire de l’Architecture ou de l’Histoire de l’Art, sans prendre en considération que le site archéologique non est seulement le sous-sol du bâtiment mais encore tout ce que s’élève par-dessus. Attendu, donc, que les architectures sont documents historiques susceptibles d’être étudiés avec une méthodologie archéologique, on c’est développé l’Archéologie de l’Architecture, qu’étudie précisément l’architecture dès une perspective archéologique. À notre Laboratoire, nous avons appliqué cette méthodologie à l’étude de constructions médiévales, sur les études de la stratigraphie de ses paramètres. Nous diviserons notre communication en deux; sur la première nous ferons une brève explication sur notre méthodologie archéologique ou Lecture de Parements; et sur la seconde l’application de cette méthodologie à l’Église de S. Fiz de Solovio (Santiago de Compostela, A Coruña, Spain) liée à la découverte des reliques de l’Apôtre Saint-Jacques et à la fondation et au déroulement de la cité de Santiago de Compostela.

Abstract: The archaeological perspective has been applied to Spanish historical Architecture since the 1980’s. Before then, historical buildings had been studied either through Architectural History or Art History. These traditional studies did not consider historical buildings as archaeological sites in the way that we do, including not only the foundations of the building but also what is found on the surface. The Archaeology of Architecture, the study of architecture from an archaeological perspective, considers historical buildings as historical documents which may be analysed through the application of an archaeological methodology. In our Laboratory of Archaeology and Cultural Forms, we have applied this methodology to the analysis of medieval buildings, studying the stratigraphy of the paraments.

Keywords: History of Medieval Art; Archaeology of Architecture; stratigraphic analysis.

We have organised this lecture into two sections. In the first, we will explain the archaeological methodology or Parament Readings. Secondly, we will illustrate our technique using the example of the church of San Fiz de Solovio (Santiago de Compostela, A Coruña, Spain). This church is linked with the discovery of the relics of the Apostle Saint James (‘Santiago’ in Spanish), and with the founding of the city of Santiago de Compostela.

A BRIEF INTRODUCTION TO STRATIGRAPHIC ANALYSIS AND THE ARCHAEOLOGY OF ARCHITECTURE

Unlike traditional studies about mediaeval architecture which use the perspective of Art History or Architectural History, in this text we propose a way of exploring this architecture from a perspective which is different yet complementary to the first: the Archaeology of Architecture. We propose dealing with mediaeval architecture and the architecture of historical buildings in general (when there is stratification) using an archaeological methodology.

The archaeology of architecture, as its name implies, is a discipline which studies historical constructions from an archaeological perspective, using an archaeological methodology in particular. It first appeared in Italy in the 1970’s and 1980’s, with its application and development in Spain starting in the mid 1980’s, as a result of contacts with Italian sources. In the Laboratory of Archaeology and Cultural Forms (ITR, USC), a line of research has been developed in recent years within Archaeology of Architecture which focuses on prehistoric as well as historical architecture, and essentially deals with the following aspects: the analysis of perception (Mañana Borrazás 1999), spatial analysis (Ayán Vila 2000), and the stratigraphic analysis of ornamental elements (Blanco Rotea 1997; 1999). The last is the subject of this paper.

What is stratigraphic analysis or ornamental reading? It is important to underline that this is a field which belongs to the much wider discipline of archaeology of architecture, which includes other types of analysis including those mentioned above. When dealing with the study of a historical building (in our case, a mediaeval building) with archaeological methodology, there are two essential conditions; we must consider the building as a site (the first condition), which as such is subject to a process of stratification (second condition) and which as such should be analysed using an archaeological methodology. The building is a prolongation at subsurface level, where the elements which form the subsurface and raised parts of the site are the product of archaeological stratification - of constructive and deconstructive activity, of anthropic transformations or other actions caused by natural agents (Aznarate 1995). The building should therefore be considered as an important part of material culture, a historical document with archaeological attributes that is susceptible to be studied, using an archaeological methodology which in turn supports other types of studies.

The development of this methodology has been directly related to the increase in Mediaeval and post-Mediaeval
**Stratigraphic analysis or elevation readings**

<table>
<thead>
<tr>
<th>Object of study</th>
<th>Prothistoric and historical architecture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>&quot;Harris Method&quot;</td>
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</table>
| **Objective**         | • Identify, organize and date the different stages of buildings  
                        • A detailed analysis of units and stratigraphic groups  
                        • To identify the building's stratigraphic sequence |
| **Methodology**       | **Nature**  
                        • Instrumental  
                        • Flexibility  
                        **Instruments**  
                        • Graphic documentation  
                        • Sectors  
                        • Numeration  
                        • Analytical records  
                        • Lists  
                        • Diagrams  
                        **Analytical procedure**  
                        • Graphic documentation, Planimetry  
                        • Differentiation of sectors  
                        • Differentiation, numeration and description of elements  
                        • Interpretation of temporal relationships  
                        • Creation of diagrams  
                        • Reduction, periodization and correlation  
                        • Identification of activities  
                        • Simplification of elements  
                        • Historical documentation  
                        • Synthesis and dating  
                        • Creating an archive for compiling information  
                        • Publication |

archaeology, periods in which the increased and improved conservation of architectonic elements made it necessary to adapt Harris method of stratigraphic analysis to the study of historical buildings. We believe that while on one hand this has been a positive step for archaeology and architecture itself, as it has benefited the development of new analytical methods making it possible to explore the 'life' of a building, contributing to its comprehension, on the other it has led to a direct confrontation with the History of Architecture and Art History.

The methodology for the analysis of ornamental elements is an analytical process through which we obtain the stratigraphic sequence of historical constructions, which in turn makes it possible for us to establish relative chronologies, although we need the support of other types of analysis such as archaeo graphic, archeometric, typological or chronotypological analyses, in order to obtain absolute chronologies (Quiroga 1994: 145-6). All of these types of analysis form part of Archaeology of Architecture, and must be understood jointly and in a complementary manner, although we only deal with some of them.

As we said before, this analytical methodology adapts archaeological stratigraphic study through the so-called "Harris method" to the layout of historical buildings. It consists fundamentally in identifying, organizing and dating the different stages through which the building has passed, from its construction until the time of study, using a detailed analysis of its elements, activities and constructive-destructive processes. The starting premise is that historical constructions are stratified objects which follow stratigraphic principles (Caballero and Latorre 1995: 38-9); buildings are subject to transformations produced by a continuous series of constructive actions which form a stratigraphic sequence, which we have to extract using a suitable archaeological methodology, the stratigraphic reading of ornamentals.

THE METHODOLOGY OF STRATIGRAPHIC ANALYSIS

There follows a brief explanation of the stages in this process.

Firstly, we must differentiate and define the parts of the building, which contain the historical data we will recover using analytical instruments, data which will be dealt with using the analytical process, in order to both conserve and communicate it (Caballero 1992: 3). We will briefly define the walled stratigraphic elements (WSE) that form a historical construction: a stratigraphic element is the smallest unit with stratigraphic individuality and homogeneity: it may have materiality and volume as an actual element, or simply be a surface, the interfaces which define these elements, both vertical and horizontal. Activity is the group of elements and their interfaces which have the same function, and belong to the same chronological period. The building is the final unit which reaches us, formed by different types of activities.

All of these stratigraphic units are subjected to stratigraphic relationships which we need to identify, as they will define and order the stratigraphic sequence of the building. Firstly, we have physical relationships: one WSE is joined to another, is supported by another, cuts through or divides another; secondly, there are temporal relationships, which may be of contemporaneity or anterior-posteriority; finally, we must consider if these relationships are certain or dubious, direct or indirect (Caballero 1996: 14).

Once the WSE have been defined together with the relationships which exist within them, we then move on to describing the stages of the working process we must follow in order to deal with the study of a historic building. Although here we propose a series of methodological rules
to be followed if work is to be carried out in an orderly and systematic manner, this method is characterised by its flexibility, with these rules being adaptable to each specific case we analyse. The actual characteristics of the building, the instruments available to the analyst and other details, may make it necessary to adapt the methodology as long as the work is carried out seriously and systematically, and the basic stages of the process are followed.

We should firstly make a graphic documentation of all of the parts of the building, either planimetrically or photographically. In this way it is possible to recover its total volume and be able to act on it. The type of documentation used should be suited to our purposes, the type of building and the resources we have available, although all observable data should be recorded. This phase is essential before carrying out an analytical intervention. The building should then be divided into working sectors, a merely instrumental division which helps make work easier and more agile, particularly in the case of large, complex constructions. The use of direct observation or graphic documentation allows us to make a differential analysis of the units and a reading of their relationships.

In the second phase, we will move on to differentiate elements and interfaces according to stratigraphic criteria, observing the actions which created them or their constructive dimension, the relationships they have with other units or their spatial dimension and their temporal sequence or chronological dimension. We will differentiate the contours of all of the homogenous constructive actions and relationships which existed before, after and during each action. As we gradually differentiate the stratigraphic units, these are given a number, which serves as a code we may use to recover all of the information which exists about the stratigraphic unit, as well as the instruments which correspond to each unit. The next stage is to create the analytical documentation for each WSE. This may be of several different types, although the basic fields which should be covered are: identification and description of the unit; a field which includes the actions and relationships between units, as well as a diagram or matrix; interpretation, and finally references to other instruments, the name of the person responsible for the work, date of creation and some archive data.

Once the WSE have been identified, numbered and described, we should then proceed with the analysis of the stratigraphic relationships which exist between them, in order to produce the diagrams which will give us the final stratigraphic sequence, essential for the interpretation of the building's historical process. This stage of description implies a very important and delicate analytical operation, as here we are attempting to "read" the direction of time in the relationships between constructive parts. These relationships have a spatial-temporal dimension, and it is very important to understand their chronological value in order to be able to interpret them and then produce a diagram which reflects the constructive processes involved.

Figure 1.
in the building, together with its historical significance. The synchronic relationships of each original constructive moment are reflected in the horizontal steps of the diagram, with vertical rows showing the diachronic evolution of its reconstruction (Caballero 1992: 15). We should firstly create diagrams of elements, and then diagrams of synthesis.

Next are the processes of synthesis and dating. Here we recover the unity of the building in an attempt to understand its totality, so that the building progressively recovers its character as a constructive unit. We now enter into an interpretative process. We should firstly eliminate the redundant relationships between units, as the diagram should only represent direct relationships, both horizontally and vertically. Then the processes of periodization should be estimated: we deduce the historical periods through the relative chronology obtained for the situation in the diagrams of elements, further assisted by chronological indicators, which will give us absolute chronologies (Quiros 1994: 145-6). Finally, elements should be correlated, grouping them together in increasingly complex units or contexts, until we once again arrive at the main unit, the building itself.

Historical analysis is the final stage of the methodological process. Here, historical data are interpreted, obtained either through the analysis itself or by the application of other disciplines. As we know, Archaeology of Architecture has mainly historical aims: until now we have reduced this finality to basically deciphering the chronological aspects which defined the activities or building itself, but without concerning ourselves with what function these constructive processes had. This is the moment to interrelate the data obtained from the analysis with historical data, as well as with possible architectonic theories which help us to situate the construction within the different historical-artistic periods throughout which it has existed.

**PARAMENT READINGS IN THE CHURCH OF SAN FIZ DE SOLOVIO** (SANTIAGO DE COMPOSTELA, A CORUÑA, SPAIN)

The first phase of our study in the church of San Fiz de Solovio was a complete documentary analysis of the building, which we contrasted in the final stage of the investigation with the data obtained throughout the whole reading process. We reached the following conclusions.

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1 This document is a brief summary of the methodological process and results of the reading. For more information see 1997, 1998a and 1998b.
Some sources believe the church to be the oldest in the city of Santiago de Compostela; we do not know when its foundations were laid, although López Ferreiro (1899: 8-9) estimated between the fifth and sixth centuries. All of the authors we consulted agree that it was erected by the end of the eighth or beginning of the ninth century, and was closely linked with the legend of the discovery of the tomb of St. James the Apostle. We know that subsequently a series of reforms were made up to the eighteenth century, arriving at the building we see today. We also know that there were later additions: in 1952 the Epiphany Tympanum was added to the façade (Perrin 1993); in 1970 the building was restored (Perrin 1982: 140) and again in 1998. The first reform to the initial construction that we know of was the reconstruction of the church by Bishop Sisnando I at the beginning of the tenth century. After having been demolished by the Moorish chieflain Almanzor in 997, it was rebuilt by Bishop San Pedro de Mezonco (Fernández and Freire 1880: 190). In 1122 Archbishop Gelmírez renewed it “from the foundations up” (Suárez 1950: 337); according to Perrin, at that time it had a nave and apse which were unique. The nave was smaller than it is today, a fact which led to the reforms of the eighteenth century, and it had a covered porch which today contains the choir. There were no further reforms until 1625, when work began on a series of chapels which were added on laterally, and led directly to the reforms of the eighteenth century. In 1701 the architect Simón Rodríguez presented a project to rebuild the church, including the building of a belltower which would introduce a new typography into Galician Baroque architecture. These reforms affected the church as a whole, culminating with the reforms of 1998.

Continuing with the methodological process, the next step was to create adequate graphic documentation which differentiated the different constructive elements present in each of the paraments analysed. We also took photographs of the whole church, which were particularly useful when dealing with elevations. Work was divided into two sectors: sector 01 for the northern elevation, and sector 02 for the southern. Visual observation started at this point, when we differentiated units directly on the parament, then including them in the plan. We used the criteria of individualisation and stratigraphic type. We then numbered all the elements and interfaces, starting with 1001 on the northern elevation and 2001 on the southern, indicating this series on the plan. Once this had been done, we started to catalogue all of the differentiated and numbered elements, collecting this information synthetically in lists of elements. Once the individual entries for each element had been completed, we had available the temporal and physical relationships between elements, meaning we were able to move on from elements to activities (hereafter referred to as AA). We were able to identify 4 AA in each elevation, for which an analytical record was also created. These AA also featured different stages of construction work. At this time we defined the stratigraphic sequence and determined the AA that comprised the building. We firstly made diagrams of records, both for elements and AA. To make the process of creating the final diagram

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2 The reading refers to the northern and southern interior elevations of what is today known as the central nave, and which in its day was the only nave of the medieval church, as because the walls are not covered with plaster, they are the only type where it is possible to carry out a complete stratigraphic analysis.
easier, we made partial diagrams of elements in each AA, and by putting them together we created the final diagram of elements which contains the complete stratigraphic sequence of the building.

We could then differentiate four AA in both elevations, which were: 101 and 102, remains of mediaeval paraments; 102 and 202: different reforms carried out in relatively recently (seventeenth to eighteenth centuries); 103 and 203: restoration carried out relatively recently (eighteenth century); and 104 and 204: modern restoration work (1970 and 1998). Finally, and with the support of the data obtained from the analysis and historical documentation we had available, we could determine the different stages of the building:

STAGE I: ROMANESQUE STRUCTURE OF THE BUILDING

We believe that this structure corresponds to the reforms carried out by Gelmirez in 1122, of which only a few elements remain in the northern and southern elevations which today form the central nave. There are no remains within the building from previous periods included in the bibliography. The walls are made of granite blocks placed in horizontal rows; although it appears to be the same as other parts of the elevations, we know that material was reused from them in the reforms from the eighteenth century. This may be seen in the three processional crosses which are found at the base of two pillars, and which appear to be incomplete, and three more found in other parts of the building. The lack of filling material between the rows of granite blocks which we had thought to be Romanesque, and those from later reforms, was another reason which led us to consider that they did not belong to this period. We believe that the reforms carried out by Gelmirez probably respected the old layout of the church, but since no elements from before 1122 exist, it is not possible to demonstrate this point.3

The ruinous state of the Mediaeval paraments is the result of a series of reforms which took place in later stages of the building, at times using the same type of material (reusing building materials), or using granite blocks. We also believe that the design of the Mediaeval nave stopped at the point where the choir begins, where there would have probably been a covered portico which was eliminated when the nave was lengthened in the eighteenth century. We base this supposition on the fact that from where the second arch starts (from west to east) until we reach the elevation of the western façade on both sides, we did not find any remains of possible Mediaeval paraments, only granite blocks. Finally, the mediaeval building was lit by slit windows which shed light inwards, with an arch in their upper part. Only three of these remain in the southern section, two of which were split by the opening of archways into the chapels, and one in the northern section. Some of the reforms which we saw in the northern elevation appear to correspond to these windows having been closed. Apart from one placed in the southern elevation, the rest were covered either in the eighteenth century or in the 1970’s.

STAGE II: MODERN REFORMS AND REBUILDING

The volume of the present-day building was created in the period between 1625 and the start of the eighteenth century. The changes were the result of different

3 This problem would be solved by excavating in the area of the building, completing the results of the elevation reading with the data conserved in the subsoil of the church.
requirements which created different working stages. In the first stage, it was the need to enlarge the building and adapt it to a new architectonic style, the Baroque (and its sub-stages). In the second stage, there was a change in functionality, when it was annexed as the chapel of the Palace of the Count of Altamira, long-vanished and whose site is now covered by the city’s marketplace (leading to the second stage of construction work).

The first stage of construction work involved the opening of a series of lateral chapels⁴ which would lead to the ruin and collapse of several parts of the parament, which were either restored with re-used masonry or granite blocks. It also involved the extension of the navel, and its being covered by an unsupported dome, whose remains may be seen in a horizontal grove which divides the northern and southern paraments of the nave from the choir to the chancel (a groove into which the dome was set), as well as in two parallel vertical grooves which meet in the second and third pillar on both sides of the nave, and which descend from the horizontal groove (the remains of the pillars which supported the dome).

In a second stage of work, we have included the reforms which resulted from the church being annexed as chapel to the Palace of the Count of Altamira. At this time a gallery and high choir were also built, and a series of openings added which made access to the church possible directly from the Palace (in the northern elevation of the building). This reform meant it was necessary to destroy the dome so that access was possible from the gallery. Today only the upper choir remains; however, it is possible to see the remains of the gallery from the series of slots carved into the wall to support the beams and crossbeams which exist on both sides of the nave. They start at the height of the choir and continue until the start of the apse. At this time the slit windows in the northern elevation were also destroyed to make way for gateways, and the only one which remains is hidden from view. We also believe that at this time the roof was raised on the central nave, giving it more vertical space needed for the building of the gallery. We corroborate this thesis by the presence of a series of large, covered support slots situated beneath the present ceiling, which we believe supported the beams of a previous covering.

**STAGE III: CONTEMPORARY RESTORATIONS**

The building has undergone three restorations in recent times, although only the last two, from 1970 and 1998, are visible in the elevations which contain them (the northern and southern interior elevations of the central nave). Neither of them have affected the interior structure of the church, and in both cases are simple ‘repairs’, which dealt with cavities, the rejoining of building materials, the covering of some parts of the parament (particularly those with granite blocks), or the covering of some slit windows. These are really reforms rather than rehabilitation work which took place in the church.

To sum up, the reading of paraments has given us a series of data which have helped us to establish the precise limits of each stage, which had been quite confused until now, and to also help with the identification of a series of stages of work which we were not able to identify using historical data, as they were not included in any of the sources we consulted. We would again emphasise that this was only a partial reading, and that a complete analysis of the building is necessary to present more data for this study. This would mean removing all of the plasterwork covering most of its elevations, and excavating an area within the church and outside it.

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