A Methodological Approach Towards Conservation

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Since conservation became a recognized discipline, professionals involved in conservation projects have tried to find the best criteria for their interventions. Often these criteria remain quite vague, based on the idea that every historic building has its own special conditions, which make its problems different from other buildings. This conviction, which is appropriate at one level, has serious consequences due to the lack of a consistent methodology. More than a lack of criteria, we might talk about a lack of ‘habit’ in identifying values in the Mediterranean region: the concept of values is much more widespread in Anglo-Saxon countries.

If we take a look at the history of conservation, there are a number of cases which are often used as models: for example, the Colosseum or the Arch of Titus in Rome, both interventions which are greatly admired and included in many conservation manuals. More recently there are projects which are widely accepted by the heritage conservation community as well: the paper explores the Palace of the Partal (Granada), the Villa Romana del Casale (Piazza Armerina), the theatre at Orange, and the Insula Orientalis I in Herculaneum. In this article, I suggest that there are constant elements within these conservation projects, reflecting typological, structural, constructional, functional, aesthetic, formal, historical, and symbolic values. These features represent a way of planning a conservation project and a critical methodology to judge the outcomes of the project in an objective manner. The methodology is qualitative rather than quantitative. All historic buildings have a set of values developed from their origins and throughout their history. These values can be analysed to extract the most important elements to be preserved. Analysing the values of our built heritage will allow us to create better decision-making processes.

KEYWORDS monument conservation, values, theatres, Rome, Piazza Armerina, Herculaneum, Orange, Granada
Introduction: the Roman theatre of Sagunto

The origin of this paper was a talk paper presented at the IV Bienal de Restauración Monumental, held in Madrid in January 2009 (Gómez-Robles & Quirosa García, in press). The workshop focused on the development of conservation between 1975 and 2000, a period characterized in Spain by the political transition from the old dictatorship to the new democracy. During the workshop a large group of specialists reviewed the most important conservation works in Spain: the most discussed and controversial was the restoration of the Roman theatre of Sagunto, carried out by Giorgio Grassi and Manuel Portaceli between 1984 and 1992.

This Roman building, constructed in the first century AD, suffered gradual decay over a long period of time, and then dramatic damage during the war between France and Spain in 1811, which left it in a dreadful state. A series of conservation works followed, each of which led to a distortion of the original construction. In 1984 the Regional Government of Valencia, responsible for the theatre, requested Giorgio Grassi to carry out a study for a potential intervention. Instead of the requested study, Grassi submitted a complete conservation proposal with five aims: to consolidate the remains; to demolish the additions from the twentieth century; to create a museum for the pieces belonging to the building; to recover the Roman typology of the theatre; and to reinstate performances at the Roman theatre. In order to achieve all these objectives, the project proposed the complete reconstruction of the *scaenae frons* (the elaborately decorated background of a Roman theatre stage) and the partial reconstruction of the *cavea* (seats). Despite the opposition expressed by a section of the public, the conservation work started in 1990.

In 1992 a Spanish citizen pressed charges against the project, which was stopped in 1993. The lawsuit went on for eight years, until in 2000 the Supreme Court of Spain passed a sentence forcing the demolition of all the recently reconstructed areas, in order to return the theatre back to the state it was in before the beginning of the project. The sentence was based on article 39 of the Spanish National Law of Historic Heritage, which specifically forbids the reconstruction of historical buildings. Attempting to enforce the verdict, however, caused a new problem: how to eliminate all the added elements without destroying the original historic fabric? This proved to be impossible and the demolition was not enforced. This long-running episode in the history of Spanish conservation took another turn in 2007 with a change in the regional law by the Government of Valencia. This alteration, unlike the national legislation, allowed for the reconstruction of historic buildings when some evidence and remains survived. So now there was an argument if one was to destroy the new elements to comply with the 2000 national verdict, they could be reconstructed immediately in accordance with regional law.

There have been many opinions, both for and against the project (Almagro, 1993; Barrero & Carauz, 2001; Giménez et al., 2003; Grassi, 1985; 1996; Hernández Esteban, 1991; Marco Molinés, 1999; Portaceli, 1993; 2003). While most of these were very passionate, few were unbiased and unemotional. Followers of modern architecture considered the restoration an example of why we should intervene in historic buildings, claiming that this gave conservation a new language. Indeed, the project was a finalist in the European Union Prize for Contemporary Architecture Mies van...
der Rohe Award, in 1994. In contrast, conservation specialists expressed their disagreement with the work in long articles, attacking the creators for their lack of methodology and professionalism. One of the most criticized aspects of the project was the lack of serious historical research, which should be considered an essential part of the preparation for any such project. The dilemma of this project raised an important question: *is there a correct way of conserving our architectural heritage?*

In the case of the theatre of Sagunto, the creators of the project argued three specific points to defend their work:

1) That a large number of interventions had taken place at the monument since 1930. Grassi and Portaceli suggested that between 80% and 90% of the building was already reconstructed and ‘false’. Reconstruction work carried out between 1930 and 1978 had indeed made significant changes to the image of the monument, but most of these were superficial. The estimate of 80–90% is probably exaggerated, while the perception of ‘falseness’ is perhaps accentuated because most of the original fabric was not visible behind the restorations.

2) The importance of the use of the building: the project intended to return the space to the citizens. Certainly there is no better example of the recovery of a piece of historic architecture, as the theatre essentially has not changed function in twenty centuries.

3) Typology: Grassi argued that Roman theatres were dissimilar to Greek theatres, and the image of Sagunto was confused because of its appearance as a Greek structure. According to Grassi it was ‘un teatro alla greca [a Greek-shape theatre]’ (Grassi, 1985: 7; 1996, 59), but unfortunately he never fully developed this argument.

**Theatre typology**

The basic difference between Greek and Roman theatres is that Greek theatres were open, without sectors, with a simple scene structure, located outside the city and often situated on a hill to save supporting structure; the Roman theatre was closed, semicircular, strongly divided into sectors according to social hierarchy, had a substantial and very decorated stage structure, was located inside the city (or close to the city walls), and with a strong structure of vaults to support the *cavea*.

Perhaps the most interesting question is ‘why’ they were different, especially as Rome inherited drama from the Greeks and one might expect that the architectural space to stage these performances would remain the same. Indeed, in the beginning, Rome often performed Greek plays without translation in temporary wooden theatres.

The Roman theatre, closed, compact, and divided in sectors, is the perfect metaphor for Roman civilization. This typology combines the whole concept of society, politics and cultural development in ancient Rome. The Romans erected strong structures of vaults over flat ground to show their power and domination. They also made closed buildings, easily controllable. The theatres became more decorated and were used as political and propaganda tools in the service of the Empire. The decorations also included plundered statues from Greece and Asia Minor to attest to their military prowess.
The theatres also accurately mirrored the Roman class-based social structure. Suetonius described the social distribution thus:

the senate decreed that, whenever any public show was given anywhere, the first row of seats should be reserved for senators; and at Rome he would not allow the envoys of the free and allied nations to sit in the orchestra, since he was informed that even freedmen were sometimes appointed. He separated the soldiery from the people. He assigned special seats to the married men of the commons, to boys under age their own section and the adjoining one to their preceptors; and he decreed that no one wearing a dark cloak should sit in the middle of the house. He would not allow women to view even the gladiators except from the upper seats, though it had been the custom for men and women to sit together at such shows. Only the Vestal virgins were assigned a place to themselves, opposite the praetor’s tribunal. (Suetonius Tranquillus, 121: Life of Augustus, 44)

The discovery of the Osuna bronzes confirmed the legal character of these social divisions and the fines for violating them. Roman theatres had physical separations, the *balteus* to keep the different sections apart, the *ima, media*, and *summa cavea*, and special spaces such as the *tribunalia* for the principals. Every social class had a very specific position in the building (Figure 1).

The image of Roman open theatres we have inherited is thus closer to the Greek concept. The destruction caused by the passage of time left us ‘un teatro alla greca’, a Greek-shape building. We have lost much more than an image: most of the significant features associated with the Roman typology have also been lost. Today, it is difficult for people to identify the political and social significance of such buildings. The very precise features that distinguish the Roman world from the Greek one have disappeared with the dissolution of this typology.

Understanding typology, therefore, is of great importance in considering the significance and value of historic buildings, as shown in this example. However, there are many other values in architectural heritage (below) that help us to better understand the monuments. In the case of the theatre of Sagunto, these were not identified and in reconstructing the stage most of them were destroyed (Figure 2).

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![Social distribution of the spectators in a Roman theatre](image_url)
FIGURE 2  The theatre of Sagunto before (a) and after (b) restoration works.
(a) Reproduced with permission from Lara Ortega, 1991: 117 & 2002: 35
(b) Reproduced with permission from Serviciode Avquitectura, Generalitat Valenciana
The values of monuments

The concept of values is widespread in many countries (e.g. De la Torre, 2002; Demas, 2002; Feilden, 1989; Jokilehto, 2008; Mason & Avrami, 2000: 13–26). The various values that can be attributed to historic monuments are held in varying degrees by different stakeholders. The success of conservation depends on safeguarding these values. What I consider to be key values are discussed below.

**Typological value**

This value is derived from the building’s architectural typology, refined through time to host specifically defined activities. Its features can change according to historic period and geographical position, even if used for the same function, suited to meet the cultural requirements of specific societies. For instance, Roman baths and Islamic baths have the same function, but their typological development is completely different, reflecting different social practices (Dow, 1996; Hillenbrand, 1994; Nielsen, 1990; Yegül, 2010). Geographical location can also be a factor. For example, within the same period a Hispanic-Muslim bath is different from an Ottoman one, because of differing local customs and environments. Typology has associated spatial, environmental, and lighting conditions, with spatial and visual relationships.

Identifying the typology in a conservation project is important because it helps to understand the construction processes, techniques involved and explain the original context. Perhaps, in conjunction with formal value (below), it is the most representative of all cultural values as we can identify and describe a civilization by observing their typologies and artistic forms.

**Structural value**

A historic structure contains information on the technical knowledge of past societies. Construction requires knowledge of available materials in a region and a good understanding of technology. Structural systems can characterize long periods, over wide areas. For example, the barrel vault, supported by thick walls, was typical of the early Romanesque period; rib vaults, supported by columns, were typical of the Gothic period: both spread throughout Europe regardless of national boundaries. Structural systems can be very stable in specific geographical regions, with small degrees of variability over time.

**Constructional value**

This value is closely related to the structural value. Different construction systems can produce similar structural solutions, and a constructive system can produce different structural solutions. For example, a double barrel vault made with Roman concrete and a groin vault made with Gothic ashlar, both supported by columns or pillars, are similar structural solutions with different construction systems. However, with the same Roman concrete it is possible to construct a barrel vault supported by walls.

Constructional value can change more easily than the structural value, as it depends on the availability of local materials. Thus it tends to be geographical variable, but can remain stable over time: a regional characteristic. It is common to find different cultures that developed different structural systems with the same materials.
and construction system throughout time. For instance, in the Iberian Peninsula many different civilizations have used rammed earth, from the Roman period to the nineteenth century (Figure 3). There are also rammed earth structures from the Punic period (c. 10th to 2nd centuries BC).

**Functional value**

Function is a cultural variable relating to the society who constructed and utilize the structure. Every civilization adds its own criteria, depending on cultural, environmental, and climatic factors. Function is an essential component of architecture. However, function can change, suffer alterations, or disappear, with the passage of time. Buildings, whose function is still relevant, for example a theatre, are easier to conceptualize and perhaps conserve. When the function has changed, or disappeared, reuse requires a more significant intervention. In that case, it is necessary to analyze compatibility: not every building is suitable for every activity. Other values could vanish in the adaptation process.

An edifice without use becomes a structure deprived of what it really is. It could become deserted or redundant if its other qualities are not strong enough to attract public attention, becoming a ‘museum piece’. This is especially dangerous at the time when many cities have more monuments than the capacity of heritage institutions to maintain them adequately.

**Aesthetic value**

Aesthetics are often seen as subjective and individual. Values are also often connected to the prior knowledge of the viewer. An informed spectator may perceive the lack of some parts, or the additions of others, because he has a previous image of the building. A simple example of this is an arch that has lost the voussoirs, conserving only the skewbacks and the abutments: the spectator who understands how it should look will see the entire shape in their mind.

To safeguard aesthetic values in a historic monument its principal elements, which are indispensable to its basic identification and conservation, must be retained.

**Architectural value**

Architectural value is derived from the decoration of the structure. In some cases, this element is of enormous importance because the strength of the architecture comes from the ornamentation. This is the case, for example, with Nasrid architecture, the Hispanic-Muslim art developed in south Spain between the thirteenth and fifteenth centuries, where the structure is merely a support for the embellishment. Even a deliberate lack of decoration has significance and can characterize particular periods.

Ornamentation provides relevant cultural meaning for a building. The form of decoration is a cultural variable which often relates to function: decoration can contain elements relating to the function for which the space was intended. It perhaps conveys the clearest messages from the society who built the edifice, and without decoration we may wrongly interpret the building, since ornamentation can offer a wide range of differing appearances on the same structural framework. This suggests that the role of decorative embellishment is important when carrying out a conservation intervention.
FIGURE 3 The use of rammed earth over time: (a) The Islamic ‘Torre del Homenaje’ of the Alhambra, Granada (thirteenth century) and (b) Ermita de la Virgen de los Dolores de Baguena, Teruel (eighteenth century).

a: Photograph by Emilio Gómez-Villalva Ballesteros; b: © the Centro de Estudios del Jiloca
**Historical value**

This is derived from the whole history of the building, from its origins to the present day. It includes the chronology of destruction, degradation, and change to the structure. Sometimes it is possible to find the traces of the building’s history in its fabric. In other cases, the clues have disappeared.

In a conservation intervention, this value holds the key to understanding not only the building and the historical background of the builder, but also the impact that subsequent societies have had on its use, transforming, enlarging or reducing the structure. Thus the building is one source for the understanding of the history of the structure, complemented by other types of evidence, such as documentary records.

**Symbolic value**

This value encompasses the representative value that people give to a monument when identifying it with specific historical events, individuals, religion, ideologies, culture, or tangible or intangible social images or icons. Communities develop such values over time and they can also change with successive generations, for whom meanings alter, gaining or losing importance.

Conservation interventions can retain or destroy such symbolism, and the balance can be a difficult one. In case of interventions in ‘ruins’, for example, the result of removing typical signs of desertion — inaccessibility, vegetation, patina, weathering, and erosion — may also eliminate the romantic sense of place of the monument.

**Model conservation: examples**

There are examples of conservation interventions — generally admired and often cited as references — that demonstrate the ability to keep and reinforce these values. I will now consider some exemplars.

In general, the discipline of conservation considers the interventions at both the Colosseum and the Arch of Titus, in Rome, with great admiration: many conservation manuals still include them as examples. The reason for their wide acceptance is their success in preserving key values. Many scholars, however, believe that they are interventions from a previous period, when different ‘rules’ applied.

**The Flavian Amphitheatre (Colosseum), Rome, Italy**

The restoration works undertaken at the beginning of the nineteenth century on the Flavian Amphitheatre, better known as the Colosseum, are one of the milestones in the history of monument conservation (Jonsson, 1986: 28–38; Jokilehto, 2008: 77–79, 85–87). Two architects, Raffaele Stern and Giuseppe Valadier, worked on the building in two different periods, to solve the problems due to the plundering of ashlars and the earthquake of 1703. The interventions halted the destruction processes with two diverse systems.

Stern built an enormous buttress, halting the collapse. He consolidated the structure by filling in the empty space under the arches in the last modules with brickwork. The voussoirs, that were almost completely dislodged, remained suspended in the wall filler (Figure 4a).

Valadier reconstructed several arcade modules with bricks, imitating the classical orders in a simplified way, but covered with a patina in order to imitate travertine.
The simplification of ornamental elements and the use of a different construction material emphasized the restoration works (Figure 4b).

The main objective in these conservation interventions was to stop the rapid decay of the building. The surviving original elements were enough to give an understanding of the typology of the structure, and even to maintain the use of the structure for occasional shows by using simple wooden covers over the central structures in the arena. The new additions had the same behaviour as the original elements, with the same system of counteracting forces. Both restorations introduced the missing ‘push force’, reinstituting the original balance of forces, using identical structural rules. The construction system employed for the restoration was similar to the original one, but used bricks instead of travertine for external work (brickwork had been extensively utilized in the original internal structures). The use of brickwork assured there would be no confusion between the old and new structures.

Both interventions aimed to restore some of the aesthetics of the Roman edifice, reducing the perception of damage that had existed before the restoration works. In addition, Valadier’s project attempted to recover the form of the building, reconstructing the classic orders so important for the architectural language of Rome. Stern’s intervention succeeded in making clear the building’s history by showing the moment of collapse, frozen forever in time and space. Overall, these restorations reinforced the image of the building as a symbol of Rome.

It is important, however, to recognize that these two wonderful restorations were partly the result of circumstances. Stern had to undertake urgent work because the...
collapse in the west side was imminent. Valadier had to carry out a project with a small budget, which was the main reason for choosing brickwork for construction. He had to give up the use of real travertine, except for capitals and bases.

In conclusion, the combination of these two interventions strengthened several values of the Colosseum: structural, constructive, aesthetic, formal, historical, and symbolic ones. In addition, they did not damage the typological and the functional values.

**The Arch of Titus, Rome, Italy**

The Arch of Titus is another paradigmatic case in the history of conservation and restoration (Watkin, 2009: 188–192; Jokilehto, 2008: 83–85). The arch was constructed in c. 82 AD by the Roman Emperor Domitian and is located on the Via Sacra, just to the south-east of the Roman Forum. It survived inside a medieval fortified tower. The restoration project, planned by Raffaele Stern and undertaken by Giuseppe Valadier in 1821, comprised the removal of later additions, the reassembling of original pieces, and the reconstruction of elements that had been lost. The new elements were made of travertine, instead of marble, and in a simplified style to distinguish them. The core of the structure was altered from the original Roman *opus caementicium* to brickwork, although the constructional and the structural concepts remained the same.

Although this restoration had both positive and critical reviews at the time, almost two centuries later our perception of Valadier’s intervention are more favourable. The restoration recovered the form and visibility of an isolated triumphal arch and gave it the status of an urban milestone (Figure 5).

This image of isolated urban milestone, with profuse decorations, is the essence of a triumphal arch. During the Empire, arches became landmarks over the main roads, paying homage to the Emperor’s victories and reminding people of the power of the Empire. The triumphal arch turned into one of the most used and effective propaganda tools of Roman government. The Arch of Titus retrieved its wholeness of form with the restoration of missing decorative elements, using simplified shapes, which underlined the importance of ornamentation on this type of structure.

The intervention, however, erased every trace of medieval fabric and history. Information on the medieval history of the monument is now only available through archives.

So we can see that Valadier’s restoration reinforced the typological, functional, aesthetic, formal, and symbolic values, keeping the structural and the constructive ones in some way, but clearly acting against the overall historical value. Perhaps an alternative would have been possible by partially integrating the medieval remains, but at the time they considered that the medieval construction was not important enough to be conserved. This decision left a small black mark on the conservation intervention, but overall the works on the Arch of Titus still made a magnificent contribution to the history of architectural conservation.

**The Palace of the Partal, at the Alhambra, Spain**

The conservation of the Palace of the Partal, the oldest palace in the Alhambra complex in Granada, was carried out by the Spanish architect Leopoldo Torres Balbás. He lived and worked a century after Stern and Valadier, and in a very different
environment, but his contributions are extremely interesting. His approach, which involved more conservative conservation concepts, changed what had been common attitudes in Spain until that time.

The Palace of the Partal was constructed in the early fourteenth century, with a front section open to the landscape and an interior portico in front of a large
pool. Much later dwellings were erected on the palace and by the beginning of the twentieth century the building was almost unrecognizable (Figure 6).

The Balbás’s conservation project started in 1923. It eliminated all the later additions and recovered the original form of the palace: special attention was placed on the decoration of the portico (Figure 7). The works consisted of the cleaning the building façades and ceilings, where modern paintings were removed, and reestablishment of the vertical position of the façade, which had moved c. 20 cm. A less well-known intervention was the introduction of a structural reinforcement in the wooden slab and in the roof, with a steel beam along the portico. The project also added several small I-shape joists in the portico ceiling — a very typical intervention from the beginning of twentieth century.

The restoration owes its notoriety to the work on the ornamentation in the portico spandrels. Torres Balbás used a creative method to restore the original designs. There was just one arch surviving, the central one, from the five originals: the architect used the drawing made in 1833 by John Frederik Lewis (Figure 6) as a reference and decided to reconstruct the four missing arches. In order to recover the texture, Torres Balbás remade the diamond-shaped decoration introducing random plaster pieces, which enables the viewer to perceive a harmonious texture when standing some meters away (Figure 8). He added some pieces of original Islamic carved plaster (yeserías), to give an idea of the original decoration, and constructed four pillars as

FIGURE 6 John Frederik Lewis’ drawing of the Torre de las Damas (also known as El Partal) from his 1833 ‘Sketches of Spain’.
Figure 7  (a) *El Partal* before and (b) after the restoration works carried out in 1923 by Torres Balbás.

© Esteban Chapapriá, 2008: 84–85
supports, because he did not find traces of columns (Torres Balbás, 1965: 85–86). Later, another restoration project substituted the pillars with columns, despite the fact that there was no evidence contradicting the hypothesis made by Torres Balbás: this was done on aesthetic grounds, as the later restorers decided that the pillars were not slender enough.

In this restoration project the architect recovered the decorative form of the building, without inventing it. He gave back to the monument its aesthetic, which had been much altered by the later additions. The intervention also clarified the architectural typology, by recovering the balcony on the outside and the portico in front of the pool, and thus enabled us to understand much better the function of the palace. The project contributed significantly to clarifying and giving coherence to the building.

The project, however, surrendered the most recent part of the building’s history to reach that clarity. 5 One should emphasize that Torres Balbás was completely aware of the loss: he noted his regrets about the demolition of the nineteenth- and twentieth-century additions in his diary of works (Torres Balbás, 1982: 191).

He did not restore the structure with its original construction system. The insertion of steel elements, very usual in that period, changed the structural value. The use of modern materials and techniques in restorations was typical of the beginning of the twentieth century and, a few years after the Partal intervention, the Athens Charter stated: “The experts heard various communications concerning the use of modern...
materials for the consolidation of ancient monuments. They approved the judicious use of all the resources at the disposal of modern technique and more especially of reinforced concrete’ (Athens Charter, 1931: article IV). The use of modern technology, however, was probably not necessary here and it could have been substituted by a wooden support.

In conclusion, as in the restoration of the Arch of Titus, the overall historical value of the monument suffered greatly, and the use of modern steel beams acted against the structural and construction values. But in return the intervention assisted the aesthetic, formal, typological, functional, and symbolical values in an exemplary way.

The Herculaneum Conservation Project, Italy

There are more recent conservation projects which have made exemplary interventions. One of the best examples is the Herculaneum Conservation Project (HCP), which was established to conserve the archaeological heritage of the ancient Roman city of Herculaneum (Pesaresi & Rizzi, 2007: 237–52). In spite of the excellent excavation, conservation and maintenance projects devised by Amedeo Maiuri (Camardo, 2007: 205–14), during the last two decades the site has rapidly decayed (Thompson, 2007: 191–204).

The street level of the present city of Ercolano is some 20 m above the ancient city. Today approximately a quarter of ancient Herculaneum has been excavated and remains in the open. The main objective of the new project has been to stop the deterioration of the exposed elements. Work has been carried out on buildings and decorations, and on drainage systems. The latter was particularly important in order to avoid significant damage being caused by rainwater.

One of the best strategies was to reinstitute the original water drainage system, including the reconstruction of roofs. The great advantage in Herculaneum is that most of the structures have large surviving walls, making it possible to rest new protective roof structures on the walls with minimal intervention. The inventiveness here was in the cover construction: this entailed the use of beams long enough to project beyond wall lines and to span atriums. The HCP team came up with an ingenious system, in Insula Orientalis I, based on the use of small logs tied together and tightened with a steel cable (Figure 9). In this way, they have managed to cover the space using wood (as the Romans did), which was both low cost and an intervention that leaves no doubt about its modernity. This simple action recovered the image of the Roman house, its typical illumination and its space, previously distorted without a roof: the conservation intervention solved this by returning the aesthetic aspect of the building.

Obviously, in this case, it is not possible to restore the function of the building, but the intervention allows the visitor to understand better its original use. Moreover, the history of Herculaneum remains written on the walls because the addition of the new roof does not remove any trace of historical events.

Thus this project supported the typological, structural, constructional, and aesthetic values, and improved the understanding of functional value (without restoring it). At the same time, it did not affect the historical, formal, and symbolic values, while solving its conservation for the future.
The theatre of Orange, France

The Roman theatre of Orange, France (Millet, 2002; Ascher, 2007; Repellin, 2006; 2007) is one of the best conserved Roman theatres in the world. However, the stage wall and decorative elements were being damaged through weathering (Figure 10). The conservation team decided to build a new roof in order to protect the scaenae frons. The work, conducted between September 2005 and June 2006, involved the installation of a large steel and glass structure, which leans on the stage walls, in approximately the same position as the original Roman wooden roof would have been (Figure 11).

The intervention, however, has contributed much more than just protecting the stage: it has helped to recover the typological and aesthetic image of the building, which were missing without the roof. Stage walls, important as a platform for governmental propaganda and to control people inside in theatre, had also to support the enormous weight of the projecting wooden roof. The covering structure, which is similar to the original Roman shape, did not invent a new support system, but the conserved walls, allowing the powerful Roman construction to make sense once more. The use of ancient structures is one of the biggest problems in conservation today: conservators hardly ever allow historic structures to work. The re-utilization of this historic structure gives meaning back to this building: it becomes coherent again and lets the spectators understand it as a whole. The functionality of the theatre...
has also been improved (it is still used for plays today) and the new roof reinforces the symbolic image of the theatre, one of the main landmarks of the city of Orange.

In this case, therefore, the project enhanced the theatre's typological, functional, structural, constructive, aesthetic and symbolic values, without damaging the historical and formal values.

**Villa Romana del Casale, Piazza Armerina, Sicily**

A suitable final example comes from Villa Romana del Casale. It was controversial (Dezzi Bardeschi, 2008: 100), but is an important case, full of audacity and intentionality (Meli, 2007; Stanley-Price, 1997: 65–84; Stanley-Price & Jokilehto, 2001: 19–34; Stanley-Price & Ponti, 2003: 275–87). Here Franco Minissi carried out an impressive conservation project in the middle of the twentieth century.

The project aimed to protect the extraordinary mosaics, dating from the early fourth century AD. Instead of constructing a large neutral shelter, Minissi decided to recreate the original shape of the roofs and walls. He used the remains of the original walls to support a relatively light steel, and plastic structure and created an elevated pathway to visit the site, set on the walls. With this he achieved two different aims: to recreate the volume/space of the original villa (making its form/typology clearer), and to enable visitors to see the mosaics from a privileged (and unreal) viewpoint.

The solution, however, was not ideal for conservation. The plastic and glass shelter produced a greenhouse effect; in part because funding was not found for the air-conditioning originally proposed by Minissi. The gaps left for ventilation...
FIGURE 11  (a & b) The Roman theatre of Orange after the construction of the new stage roof.
Photographs by Pablo Latorre González-Moro
were not sufficient, so temperature and the humidity levels were extremely high, especially during the hot summer months. The shelter casts shadows and it can become very difficult to observe the mosaics on sunny days, when they are covered by bands of sun and shadow.

Minissi’s idea was very suggestive: he was able to create the form of the building with a very potent intervention, especially from an aerial view. However, it was less effective at ground level, because of its transparency, although it still conveyed the volume of the complex. The perception is less clear in the rooms with adjoining spaces, but the result is very beautiful in the isolated rooms such as the Triclinium (Figure 12). The conversion of the site into a ‘museum exhibition’, despite the unreal position of the visitor in relation to the mosaics, is ingenious. The visitor cannot see the mosaics as the original owners did, but they now have a better position to admire them from. Minissi took advantage of the conserved walls and columns, using them as supports for the new structure, but altering the image of the space. The project brought back the aesthetics of the building, without reconstructing the wall decorations (fragments of which remain at the wall bases). He also reinforced — extraordinarily — the symbolic nature of the villa, one of the most important Roman archaeological sites conserved in the present day.

There are quite a few issues with the project, especially regarding conservation conditions (essential objectives for any conservation project), but it has conceptual
virtues. Minissi restored the typological value, in some way at least, giving a clearer image of a Roman house. He reinforced the aesthetic, structural, and constructive values, while enhancing the symbolic value at the same time. He also introduced a new functional value, compatible with the original one, without damaging the aesthetic and formal values. Perhaps different material, and a better ventilation system, would have achieved more satisfactory conservation conditions. With an opaque material, it could have also gained verisimilitude, better lighting conditions for conservation and a better understanding of the Roman house. Indeed, a new conservation project is under way which will remove Minissi’s structure and replace it with a different shelter, made of wood and metal, which will be ready in the next few years (Rizzi, 2008: 1–3).

**Conclusions**

Professionals in charge of architectural conservation projects consistently try to find the best criteria for interventions. Today these criteria have become difficult to determine as each building is often seen as special, with its own unique issues and requirements. This sometimes has dire consequences: too often conservation projects depend on the architect’s ‘feelings’, because there are no clear criteria to apply. An example of this is the case of the theatre at Sagunto, a project which was eventually declared illegal. More than a lack of criteria, we might talk about a lack of ‘habit’ in identifying values in the Mediterranean region: the concept of values is much more widespread in Anglo-Saxon countries (e.g. Feilden, 1989; Mason & Avrami, 2000: 13–26).

Historic buildings and monuments have different values that characterize them and a good conservation project can and must protect and reinforce these. We have examined the importance of values, what type of information they offer, and how they help to explain the original context of the historic buildings and their later history. Architectural importance lies not only in being a valuable object, but also in understanding the composition of very complex elements. From this point of view, we could even re-read the history of architecture, many times converted into a long list of single objects, and reconsider the study of historic buildings as a source of multiple nuances.

Obviously, different values will not have the same importance in all buildings, nor is it possible to preserve all values completely: therefore, decisions will have to be made about which are the most important, in order to reinforce and emphasize them without destroying the rest. The restoration of one value in isolation, or taken to extreme, can result in a caricature: for example, the eagerness to reuse a structure can ruin part of its values and make it unrecognizable. Non-reversible values should never be reduced or destroyed. It is in conserving a combination of all of the values, or at least the majority, which might achieve a balance that we find acceptable. We need to understand all the aspects of a building in order to be able to act on the values. Only with all the data assessed, will we have the tools to make the decisions on restoration.

After briefly analysing some iconic interventions we can see how these contributed to the recovery or reinforcement of the buildings’ values, and to enhancing the interpretation of the structures. Each conservation project did not address the values in the same way or with the same strength, but they always succeeded in reinforcing
some of them. This paper only suggests a basic approach to values, but I hope that this preliminary study will permit us to develop a more objective assessment of conservation interventions. If values explain and enrich a monument, then the more of those values that are protected and enhanced by the conservation intervention, the better it will be.

Keeping in mind all the values, we cannot forget that the main objective is the protection and conservation of the building. This means that conservation interventions like Minissi’s project at Villa Romana del Casale were not successful interventions, despite all their other contributions. Without protection, historic buildings disappear. Interventions planned to conserve a building’s aesthetic values tend to help overall protection (as we saw in Orange and Herculaneum), given that aesthetic value are often linked to fundamental constructional elements. At the same time, distinguishing original materials from conservation materials, and making them reversible, may contribute to saving historical value.

Returning to the first example in this article, the Roman Theatre at Sagunto, it showed a lack of deep understanding about its specific features. Only with a sound knowledge of the building is it possible to propose correct conservation interventions, because by understanding its history and complexity the conservator will aspire to give it back its identity, without faking or distorting it. The authors of the Sagunto project argued that their use of modern materials clearly differentiated their work from the original, and that they recovered function and typology. The real problem here was that, in order to save those values, they destroyed the rest of them.

Finally, what is presented here is neither a strict method or guideline for interventions, or a quantitative critical system. The idea is not to grade every value from A to F in order to discover if the project passes or fails. It is far from my intention to simplify such a complex discipline as conservation, but I believe that all the values discussed are important elements to keep in mind. They let us reflect systematically about interventions. If there is a road to a more scientific conservation, it will start here.

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Notes
1 LEY 16/1985, 25 Junio, del Patrimonio Histórico Español (BOE 29 Junio 1985). Art. 39.2. ‘En el caso de bienes inmuebles, las actuaciones a que se refiere el párrafo anterior irán encaminadas a su conservación, consolidación y rehabilitación y evitarán los intentos de reconstrucción, salvo cuando se utilicen partes originales de los mismos y pueda probarse su autenticidad. Si se añadiesen materiales o partes indispensables para su estabilidad o mantenimiento, las adiciones deberán ser reconocibles y evitar las confusiones miméticas’.


3 Urso (Osuna, Seville) was a Latin colony. The Osuna Bronzes recorded the municipal law of Urso, providing an example of an almost complete set of laws for a Roman city (Gonzáles, 1986).
A caveat is that there are also buildings whose function is unknown to us, for instance some pre-Columbian architecture in Mesoamerica.

To retain all aspects of historical value together requires an ingenious answer and special conditions in an historic building. A good example is the Mexuar of the Alhambra, also carried out by Torres Balbás. In this building the architect needed to maintain the coexistence of three different phases (two Islamic and one Catholic). He restored the space leaving elements from all the phases visible, which, with simple explanation, is very easy for the visitor to understand — a solution which allowed him to retain all the historical information contained in the monument.

Bibliography


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