Museography and Museology

Calogero Bellanca and Cecilia Antonini Lanari

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with contributions by

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In this volume have collaborated specially:
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Dedicated to
Wolfgang Wolters

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Sixth volume

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Introduction

Why this book on museum adaptations?
Because the Musealization is a component of conservation of the architectural historical artistic archaeological heritage.
The broad and different themes of the volume is to conserve, restore and, when necessary, adapt the pre-existing structure.
The first point, the simplest, manifests itself when the pre-existence preserves and maintains its origin purpose, in short, a museum of itself.
A second point is characterized when the architectural heritage is preserved, but its intended purpose is not maintained.
The most complex situation decors when the architectural heritage has irreversibly lost its historical and initial intended use and is destined for its current trends.
Another more complex reality is found when the historical pre-existence destroyed/damaged, has lost its consistency and does not present any vocation for a new-use.

Historic premise

The name museum evokes the Muses, who in Greek mythology were the daughters of Zeus. The place in the Royal Place of Alessandria in Egypt that housed the famous intellectual gathering, the "*Mouseion*", was named after these protectors of the learned.[1]
The modern use of the term beginning in the Renaissance[2] remember that the first museum, or rather the first collection of works of art, open to the public is the one that Pope Sisto IV donated to the citizens of Roma in 1471, Museo Capitolino.[3] Thus, a real museum opens in the Campidoglio[4] before the Vatican Museum created in 1506 from Pope Giulio II and open public 1771 with Clemente XIV.

Vatican Museums

It is not possible to go into specifies about the Vatican Museums, *the museum of museums*, here.
A series of volumes should be dedicated to its history; the continuous adaptations, restorations and new architecture demonstrate the interne activity by various Popes up to the present day.
However, it is felt necessary to present the process of conservation and adaptation. Since the time of Giulio II (1503-1513), On January 24th, 1506, the marble group of Laocoonte was found, quite by chance, on the Colle Oppio in Roma. It was purchased by Pope Giulio II and placed in the Palazzetto del Belvedere in Vaticano. This created the courtyard of the Statues, the first nucleus of Vatican Museums.[5] From this point on, purchases and discoveries increased.

Thus, the Pope ordered the purchases of the Hercules with Telefo, discovered in Campo de Fiori, in May 1507, and again in 1508, the sculpture of Apollo (known as the Belvedere) was transferred to the Belvedere, as well as the Torso di Hercules and Anteo. In 1509 it was Venus Felix who entered the courtyard in front of the "Palazzina" of Innocenzo VIII (1484-1492), then the Pope purchased the Sleeping Ariadne. The last statue to be placed in the courtyard in 1512, was the personification of the Tiber, later planked by that of the Nile.[6] During the Pontificate of Leone X (1513-1521), the statue of Tigris was placed in a niche, at that time believed to be the personification of the Arno, the River of the Medici Pope's hometown. Thus, the courtyard appeared for many years as one of those gardens of antiquity, a place for gathering ancient collections. Clemente VII (1529-1534) resumed the traditions of purchases with Afrodite of Cnidia and also with Paolo III Farnese (1534-1549).

At the same time, the desire to have copies of the Laocoonte spread from various European courts.

The continuous discoveries in the numerous excavations, and the purchases initiated by Clemente XI (1700-1721) and Benedetto XIV (1740-1758), initially assigned to the Capitoline Museum, following the example of Sisto IV, led to an excessive "saturation" of the spaces and made the new museum necessary.[7]

The 18th century marked a certain rebirth of the Vatican collections, with the creation of medal collection and the Christian and Pagan Museum. Thus, during the Pontificate of Clemente XIV (1769-1774), the idea of a new museum matured the first in the world with true museographic criteria. Its creator was Giambattista Visconti, coordinated by the architects Alessandro Dori and Michelangelo Simonetti.

This is how the Clementino was built, with work beginning in 1771. The project was limited to transform the open loggia of the Belvedere into a gallery of statues, as Deoclecio Redig De Campos writes, leaving the chapel of Mantegna intact.

Clemente XIV was succeeded by Pio VI (1775-1799) who completed the project, hosting statues and epigraphs of the Reverenda Camera Apostolica or from those authorised on State-owned land.[8]

The work began in 1776, with an improper destruction of the Mantegna Chapel, to lengthen the gallery of statues of 10,40 m.[9]

And a few years later the so-called Cabinet of Maskes was created in the western forepart of the Belvedere.

In this profile of the Vatican Museums to be considered as an exemplary case for many museums throughout the world, the new addition of the new wing started by Stern on Canova's instructions was completed by Pasquale Belli and opened to the public in 1822.

With Pio VII (1800-1823), Antonio Canova appointed Inspector general of the Art in Roma on August 10, 1805, suggested the Pope that the Vatican Museum be expanded with a new wing.[10] The project was resumed in 1816 with the return of the stolen works of art and the accumulation of those purchased in the first decade with a general reorganization.

The architecture expresses the canons of Neoclassical aesthetic clime at the same time declares the museographic criteria of the nineteenth century, justifying the way in which the sculptures are displayed.

We would also like to highlight the insertion of the Rotonda, a late eighteenth-century revival of the Pantheon. The large and porphyry bowl from Domus Aurea was housed here. Then from the Rotonda there are other architectural episodes, less neoclassical, built from 1780 with the Greek cross hall to reach the current Gregoriano-Etrusco Museum.
The Memory of Gregorio XVI (1831-1846), in the Architecture history of the Vatican is also linked to his architectural adaptation, namely the two great museums for Etruscan and Egyptian antiquities he founded. The implementation involved the names of Thorvaldsen, Camuccini, Valadier, Nibby, a veritable team of Scholars and Artistists Gaspare Salvi, architect of the Sacred Palaces, was commissioned for the construction.[11]
All the end of the century, an entrance was still missing, and the Atrium of the "Quattro Cancelli" was built completed in 1793. The long construction process of the museum, saw the creation of the "Zecca" in 1776. Thus, we come to the Canova period with the expansion project with the New Wing ("Braccio Nuovo").

Necessary gleanings to reach the 20th century

It is impossible to summarise the history of museography over the last three centuries in these pages. The aim is to touch upon the complexity of our times.
We have many examples during the XVI century of acquisitions by the French royal collections of some of Leonardo's great paintings.
With the problem of the modern museum, we must not forget the museum heritage that we have inherited.
With all the different situations without changes, transport, accumulation to evaluate the intervention for a modern solution.
From '600 there is the costume of distinguish through scientific or artistic subjects. Scientific, more frequent in museums in England and central Europe, and artistic, in Latin world. There must be quite different solutions for museographic, but not for museology.
In the last thirty years, many things have been done for the conservation of Heritage, and for its use for social benefits and the increase of culture, in connection with the cultural expression of each country.
And so, this has transcended in museology and its translation into museography; and its consequence in the changes of museums, from the collectionism to the real museums.
In the "età della borghesia", and the revolution in 1793 a lot of collections which were situated in private palaces, began to be united in important museums, as it happened with Louvre and there "treasures" can be observed by the public, and published in catalogue, organizing one of the first organic modern museum.
Constituted the documentation of all the works of art that the State have collected from all times and all activities.
Louvre and British museums began to define itself with the history of the ideas.
In 1609 it was opened the Biblioteca Ambrosiana in Milano, seven years after the opening of the Bodleian Library in Oxford. Cardinals gave some pictures to library and so began unifying.

In 1657 Ferdinando II Medici founded in Florence, the Accademia del Cinquecento, with a scientific experimental intention organic base of the foundation of the Galleria Fiorentina and, in 1775, Pietro Leopoldo d'Asburgo Lorena, granduca di Toscana founded the Basic and Natural history Museum with the intention of conserve the Medici's collections and to create a centre of studies, a "gabinetto scientifico".

The architect J.N.L. Durand in 1803 defines the Museum in part as a public treasure as collection of the most important human knowledges and in part a temple dedicated to the studies. Some museums take the tradition of the Greek temple as traditional gallery in Lorndon. Another model is the one with a central pavillon with a Napoleon scheme.

Many private collections that have passed to public use, may conserve their situation, distribution, ambience, as the collectionist have given to the house museum. (For example: Sr. John Soane in London, Casa Museo di Gabriele d'Annunzio il Vittoriale degli Italiani in Gardone Riviera, Fondazione Bagatti Valdeschi in Milan, and a lot of other examples in all Europe).

"Another issue [...] that constitutes a significant part of the museum's problems is that of adapting existing buildings to this purpose, particularly historic buildings, which, often being museums in themselves, offer very limited possibilities for adapting their architectural spaces to the needs of the museum collections they house.

Due to the wide range of possible scenarios influenced by the qualities of the existing building, the issues involved take on different aspects on a case-by-case basis".[12]

In 1926, the Office International des Musées was established, publishing its bulletin *Mouseion* in Paris until 1946. After the establishment of the United Nations, the new museum organisation ICOM, founded in 1945, began publishing the magazine "Museum" in 1948.

Faced with the legacy of the nineteenth-century museum as a repository of art treasures, the intervention of modern architects was initially limited to the devil with the eclectic language that characterised it, before tackling the much more challenging issues of the relationship between form and function.

Henry Van de Velde's Folkwang Museum in Hagen (1900-02) is a modern reinterpretation of the classic museum layout with undifferentiated spaces; Berlage's Gemeente Museum in The Hague (1934,2) is an elegant reworking of the nineteenth-century form, taken to its highest organisational and technological level (for example, with the skylights on the upper floor) rather than a decisive break with the past. A great number of palaces moments have been used to collect a great number of treasures, collections of pictures, art objects… and about this.

Gustavo Giovannoni wrote in 1934 about *Les anciens et les exigences de la muséographie moderne*.

Giovannoni writes: "to convert a palace, convent, etc… into a gallery or museum, a conflict must be resolved between the architectonic character and the needs of the collections. The antithesis lies in the desire, on the one hand, to maintain the living character of an ancient building, while, on the other, to use it for a modern destination.

The intention is laudable, but I do not believe it is possible to realize it without making essential sacrifices with regards to the historical and artistic integrity of the buildings, as well as with regards to the usefulness and advantage of the new destination.
Museum must serve, on the one hand, the public, its education, its culture, its pleasure, and, on the other, researchers, that is progress, the organization of our knowledge".[13]
On the other hand, the volumetry is rich and fragmented and moves decisively towards the erosion of the compact and static volumetries of the nineteenth century, in a completely new dynamism. Van de Velde, Le Corbusier, Wright and Mies van der Rohe, on the other hand, succeeded in making a complete break with the past in terms of typology, whereas in the two buildings mentioned above this break was only expressed in formal terms.
The problem for the museum is therefore to channel the constant, unidirectional flow of visitors without the crossing of paths characteristic of nineteenth-century museums.
In the new post-war museum concept, temporary exhibitions in the United States in the 1930s had a significant influence. Furthermore, some of the modern movement also paid attention to museography. We should remember the statements made by MOMA architects Philip Goodwin, published in *Mouseion* in 1940. 'The museum must have display windows, like department stores, so that passers-by can see part of the collection and be persuaded to visit.

Previews for contemporary reality
What is the museum?
The official definition was formulated in its statute by ICOM in 1975.
"A present, non-profit institution at the service of Society, open to the public, … which carries out research or human testimonies… but it is also a cultural structure, a physical space, a system for the dissemination of knowledge".[14]
In this volume we will real with the destination of a historic "building" (palace, ancient hospital, ancient monastery, convent, archaeological pre-existence) for museum purposes only when it can be highlighted, without risk of misunderstanding, "the hospitality" offend to the collections by the historic site. In some cases, the old-new dialogue caries when, for example, a modern or contemporary.
From the museum renovation started after the II World War, we can read the Museum organisms that will be analysed will be based on some elements: the pre-existing "building" it hosts the collection the public that uses it, the staff that organizes it.
In all these phases, the complementary of at least two disciplines: museology and museography, will be important.
Museology: which considers the museum as a concept, thought the logos and is realised with the action of the curator, in short with the specialist of the individual specificities of the cultural heritage to be protected and conserved.[15]
Museography: the discipline that considers the physical place, the architecture, the planning in symbiosis with the conservator, this is the figure of the curator architect.[16]

The best result will be when the two different figures of specialists and professionals have a constant collaboration. In this sense, several exemplary cases will be preserved.
The well-known assertion by Franco Minissi published in 1978 is still considered valid.[17]
Restoration, operation intended to ensure the survival of what is intended to be conserved + musealization + permanence use (exclusively cultural or cultural and practical).
Permanence of use, musealization + attribution of practical functions of use that do not after the essential characteristics of what is preserved.
Musealization, conservation + creation of environmental conditions that allow for the correct historical-critical reading of what is preserved.[18]
"All architecture design deals on value judgements strongly guided by cultural and historical awareness. The museum is no exception; on the contrary, if anything, it carries an even heavier burden of cultural overtones than most other buildings. Its design and the design of its interior and display cannot escape those specific issues. However much very special conditions may be governed by the limits set by conservation or the need to accommodate large numbers or the strict demands of security, the final problems will always be architectural and will of necessity involve a series of interlocking design decisions.
The notion that the museum is a repository of objects which we value and whose visual messages we believe to be important must continually guide these decisions and remain dominant".[19]

A general overview in Europe

One could reply with a recent definition supplied by Antonio Paolucci, who states that museums are gold mines for the tourism sector and allow one to boast to the respective cultural ministries... Because the classical, medieval and modern collections scattered in the major European cities are, above all, a resource of beauty which we sometimes underestimate.[20]
Salvatore Settis insists that our museums are part of the great collections, not simple objects, but attributes of sovereignty subjected to special protection. Today, they carry out a civil function, as symbols of identity. Their value is not merely monetary.[21]
Indeed, among the privileges old Europe can offer to people a visit to the museum, which keeps intact its charm in its historical furnishings, its exhibitions and its routes.
It would be opportune to remember some words uttered by Francis Haskell in his description of the Borghese Gallery: moving among the classical statues, the polychRoma portraits, the mosaics of Late Antiquity, the Caravaggios and the Domenichinos, the Rubens, the flemish landscapes, the Canova etc. is the joy of the eyes, astonishment, tumultuous emotion of the heart, adventure of the fancy, in one word, happiness.[22]
But many are the museums which arouse admiration in the world due to their immense assets: from the Louvre to the British Museum, from the Vatican Museums to the Uffizi, from the State Hermitage to the Metropolitan Museum of Art.

With the exponential growth of tourism, one need only think of the endless queues for access, the abovementioned museums call for a zero increase. This is nigh impossible; moreover, the issues of safeguarding, conservation, restoration and functional adaptation become essential (Figs. 1-2).

Fig. 1 - Roma, Colosseum, exhibition on *the Italian economy between the wars*, in the foreground the iconic car known as "la Topolino"; in the background, one can still read the shafts, now looking rather haggardly, of the columns according to the 1936 work by A. Muñoz. (CB 1985)

Fig. 2 - Roma, Ara Pacis Museum, temporary exhibition: "*Valentino a Roma*". (CB 2007)

Similarly, the many museums scattered in cities and the territory must also be adapted and equipped, since Europe, and it is not alone in this, is a whole museum, not physically but in essence. Consequently, it would be well to recall some principles expressed and codified in the documents produced by Italian and European culture.

I would like to remind the reader that since the international conference in Athens in 1931 and its resultant Athens Charter, it has been advocated that one should: "recommends that the occupation of buildings, which ensures the continuity of their life, should be maintained but that they should be used for a purpose which respects their historic or artistic character (point I)".[23]

In the Italian Restoration Charter of the same year, issued by the High Council for Antiquities and fine Arts, the fourth point reads "that in the so-called monuments living only those uses are accepted that are not too far removed from the original use in order to avoid drastic alterations to the building during any necessary adaptations; while the point reads "That any alterations which should prove necessary to consolidate the buildings or to achieve a partial or total reintegration or for the practical use of the monument, the essential criterion to be applied, over and above the need to limit any such new elements to a minimum, should be that of making there alterations as simple and base as possible and in conformity to the structural form".[24]

In the Venice Charter of 1964, article 5 states that "the conservation of monuments is always facilitated by making use of them for some socially useful purpose. Such use is therefore desirable but it must not change the layout or decoration of the building. It is within these limits only that modifications demanded by a change of function should be envisaged and may be permitted".[25]
More recently, the Restoration Charter of 1972 underlined, in the instructions for the carrying out of restorations, attachment B, that "At all times aiming to secure the survival of monuments, it is always necessary to examine the possibility of new uses to old monumental structures, while taking care that these would not be incompatible with the historical-artistic interests. Any adaptation should be kept to the minimum, making every effort to conserve the external forms and to avoid major alterations to typological individuality, to the structural system and to the sequence of internal connections".[26]
At present, noting the numerous encounters promoted by the Associazione dei Musei Italiani, by ICOM and by ICOMOS itself, it seems appropriate to urge an adequate equilibrium in the interventions of adaptation and valorisation, through the careful "evaluation" of the limits and the constraints expressed by the existing, in accordance to the teachings of the culture of critique. Further, it is necessary to ensure the greatest efficacy to conservation policy in Italy and in the world; indeed, the operational reality is different to the theory, also due to the fact that the gradual extension of protection towards a global measure, towards integrated conservation, has given rise to the danger of a detachment between the theoretical views and operational praxis.
The fundamental issue today, in Italy and in the world, is not constituted by the nuances in thought within the scientific community, but lies rather in finding a point of convergence with all the cultural and productive elements, to commune between science and the economy in the sector of cultural heritage.
An unambiguous line of conduct appears to be necessary in order to avoid that only the trend of super restorations continue to manifest itself. This must limit speculative motivations so as to obviate the identification of restoration with reuse. "Reuse is founded on the assumption that the true motivation of restoration must be the utilisation in the present of the historical real estate, because what counts is bringing it back to catering to the concrete needs of our time; this is equivalent to disowning two centuries of conquest by critical-historical culture, encouraging only the consumerism of architectural heritage and opening the road to an arbitrary and uncontrolled transformation of monuments".[27]
The invitation proposed by Giovanni Carbonara is therefore that of acting with every more awareness in a dialectic between the operational moment and the speculative moment, the only guarantee to increasing the level of both[28] (Figs. 3-4).

Fig. 3 - Lyon, Parc Archéologique de fourvière, Gallo-Roman Museum (1970- 1975), Bernard Zehrfuss, example of an in situ museum. (CB 2008)

Fig. 4 - Rivoli, contemporary insertion. (CB 1988)

Fig. 5 - Paris, Musée d'Orsay, general view of the interior. (CB 1989)

Fig. 6 - Venezia, Palazzo Grassi, partition wall. (CB 1985)

Hence, some architects will have to try and avoid a certain excessive protagonism, which gives rise to embarrassing situations. There is no lack of examples in Italy nor in other European countries.[29] Many interventions on the existing are too unbalanced in terms of the "beautiful", of the "refined", with an excessive enrichment of the old via the new. These motivations have produced the "machine of the year 2000", which appears to have erased and then reinvented a fin-de-siècle architecture, such as the Gare d'Orsay in Paris, or of restoring the 1700s to the 2000s in 14 months, such as the episode of Palazzo Grassi in Venice. In recent years, many have come to sense a feeling of confusion when entering the Musée d'Orsay.

The initial enthusiasm at the novelty on the part of the authors of the new turned into a profound annoyance, almost oppressed by the heavy "Theban" re-evocations, which oppress the masterpieces exhibited and which have debased the essence of the architecture (Figs. 5-6).

Often, some monuments have been the object of a misunderstood artisticity, which is not aiming at their conservation and is therefore limited to their reproposition, which ends up humiliating them by the disproportion and (why not?) the violence inflicted on them.

In many aspects, it is possible to find the double soul of the architecture again and, at the same time, the reflection of a crisis of creativity and identity in contemporary architecture.

I still recall the presentation of a project, an early one, by Renzo Piano, for the Basilica of Vicenza, before André Chastel and many young architects of the time, including myself. There, the author made absolute the principle of intervention. In fact, he insisted on the concept that the edifice is conceived for the purpose of being used, as if to say that the reasons for the reuse must prevail and trump all other motivations, including those of conservation.[30]

This introduces us to the world of the "archistars". The role of the archistars today needs perhaps to be looked at in more depth, reviewed and moderated in search of a greater equilibrium when working on pre-existing architecture. fortunately, from the end of the 1970s, there has been an ever more widespread respect not only toward the heritage of the past, but also modern architectural properties. There has been an increase in the understanding between the spaces and the daily use, as abandonment and incompatible use cause the deterioration and the gradual loss of the cultural property.

Furthermore, the dialogue between the ancient and the new has concretised through continuous doctrinal and operational research. Among the major protagonists, Norman foster, Richard Rogers, Renzo Piano and Jean Nouvel act with a prevailing technological interest. In fact, their projects could be defined as being high tech.[31]

In the Médiathèque in Nimes (1984-1992), adjacent to the Maison Carré, Foster avoids any mimetic reference and, through the new structure, proposes dialogue with the existing building with absolute linearity and simplicity (Fig. 10).

More recently, he confronted and resolved, with efficacy, the restoration and return to functionality of the Reichstag in Berlin (1992-1998) (Figs. 7-9). Foster simplified the hall and created a paved square on the terrace top. The dominating element is, however, the new dome of steel and glass. This reproposes the theme of insertions into the existing structure, appearing to all effects to be critical, distinguishable implementation. It presents the novelty of the helicoidal access ramp to the upper Belvedere.

At the British Museum in London (1998-2002), the intervention remodelled the external space, moving the parking lots further away, but most importantly, it continues to propose the shaping and covering of the courtyard, thus the great court is set up as a grand hall covered by a transparent roof with hexagonal tessellation (Fig. 11). With regard to Renzo Piano, one can see the diversification of some attitudes in these last 20 years since the initial projects.

A significant experience for his approaching of the existing architecture dates back to the episode of the Lingotto for Fiat in 1985. Here, he suggests light insertions and realises a public route and the famous "Bolla" for the meetings hall, etc. A second approach with the pre-existing is the case of the Niccolò Paganini auditorium in Parma (1997-2001) (Fig. 17).

Figs. 7-8 - Berlin, Reichstag, the dome from the exterior, detail of a full-length window. (CB 1999)

Fig. 9 - Berlin, Reichstag. the dome from the interior. (CB 1999)

Fig. 10 - Nîmes, Médiathèque, 1984-1992, adjacent to the Maison Carrée. (CB 1994)

Fig. 11 - London, British Museum, the covering of the Hall. In the foreground: marble statue of a youth on horseback, a Roman prince of the ruling Julio-Claudian dynasty, almost as if to create a parallel with Marcus Aurelius at the Capitoline Museums. (CB 2010)

Fig. 12 - Vienna, Albertina, new entrance to the museum with the large projecting roof. (CB 2007)

Here the intervention prescribed the demolition of some transversal walls in an industrial shed and their substitution with glass walls to enlarge the interior. In this space were the foyer, the hall, the stage and the facilities.
Lastly, among the works of Jean Nouvel that can be considered to fall under the category of museography, I would like to cite the recent Vesunna Gallo-Roman museum in Périgueux, completed in 2003.[32] Another in-situ museum of the same period is Saint Roman en Gal (Fig. 14), near Vienne.
This consists of a partial covering of the archaeological site. The whole is constituted by thin circular beams, a cantilever roof and vertical glass panels. Inside, steel and wooden catwalks facilitate visits. Here, like elsewhere, echoes emerge of the Italian pioneer projects of Franco Minissi from the 1950s; it should be sufficient to recall the protective insertions for the Villa del Casale in Piazza Armerina[33] (Fig. 13).

Fig. 13 - Piazza Armerina, Villa del Casale, (1956-1959), partial view of the intervention for the protection of the mosaics by Franco Minissi. (CB 1983)

Fig. 14 - Saint-Roman-en-Gal, in-situ museum. (CB 2008)

Wishing to go over some significant moments, which have now entered the history of restoration and of museum conversions, while remaining within the scope of this essay, one can but briefly consider, as landmarks, the themes of conversion and the criteria of museography.
Post-war Italy, with the works of Scarpa, Albini and Minissi, traced a route which was taken up in many countries of the world.[34]
In Roma, in the 1950s, following its restoration, an initial idea of conversion compatible with the Museum of Villa Giulia takes form. Minissi's intervention influenced entire generations of architects with the new glass panels, the light supports, the two storey routes allowing the appreciation of the architectural elements surviving from the Etruscan temple. In the 50s, 60s and 70s, Minissi's interventions are characterised by the knowledgeable and moderated insertion of the new with respect paid to the ancient.
Among the many works, in this sector, at least, I would like to remember the case of the Etruscan museum in Cerveteri.
As in other places, the theme of transparency emerges, with large glass panels host the remains and which exhibit the newly restored wall structures behind.
In the early 1980s, in Roma, another interesting solution is found, that of the rezoning of the Stenditoio hall of San Michele. Indeed, the large hall is converted into a venue for cultural events and conventions for the new Ministry of Cultural Activities and Properties and is inaugurated with the ICOMOS general assembly in Roma in May 1981. The new insertion realised by Minissi and Miarelli presents the solution of two fans which permit the division of the hall into three sections depending on the number of guests (Figs. 15-16).

Figs. 15-16 - Roma, San Michele, "Sala dello Stenditoio" before restoration. Roma May 1981, San Michele, during ICOMOS General Assembly, after restoration and adaptation. (CB 1981)

Also in the 60s and 70s, Hungary takes note of the lessons learnt from Italy and the directives of the Venice Charter. In fact, in the Royal Palace in Budapest, the historical museum features the appropriate presentation of the original fragments and their museal-didactic reading with visual representations on the panels (Fig. 18).
Less fortunate, perhaps, is the protection of the archaeological area of Baláca, in the ancient province of Pannonia (Figs. 19-20). In the same period other important restoration works were Carry out in Szombathy and Visegrad.

Fig. 17 - Parma, Auditorium Paganini, interior. (From "L'industria delle costruzioni" n° 368, Nov-Dec. 2002)

Fig. 18 - Budapest, Royal Palace Museum, detail of the mounting of the portal fragment. (CB 1982)

While recent restoration in the royal palace of Visegrad and temple of Iside create some perplexity (Figs. 21-25). Once again, the work here takes up the suggestions of some Italian projects but is not as light, almost moving toward a redefinition of the space.[35]

In the 1980s, a growing phenomenon is witnessed which would influence many palaces and historical venues for temporary exhibitions in Italy and in Europe. This would be the case with the courtyard of Palazzo Strozzi in Firenze, where the mistake was made in the emergency stairs. At the same time, the international community is witness to numerous restoration interventions and new major works for museums (Fig. 26).

Figs. 19-20 - Balàcà, Roman villa, protection and adaptation. (CB 1994)

Fig. 21 - Szombathely, Temple of Iside, example of indirect anastylosis (1961-1962). The documentary, evocative and didactic value is safe. (CB 1980)

Fig. 22 - Szombathely, the new Temple of Iside, perhaps an excessive repristination which tends toward the virtual. (CB 2010)

Fig. 23 - Visegrád, Solomon Tower, interior. An exam- ple of restoration with emphasis on documentary research, scientific rigor and creative commitment. (CB 1984)

Figs. 24-25 - Visegrád, Royal Palace with the working site for the reconstruction in progress. (CB 2010)

Passing over the French projects in this sector planned for the bicentenary of the revolution, with strong political and cultural implications, and the new Roman museums born as sections of the National Museum of Roma, attention is due to the case of the Palazzo della Pilotta in Parma (1988).

The architect, Guido Canali, restored and adapted the palace as the seat of the National Gallery of Parma. The project can be said to follow some of the themes of Carlo Scarpa, but Canali is more sensitive to archaeological research and to the understanding of the existing buildings. The intervention is essential in presenting the properties exhibited with respect for space, with provocations provided by the scaffolding acting as a support and the knowledgeable use of lighting to exalt the oeuvres presented[36] from the end of the 1990s, in the major capitals, from Roma to Vienna, but especially in Berlin, London and Paris, major museum conversions continue to be carried out. Berlin presents itself to the public opinion of the world after the major works carried out in Museum island and many more restoration and reconstruction projects[37] (Figs. 27-28).

As for Roma, we can mention but a few considerations. The equestrian statue of Marcus Aurelius finally finds a home. In December 2005, the new museum venue set up in the Giardino Romano of the Palazzo dei Conservatori, designed by Carlo Aymonino, is inaugurated. The hall has an elliptical shape and exhibits three of the most prestigious sculptures of the Capitoline collection: the gilded statue of Hercules, the equestrian statue of Marcus Aurelius and the remains of the statue of Constantine.[38]

Fig. 26 - Firenze, Palazzo Strozzi, emergency stairwell. (CB 1984)

Distant seem the years, now, which witnessed the statue of Marcus Aurelius suffer and then be moved first to the interior of the Istituto Centrale del Restauro, then into a provisional reliquary inside the Palazzo Nuovo on the Capitoline Hill, awaiting a more decorous site (Figs. 29-32).

Figs. 27-28 - Berlin, Neues Museum. The high- quality reintegrations by David Chipperfield. (CB 2009)

In recent years, particularly, one of the most interesting set ups in Europe has been created at the Centrale Montemartini. The exhibition space inserted into the system of the Capitoline Museums (1996-97) constitutes a valid example of a reconversion of an industrial archaeological oeuvre into a museum. The architect, Francesco Stefanori, realised, beside the machinery, the exhibition of over 400 Greek and Roman sculptures from the Capitoline Museums, among which is also the pediment of the temple of Apollo Sosianus[39] (Fig. 33-34).

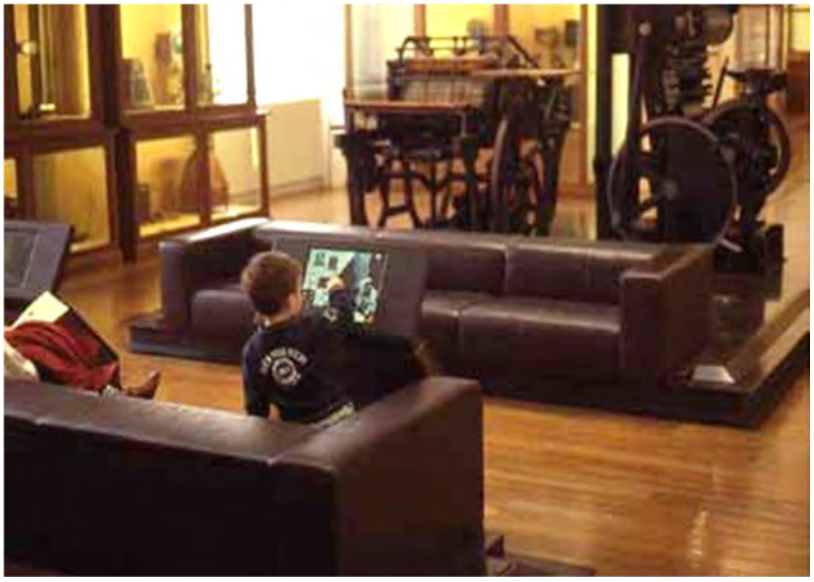
Figs. 29-30 - Roma, "Marco Aurelio" statue in the laboratories of the "Istituto Centrale del Restauro". (CB 1981)

Fig. 31 - Roma, Palazzo Nuovo, temporary exhibition the statue of Marcus Aurelius in a showcase, after restorations. (CB 1990)

Fig. 32 - Roma, Palazzo dei Conservatori, Esedra of "Marco Aurelio". (CB 2005)

Figs. 33-34 - Roma, Centrale Montemartini, view of the mounting of the sculptures from the Capitoline Museums. (Photos by O. Muratore, 2007).

In those same years, in Paris, the Musée des Arts et Métiers makes a number of suggestions. While, on the whole, it is an interesting museum due to the great quality and quantity of exhibits and the good didactic and educational function it serves for young visitors, some perplexities do emerge from the conversion of the church. Doubtless the set-up is reversible, but it presents itself as a large sequence of metallic tiers which exhibit the first motor vehicles. The location may not be the most suitable for the exhibiting of these objects, but the strong contrast is surprising and curious (Figs. 35-36).



Figs. 35-36 - Paris, Musée des Arts et Métiers, interior of the chapel with an installation made of metal shelves for early vehicles; a touch-screen, didactic facilities. (CB 2005)

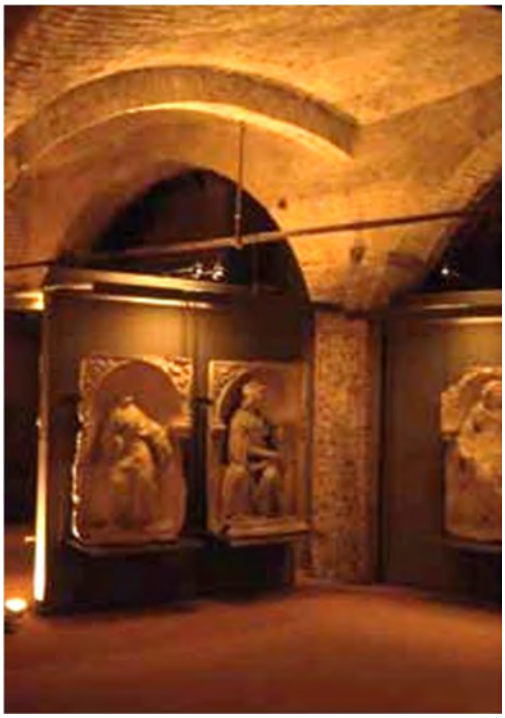
In Vienna, among the many complex and widely discussed projects, like that of the Albertina (Fig. 12), i would like to draw your attention to a new episode between the ancient and the contemporary, the Museumsquartier, which was inaugurated at the start of the new century. Today, when entering the largest courtyard, one is drawn in by the realisation of the two blocks set against each other which host two different museums, by the architects Manfred and Laurids Ortner. To the left of the ancient Winter Equestrian School is the Leopold Museum, in a parallel configuration with the Kunsthistorisches Museum, while, on the right, the Museum Moderner Kunst, with its curved roof, converges towards the centre of the courtyard. The connection with the wing hosting the stables is solved with a stairway which has the function of closing the contemporary episode, besides that of creating a proper entrance to the museum. furthermore, new horizontal and vertical connections facilitate the fruition of the whole museum complex[40] (Figs. 37-38).

Fig. 37 - Vienna, Museumsquartier, view of the central courtyard with the two insertions of new museums. (CB 2004)

Fig. 38 - Vienna, Museumsquartier, detail of the new horizontal and vertical links. (CB 2004)

From the last decade, I would like to cite, due to large scale of the project, but also, particularly, due to the success of the museum conversion, the set of interventions carried out at Santa Maria della Scala in Siena. Santa Maria della Scala, today, has moved from being a “millennial hospital to a museum of the third millenium”.[41]

Today, like in the past, the Senese public commissioning office has renewed its commitment with a farsighted project. The construction yard is always open to the public, like an open museum, even before presenting itself as a proper museum. The municipal administration promoted an international competition for ideas in 1991, which was won by Guido Canali.



Figs. 39-41 - Siena, Santa Maria della Scala. Detail of a glass-box; the Fonte Gaia located in the old barn, with exhibition panel and light sources, the archaeological itinerary and presentation of urns. (CB 2007)

It should be remembered that the progressive archaeological digs have provided new historical and urban knowledge for the city of Siena. An important aspect is constituted by the various restorations, both of the surfaces, according to the criteria of critical-conservative interventions, and of the set-up of many archaeological and historical-artistic properties.
Among these, that of the Fonte Gaia by Jacopo della Quercia is of note, located in the medieval rooms of the barn, while a copy is exhibited in Piazza del Campo; also, a cycle of frescoes attributed to Ambrogio Lorenzetti. Canali's intervention can be called a light restoration: naturally, he used the underground spaces, which were converted into depots, warehouses and technical facilities for the presentation of the archaeological collections and the materials from the Senese territory. The whole of the archaeological section is inserted into the underground passages dug into the tuff; here, the essentiality of the museum conversion, the wooden elements, carpets and supports are significant. A special definition is reserved for the various types of glass panels distributed along the routes and to the situation of the lights.
The project realised in Santa Maria della Scala is, as a whole, one of the most significant museum conversions of the last few decades in Italy. This bodes well for the future of Italian heritage and for appropriate functionalization projects (Figs. 39-41).

First considerations

These brief reflections urge one to consider the museums of our time not as closed locations reserved for scholars. They are open to the world community, but must not be merely testimonies of globalisation and of technical or technological efficiency, rather, they must continue to present and guard our memories, promoting knowledge and fruition in a correct equilibrium between the ancient and the new.
The rediscovery and the conservation of values must be one of the major issues of our society; one should endeavour not to indulge only in commercialization and facilities, but to transmit to young people the passion and respect for the memory and the past, so that it be bequeathed to posterity.[42]

Notes

1. *Mouseion* was a centre dedicated to the Muse. It was necessary for the best poets, writers and scientists of all the world for living and working.

2. In the Renaissance, it began to apply the private collection with artistic pieces and rare objects. It began the collaboration with the maecenas.

3. The donation by the Pope, of four sculptures the "she-wolf", the Thornbearer, the Camillus, the bronze head of Constantine, with the hand and the globe, marks the beginning of the return of ancient works to the Capitoline Hill, and the birth of the Capitoline Museum complex.

4. P. RIGHETTI, *Descrizione del Campidoglio,* V, Roma 1833. E. RODOCANACHI, *Le capital Romain, antique et modern,* Paris 1904. P. PECCHIAI*, Il Campidoglio nel Cinquecento sulla scorta dei documenti*, Roma 1950. C. PIETRANGELI, *Nuovi lavori nella più antica pinacoteca di Roma,* in "Capitolium", XXVI, 1951, pp. 59-71. C. PIETRANGELI, *Il museo Clementino Vaticano,* in "Rendiconti della Pontificia Accademia Romana di Archeologia", XXVII, 1951-1952, 1953, pp. 87-119.

5. F. DA SANGALLO, *Lettera a Vincenzo Borghini*, 28 febbraio 1567, BAV, Chigi, L.V. 178, foll. 104-106. See also: S. SETTIS, *Laocoonte, forma e stile,* Roma 1999. There are published letters and documents about the finding and the purchasing, pp. 112-113.

6. D. REDIG DE CAMPOS, *I palazzi Vaticani,* Bologna, 1967. F. BURANELLI, *La scoperta del Laocoonte e il cortile delle Statue in Vaticano*, in *Laocoonte alle origini dei Musei Vaticani,* Roma 2006, pp. 51-60.

7. C. PIETRANGELI, *Scavi e scoperte di antichità sotto il pontificato di Pio VI,* Roma, 1943. B. NOGARA, *Origine e sviluppo dei Musei e Gallerie Pontificie,* Roma, 1948. D. REDIG DE CAMPOS, *I palazzi Vaticani*, Bologna 1967.

8. On the activity of different Popes see: L. von PASTOR, *Geschichte der Päpste seit dem Ausgang des Mittelalters, in 40 volumes, Freiburg-Roma, 1883-1933.*

9. D. REDIG DE CAMPOS, *I palazzi Vaticani*, Bologna 1967.

10. It opened in the Campidoglio preferently with Roman sculptures and in the XVIII century it was added an important Pinacoteca. D. REDIG DE CAMPOS, *I palazzi Vaticani*, Bologna 1967.

11. M. MISSIRINI, *Della vita di Antonio Canova*, libri quattro, Prato 1824.

12. B. NOGARA, *Origine e sviluppo dei Musei e Gallerie-Pontificie,* Roma, 1948, p. 49. G. MORONI, *Dizionario di erudizione ecclesiastica*, 103 volumi, XLVII, 112, Roma 1801-1883.

13. G. GIOVANNONI, *Les anciens et les exigences de la museographie modern*, in "Mouseion", XXV-XXVI, 1-2, 1934, pp. 17-23.

14. ICOM: addition has been created to expand the exhibition space, etc.

15. F. MINISSI, *Il museo degli anni 80,* Roma 1983, p. 23.

16. F. MINISSI, *Il museo degli anni 80,* Roma 1983, p. 23.

17. F. MINISSI, *Conservazione dei beni storico artistici e ambientali. Restauro e musealizzazione*, Roma 1978, p. 10.

18. F. MINISSI, *Conservazione dei beni storico artistici e ambientali. Restauro e musealizzazione*, Roma 1978, p. 10.

19. M. BRAWNE, *The museum interior. Temporary + permanent dispay techniques,* London, 1982, p. 141.

20. A. PAOLUCCI, *Musei un codice etico per la tutela*, in "Avvenire", 6 July 2008. See some recent books: D. POULOT, *Musèe, Nation, Patrimoine*, Paris 1997; D. POULOT, *Musée et muséologie*, Paris 2005; ID, *Une histoire du patrimoine en Occident, XVIII-XXI siècle, du monument aux valeurs,* Paris 2006; an also 25 musées, edited by Christine Desmoulins, Paris 2005.

21. These concepts can be found in S. SETTIS, *L'assalto al Patrimonio Culturale*, Torino 2002.

22. F. HASKELL and N. PENNY, *Taste and the antique, the Lure of Classical Sculpture* New Haven and London 1981; But see other interesting publication: F. HASKELL, *The Ephermeral Museum. Old Master Paintings and the Rise of the Art Exhibition*, Yale University 2000, ed. it. *La nascita delle mostre, i dipinti degli antichi maestri e l'origine delle esposizioni d'arte,* Milano 2008.

23. For the Athens Charter of 1931, see the Actes de la Conference d'Athénes in the official text, in *La Conservation des Monuments d'art et d'Histoire*, edited by the Office International des Musées, Paris 1933, pp. 401-407.

24. For the Italian Charter of Restoration of 1932, see the "Bollettino d'Arte", January 1932, art. 4.

25. For the Venice Charter see the Atti del II Congresso Internazionale degli Architetti e Tecnici del Restauro, *Il monumento per l'uomo*, Venezia 25-31 May 1964, Padova 1971, pp. LXIX-LXXXI (English text), pp. XCIII-XCV (French text).

26. The Italian Charter of Restoration of 1972, op. cit. note 9.

27. This strong statement by Renato Bonelli can be found in: R. BONELLI, *Restauro anni 80, tra restauro critico e conservazione integrale*, in *Saggi in onore di Guglielmo De Angelis d'Ossat*, edited by Sandro Benedetti and Gaetano Miarelli Mariani (Quaderni dell'Istituto di Storia dell'Architettura, special issue I, 1983-1987, 1-10), Roma 1987, p. 515.

28. G. CARBONARA, *Questioni di principi e di metodi nel restauro dell'architettura*, in "Restauro", 36, 1978, p. 49.

29. For some considerations on the Gare d'Orsay, see Gae Aulenti e il Museo d'Orsay edited by Mirko Zardini "Quaderni di Casabella", Supplement n.535, 1987, and J. HOUSE, *Uno sguardo al Musée d'Orsay. Il resoconto di uno storico*, in "Lotus international", 53, 1987, pp.86-96. Also, for Palazzo Grassi, see F. GRAMAGLIA, *Opere di restauro conservativo, consolidamento e adeguamento di Palazzo Grassi a Venezia*, in ANIASPER*, Il Progetto di Restauro, Atti del convegno e mostra*, Roma 20-22 November 1986, pp.91-107 and the subsequent debate pp. 121-128.

30. This testimony is connected to the recording carried out during the presentation of the project on the evening of 30 August 1988 at the Teatro Olimpico in Vicenza.

31. A profile of the projects of the so-called archistars can be found in the most important European architectural periodicals and in various texts of contemporary architecture. Among the most recent, see C. JENCKS, *Iconic Building*, New York 2005. While, for Italy, see the volume by L. BENEVOLO, *L'architettura del nuovo millennio*, Roma-Bari 2006; then *Museum in the 21st century, Concepts, projects, buildings,* edited by Susanne Greub and Thierry Greub, Munich-Berlin-London 2006; and *Build On, Converted Architecture and Transformed Buidings*, edited by Robert Klanten and Lukas feireiss, Berlin 2009. See also: edited by Ruth Peltason, *Grace Ong-Yan, Architects, Pritzker Architecture Prize. 1979-2010,* New York 2010.

32. On Périgueux and Jean Nouvel's Gallo-Roman Museum, see a brief essay in "Lotus", n.134, 2008, pp. 14-21.

33. On Minissi see F. MINISSI, *Conservazione dei Beni Storico artistici e ambientali, restauri e musealizzazione*, Roma 1978, e ID, *Il museo degli anni 80*, Roma 1983. ID., *Conservazione, vitalizzazione, musealizzazione,* Roma 1988.

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35. An important general text for understanding the critical method that has regulated the conservation of monuments in Hungary is the essay by M. HORLER, *La Charte de Venice et la restauration des Monuments Historiques en Hongrie*, in "ICOMOS Bulletin hongrie", 1, XI, 1971, pp. 52-125.

G. CARBONARA, *Qualità dei restauri ungheresi*, in "Palladio", XXVII, 3-4, 1978, p.101.

C. BELLANCA, *Riflessioni su alcuni interventi in siti archeologici ungheresi*, in *La Pannonia e l'Impero Romano*, Acts of the international convention in Roma 13-16 January 1994, edited by Gabor Hajnoczi, Roma 1994, pp. 353-361.

36. For the Palace of the Pilotta in Parma, see: A. C. QUINTAVALLE, *La Pilotta segno della città*, in "Casabella", 454, 1980, pp. 12-33. A. PIVA, *La costruzione del Museo contemporaneo,* Milano 1983.

37. See Neues Museum Berlin, edited by David Chipperfield architects in collaboration with Julian Harrap, with essays of Kenneth frampton, Julian Harrap, Jonathan Keats, Rik Nys, Joseph Rywert, Karsten Schubert, Peter Klaus Schuster, Thomas Weski, and a conversation between David Chipperfield and Wolfgang Wolters, Köln 2009.

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38. For the location of the statue of "Marco Aurelio", see il *Campidoglio* di Carlo Aymonino, edited by Efisio Pitzalis and Geneviève Hanssen, Roma 2000, and also, edited by Giorgio Ciucci, Francesco Ghio, Piero Ostilio Rossi, Roma la nuova architettura, Milano 2006.

39. See *Centrale Montemartini,* edited by Marina Bertoletti, Maddalena Cima, Emilia Talamo, Roma 2007.

40. M. BOECKL, *Museumsquartier Wien, Die Architecture*, Vienna-NewYork 2001, and some considerations in C. BELLANCA, *Una finestra sull'Europa, Vienna, il rapporto antico-nuovo,* in "Progettare, Architettura, città, territorio", III, April 2004, 14, pp. 98-103.

41. On the work of Guido Canali, it is opportune to cite the monograph "Costruire in Laterizio", XV, 2002, 87, pp. 2-45. On Siena: *Santa Maria della Scala, da millenario ospedale a museo del terzo millennio*, edited by Enrico Toti, Siena 2003.

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for another new recent experiences of museum in Italy see also: G. TORTELLI - R. FRASSONI, *Santa Giulia, Brescia dalle domus romane al museo della città*, Milano 2008.

42. An important general text for understanding the value see: *Value and Criteria* in *Heritage Conservation,* Procedings of the International Conference of ICOMOS, ICCROM and fondazione Romualdo del Bianco 2-4 march 2007 Florence, edited by Andrzej Tomaszewski, Firenze 2008.

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Chapter 1

After the Second World War in Italy, the first museal adaptation

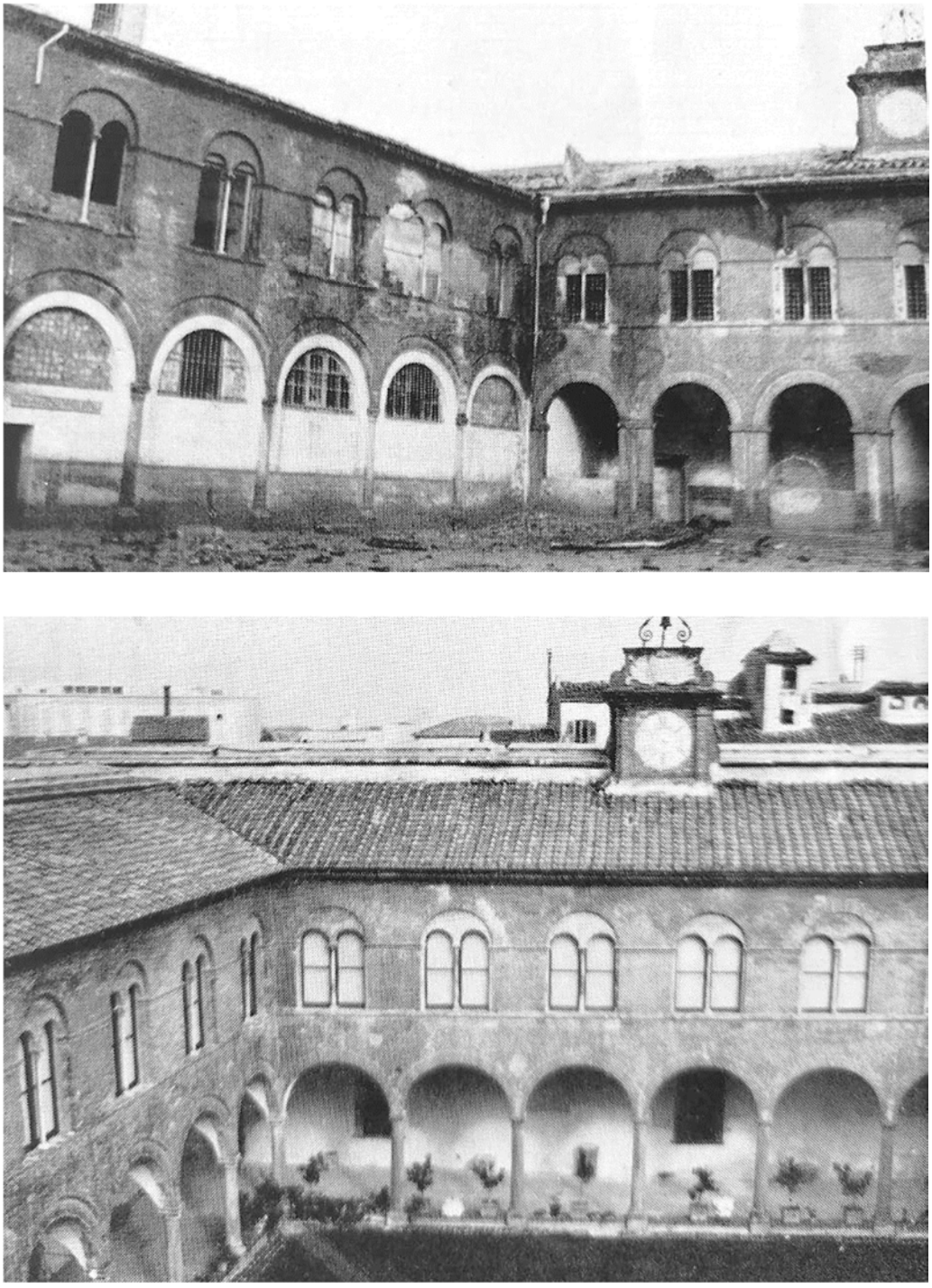
It is impossible to begin a reflection on the restoration and adaptation of museums in post-war Italy without mentioning the enormous destruction of monuments and the relative rescue of masterpieces from the events of war.
The well-known volume "*L'Arte liberata, capolavori salvati dalla Guerra, period 1937-1947"* is a living testimony of the works to safeguard and protect many masterpieces of national identity.[1]
The post war period is significant for the new cultural policy and operational implementations.
Bruno Molajoli on 29 September 1948, in his inaugural speech for the reopening of the Neapolitan museums, recalled the action to safeguard Italy's monumental and artistic heritage.
"We have been waiting for this hour for eight years writes the superintendent since a coded telegram look us from gallery directors and museum directors to art packers and crate transporters".[2]
The superintendent and directors' museums were entrusted with the task of compiling the list of monumental buildings worthy of protection and identifying the movable works of art to be protected in the deposits.
This is the first time in Italy that this strategic plan has been implemented where the protection apparatus with the superintendencies demonstrates its efficancy.[3]
The subreavent theme of reconstruction and restoration of pre-existing architectural structures and museum will be crucial.
In the early post-war years, new theories of artificial restoration[4] emerged and modern architecture engage in dialogue with the past. The theme of insertions becomes fundamental.
The museum space does not escape to the complexity of the theoretical and operational aspects of reconstruction and restoration, with various proposal and projects throughout the country.
In the post-war debate, the museum looks on a new function: the space was intended for a wider audience this impacted the new architectural and museographic image, with a language that expressed the master's constant search for dialogue with the past and the works of art to be presented.
During the first decade, from 1945 to the mid-1950s, we witnessed continuous experimentation. It is worth remembering that in Italy, from 1945 to 1959, over 300 exhibitions were held. The novelty was that these cultural events would not only be held in large cities, but also in so called smaller centres.[5]

The museum changes in its relationship with the work of art and this is due to the constant dialogue between the architects and the curators.
In the exhibition proposals, new ideas and solutions can be found in the various authors. Already in 1941, the "Casabella" magazine had dedicated on entire issue to the topic with a broad overview of numerous exhibitions in various countries.[6]
In 1941 then was a preview with Franco Albini, in an exhibition dedicated to Scipioni. On this occasion in Brera, the architect had introduced the essential language of the supports and fabric backdrops on which the works rested.[7]
While in 1949 Scarpa worked on the essentiality of the artist's spatial values in the conception of the exhibition space.[8]
A few years later, in 1956 Scarpa set up an exhibition on Mondrian, where the affinity with the painters' work and poetics and neoplastic architecture was impeccable?[9]
During these years the young Franco Minissi also emerged and together Albini, Scarpa, BBPR, Sanpaolesi, Gazzola, De Felice, he formed the group of architects who would shape the new museums and implement critical restoration.[10]
Museography would succeed in creating refined solutions throughout Italy. In 1953, the photographic *Atlas of the general Directorate of Antiquities and Fine Arts* published a report of the 180 Italian museums in which the principles of the new museography can be captured. In this repertoire, the projects and creations show the new showcases, supports and techniques for lighting systems.
To this end, in this chapter and in the two following ones we believe it is appropriate to present, briefly, some of the intervention that have made Italy the leading country in museum restoration and adaptation in the world.
The fabulous Fifties and Sixties of the twentieth century for restoration and museography. During the first 15-20 years after the war numerous restoration projects were carried out in Italy (see volume 5) and numerous museum adaptations were carried out in various pre-existing architectural structures, with intervention that have set standards throughout the world.
To this end, for editorial reason, it is deemed appropriate to prepare a "synoptic table" for different interventions.

Genova, *Palazzo Bianco* (1950-51), Franco Albini con Caterina Marcenaro.
Pisa, *Museo Nazionale di San Matteo* (1945-1949) Piero Sanpaolesi, ordinamento delle collezioni Giorgio Vigni.
Milano, *Restauro e adattamento della Pinacoteca di Brera* (1946-'50) Piero Portaluppi con Fernanda Wittgens.
Genova, *Museo del Tesoro di S. Lorenzo* (1956) Franco Albini con ordinamento delle raccolte Caterina Marcenaro.
Milano, *Castello Sforzesco* (1954-'56) Lodovico Barbiano di Belgiojoso, Ernesto Peressutti, Ernest Nathan Rogers, museum arrangement with C. Baroni
Palermo, *Palazzo Abatellis* (1954) Carlo Scarpa con Giorgio Vigni.
Napoli, *Museo di Capodimonte* (1956) Ezio De Felice, with superintendent Bruno Molajoli, ordinamento galleria Ferdinando Bologna, ordinamento dell'Ottocento Raffaele Causa.
Roma, *Museo Etrusco di Villa Giulia* (1955-'60) Franco Minissi with superintendent Baroccini.
Gela, *Museo Archeologico*, Franco Minissi with superintendent Pietro Griffo.
Piazza Armerina, *Piazza Armerina* (1955-'58), Franco Minissi with Pietro Griffo.
Possagno, *Ampliamenti della Gipsoteca di Possagno* (1956-'57), Carlo Scarpa.
Verona, *Museo di Castelvecchio* (1958-'61), Carlo Scarpa e ordinamento Licisco Magagnato.
Firenze, *Uffizi alcune sale* (dal 1956), Ignazio Gardella, Giovanni Michelucci, Carlo Scarpa, Guido Morozzi.
Firenze, *Uffizi Gabinetto di disegni e stampe* (1955-'60), Carlo Scarpa.

1.1 Pisa, National Museum of San Matteo (1945-1949)

The convent of San Matteo in Pisa was severely damaged by the bombings of 1944 and thus reached the end of the war profoundly altered. (Figs. 1-2)
In the aftermath of the war destruction, Superintendent Sanpaolesi proceeded with restoration and reconstruction and began the arrangement of the civic museum.
It can be said that from the very beginning Sanpaolesi's intervention manifested its dual action: on the one hand, reconstruction of the ancient pre-existence with unveiling and, on the other, project insertion and museographic orientation. The convent was presented as a work open to a whole series of interventions, so as to be significant for the museum's renewal.



Figs. 1-2 - Pisa, San Matteo. The Cloister before and after the restoration. (From R. ALOI, *Musei, Architettura-Tecnica, museum-architecture-technic*, Milano 1962)

The restoration project involves reconfiguring the large exhibition rooms, the walkways, and preserving the ancient structures, enhancing the elements recovered from the rubble. (Fig. 3)

Fig. 3 - Exhibition room of the 14th century painting and the Giovanni Pisano room (From R. ALOI, *Musei, Architettura-Tecnica, museum-architecture-technic*, Milano 1962)

Lighting will be one of the most innovative elements on which the restoration and new museum layout will focus.
Sanpaolesi wrote: “Più conveniente ai vari tipi di sale è fare in modo che la luce fosse li composizione quanto più possibile identica a quella esterna, diffusa uniformemente sulle pareti, di intensità moderata e tali che I raggi luminosi non impedissero la buona osservazione degli oggetti esposti con riflessi sulle superfici dipinte”.
The project includes a system engineering section and the regulation of the humidity conditions of the rooms intended for the conservation of the works. Among the collaborators, it seems appropriate to mention Franco Russoli and Giorgio Vigni. (Fig. 4)
Sanpaolesi developed a new concept with the usability and good visibility of the work of art. The museum opened in July 1946 and was a notable success.
On the ground floor there is a sequence of rooms displaying fragments of frescoes from Pisan Churches, as well as fragments of mosaics from cathedral, while on the upper floor the collections of paintings are presented and finally the rooms above the loggia are presented as an interpretation of the convent galleries.
The room lit from above by skylights house crucifixes and paintings from the Lucca and Pisan schools. (Fig. 5)
Through the establishment of this museum in the aim of revitalising an area of the city that until then had been considered marginal.
It can be said that this intervention created a living ever-growing organism. Finally, in 1956, additional rooms were opened, and the museum became a national benchmark for the new Italian museum system.

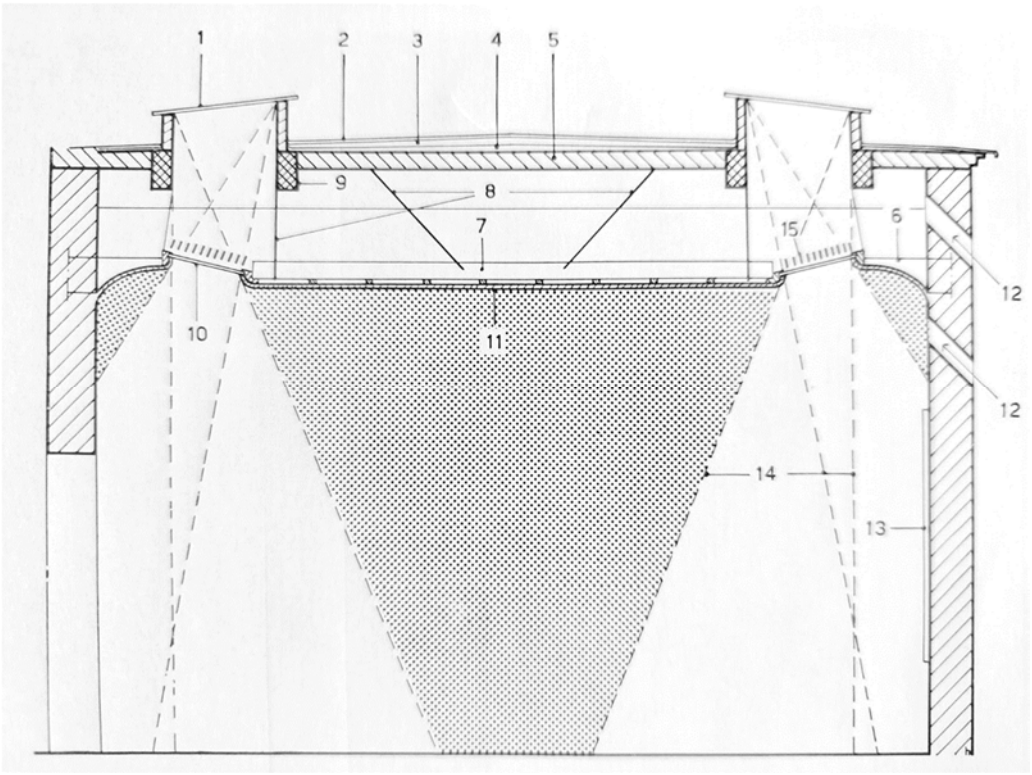


Fig. 4 - Cross section through the room 34. (From R. ALOI, *Musei, Architettura-Tecnica, museum-architecture-technic*, Milano 1962, p. 225)

Fig. 5 - The temporary exhibition of the Pisan sculpture (1946-'47). (From R. ALOI, *Musei, Architettura-Tecnica, museum-architecture-technic*, Milano 1962)

Final consideration

In the volume *Musei e Gallerie d'Italia 1945-1953* edited by Direzione Generale Antichità e Belle Arti, Roma,1953, the San Matteo Museum is presented on the first pages. This demonstrates the great resonance in national panorama.

1.2 Genova, Palazzo Bianco (1950-1951)

Since June 1940 due to the well-known damage caused by Second World War, the collections had been should in numerous boxes.
Only in the early 1950s did a new organization begin under prof. Caterina Marcenaro and the arch. Franco Albini.
A layout was adopted by adopting the individual rooms and above all the lighting was carefully considered. All the rooms have antique floors and black state and white marble except rooms I and II, which have floors covered with grey wool.
Artificial lighting is provided by cold-cathode fluorescent lamps, which are suspended in mid-air and to not damage the paintings on rods sliding on iron guides, and some are hung on iron support an ancient column drums. (Fig. 6)
The furnishing of the rooms is completed by "Tripolina" armchair, folding in block wood with brass joints, and a backrest in natural leather. (Fig. 7)
Room II, the most important, features the group by Giovanni Pisano and the Byzantine pallium. (Fig. 8) A metal support that can be adjusted using a hydraulic pump has been attached to the group. The sculptures can rotate on itself. In the same room, a 13th century Byzantine embroidered silk altar frontal is preserved in a dust-proof glass case, internally illuminated by cold cathode-lamps. (Fig. 9)

Fig. 6 - The light system and support for painter. (From R. ALOI, *Musei, Architettura-Tecnica, museum-architecture-technic*, Milano 1962)

Fig. 7 - The marble fragment of the Margherita di Brabante (1313) by Giovanni Pisano; the automatic mobile support for displaying the sculptural group; note the clear practicality of the invention, beyond its formal value. the wall is covered with slate and explicitly declares its museographic function as a backdrop. (From R. ALOI, *Musei, Architettura-Tecnica, museum-architecture-technic*, Milano 1962)

Fig. 8 - Detail of the Byzantine Pallium inserted in the new trasparent show-cases. (From R. ALOI, *Musei, Architettura-Tecnica, museum-architecture-technic,* Milano 1962)

The design consequences are those of the spacing of the works which are placed in the most correct position to be observed.
The exhibition is organized according to a chronological sequence and linguistic affinities. Thus Albini, translating Marcenaro's suggestions into architectural reality, states: "that each painting must be assigned a volume, of air, almost a zone of influence of its pictorial space".[11]
In this museum, as in many others in recent years, a complete identity between creator and architect was established.
The masterpiece is given by the support made up of two asymmetrical shelves, grafted onto a telescopic to an electric motor that allows the sculpture to rotate, raise and lower.

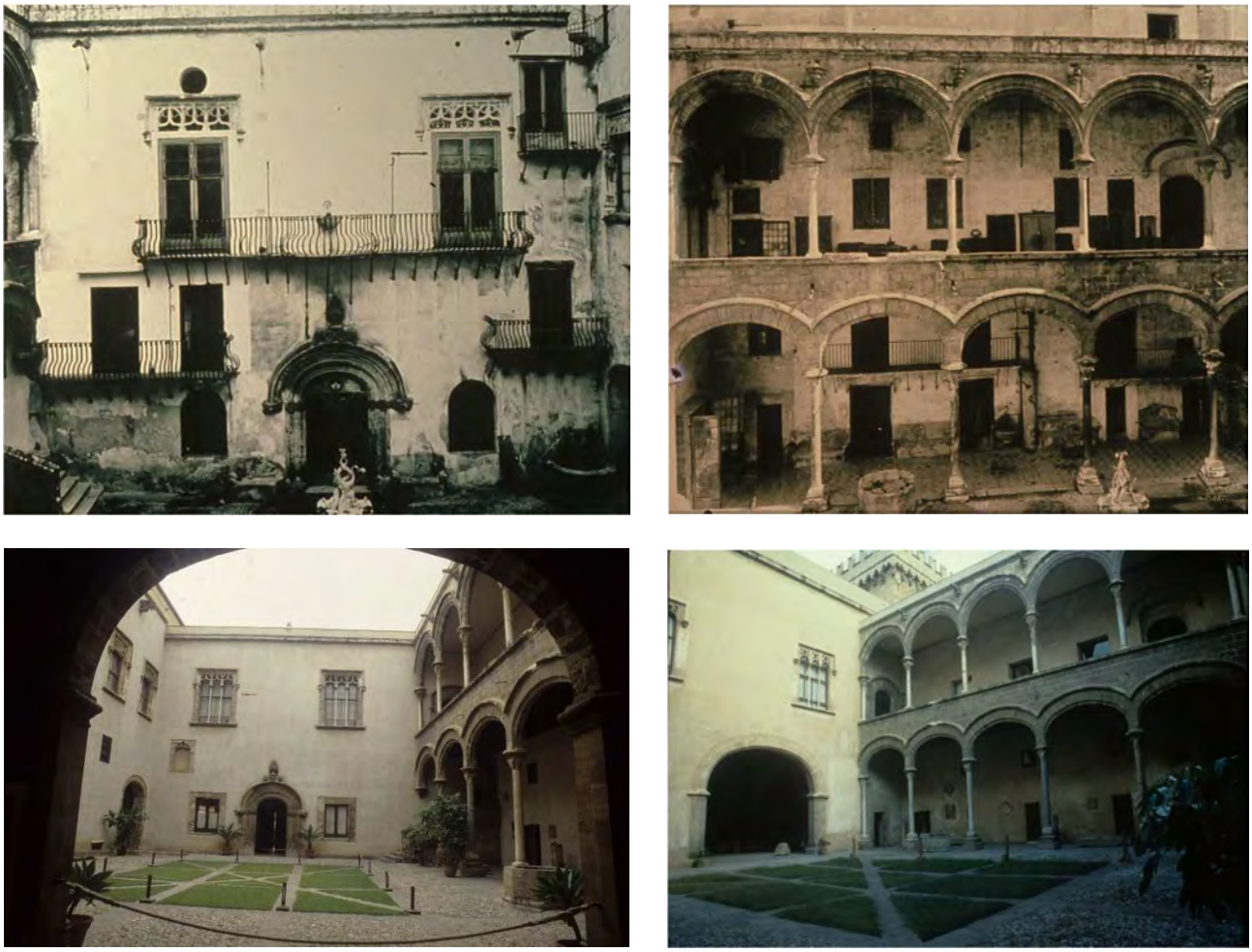
Fig. 9 - The marble group by Giovanni Pisano and Byzantine Pallium (From R. ALOI, *Musei, Architettura-Tecnica, museum-architecture-technic*, Milano 1962)

Final Consideration

The project and construction were concluded with an economy of materials, with an essentiality of the proposal and a reconciliation between the Aesthetic aspect and the historical quality of the pre-existing architecture.

1.3 Palermo, Palazzo Abatellis (1953-1954)

On June 21, 1954, the National Gallery of Sicily, as it was called inaugurated. This institution brought together the medieval and modern works of art that had been exhibited at the National Museum before the Second War. This Gallery occupies a well-known patrician palace from late 15th century, Palazzo Abatellis. This palace, in its long history, after having been adopted as a monastery for four centuries, was damaged during the Second World War. (Figs. 10-13)



Figs. 10-13 - Palermo, Palazzo Abatellis. Before the Second World War (Private collection CB) and Restoration and museal conversion. (CB 1980)

After the tormented "reconstruction" and restoration interventions, it was adapted into a museum.

The existing architectural structure features two floors and opens around a quadrangular courtyard. The renovations carried out along the courtyard's facades have erased a series of historical layers, particularly from the Baroque period, and modified the layout of the exterior. The adaptation and museographic arrangement of the various work of art on display seeks to respect a chronological order and their decorative value.

The division into sections had been avoided thus, the Triumph of Death, the "grandiose" 15th century fresco, has been placed on the ground floor, allowing it to be viewed from above. A constant throughout the exhibition is that the works of art are not displayed in isolation and from different perspectives. (Fig. 14)

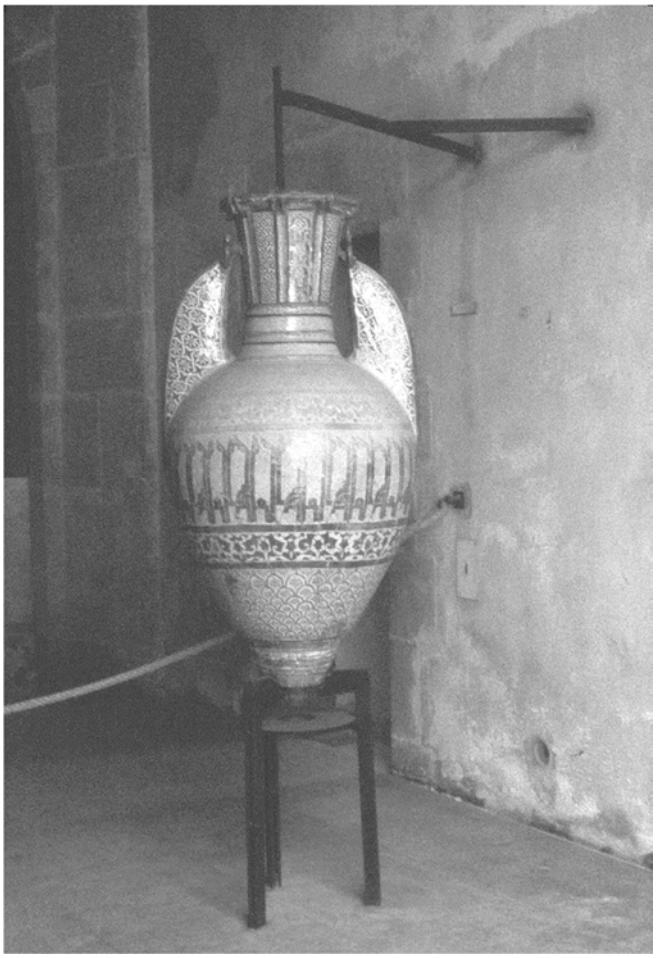
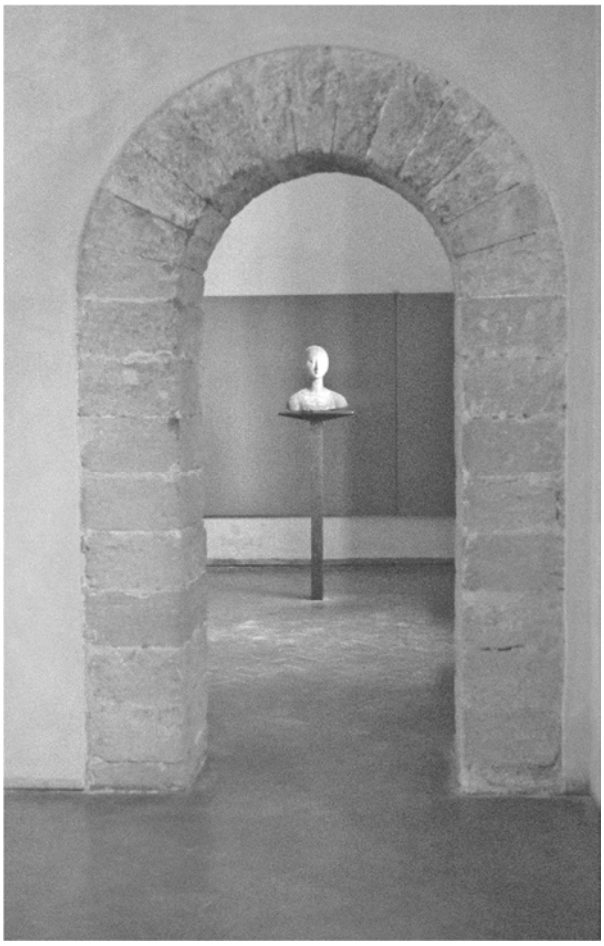


Fig. 14 - The Arabian Medieval amphora with its support that allows you to rotate safely. (CB 1984)

Fig. 15 - Particular of a testa with a particular panel with soft colour for the distinguishability. (CB 1984)

This was the case of Pisan Crucifix for the Annunciation by Antonello da Messina, and for the bust of Eleonore of Aragona. (Figs. 16-17) A dominant theme was the supports designed specifically for each individual object to be displayed. And again, the refined expressive quality conveyed through the blue panels to high light the sculpture's marble.



Figs. 16-17 - Eleonora d'Aragona. The supports are essential in the design, the metal itself helps the reading of the work. Furthermore, the theme of the panel is highlighted with the soft colour. (CB 1984)

Even when the works are displayed close to the wall, an attempt has been made to isolate them, leaving a space for perception between them and the background. Among the various details, the support stands out, correctly displaying the bases and capitals, in their correct arrangement while the "lacuna" in the column shafts is presented with a simple, metal structure. (Fig. 18)

Fig. 18 - New internal stairs. This staircase is like a sculpture, because it is not accessible, it is always out of order. (CB 1984)

Final consideration

Scarpa's creativity can be seen in the visual scope of his various works and in the technical quality of his many supports. Among these on the well-known Arabian vase with its specific support, or the three wooden panels for the three Saints by Antonello da Messina, covered in fabric but rotatable to obtain the correct lighting.

1.4 Milano, Castello Sforzesco (1945-1956)

The Sforzesco Castle as we see today is the result of numerous reconstructions, restorations, and adaptations.
In 1946, a general plan for the reorganization of Milan's layout includes the collections of Medieval and Renaissance sculpture, furniture, tapestries and the art gallery.
In the first three rooms, dedicated to medieval sculpture, the restoration and opening of the large arches connect them in a single prospective. (Fig. 19)

Fig. 19 - Ducal Chapel, restored of the 15th century. In the front wall a Madonna with the Child against a dark brocade velvet dropery. (From R. ALOI, *Musei, Architettura, Tecnica*, Milano 1962, p. 239)

The Ducal Hall known as the "Hall of the Colombine" filled with refined Renaissance artistic documents is elegantly furnished using bronze instead of iron.

Until you reach the space where Michelangelo's Pietà Rondanini is located.
This has been transformed, while maintaining its essential value intact.
The floor surface has been lowered by 1.80. (Fig. 20)

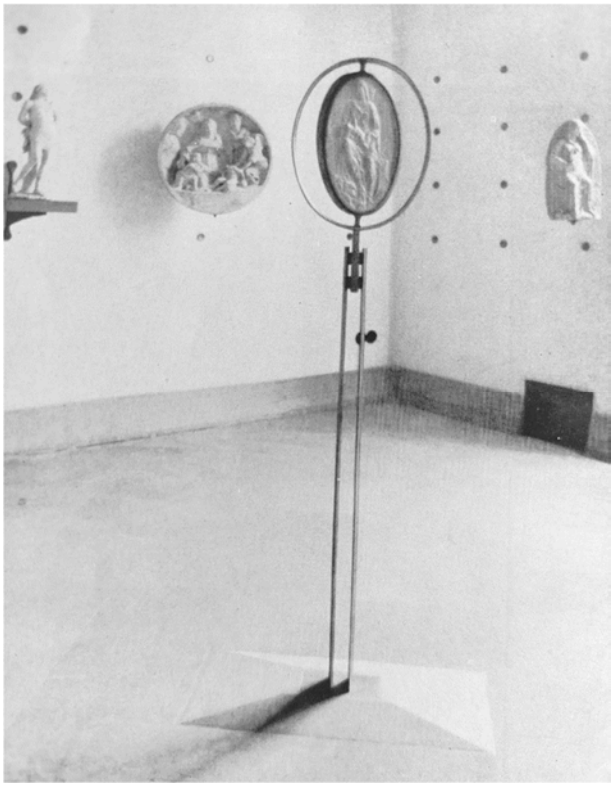


Fig. 20 - Elevation section of the revolving support for the double-faced by Pierino da Vinci. (From R. ALOI, *Musei, Architettura, Tecnica*, Milano 1962, p. 242)

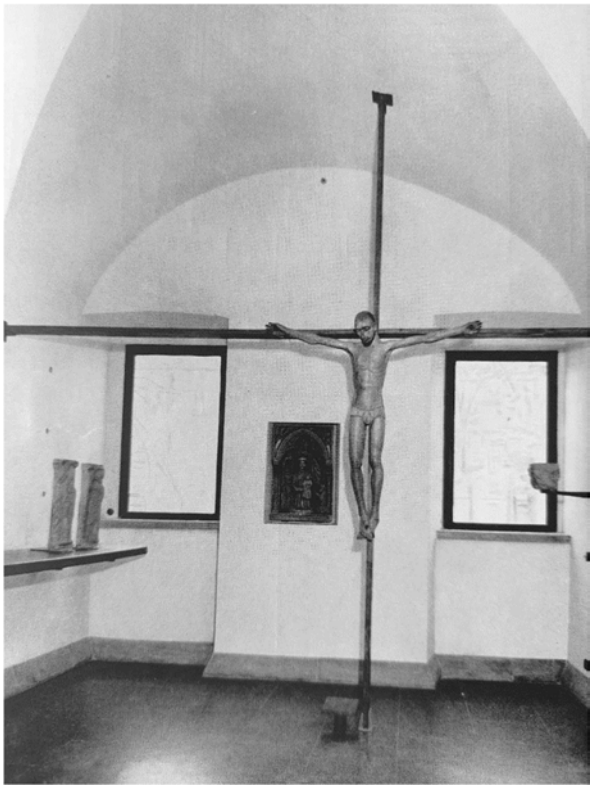


Fig. 21 - A cruciform frame with Christ in wood (13th century). (From R. ALOI, *Musei, Architettura, Tecnica*, Milano 1962, p. 245)

A niche in "pietra serena" can be seen from the shelf by turning its convexity toward the highest part from which the visitors start; the visitor will highlight Michelangelo's sculpture, in the concave of this element. The vaulted ceiling had been covered with a wooden ceiling from which the lamps hung. (Fig. 21)

Consideration

The Architects commissioned to create the modern museum succeeded in insisting a dialogue between the old and the new. Two approaches had emerged in the Milanese experience: that of "modernized pristine state" (Wittgens) [12] and that suggested by Costantino Baroni with the conquest of space through new design experiments.[13]

It should be remembered that the intervention after the fires of 1943 between "fake" and authentic, had to confront the pre-existing intervention by Luca Beltrami. The project by BBPR studio interpreted the exhibition as a living and dynamic organism. The solution was to get in dune with the existing atmosphere and interpret it. Finally, we would like to recall the long process of relocating the Romanini Pietà. It has recently undergone a minimalist redesign by Michele De Lucchi (2013-2015), this introduces us to the current events of re-installations in many Italian and European museums.

1.5 Genova, Museo del Tesoro di San Lorenzo (1956)

The Treasury of the Cathedral of San Lorenzo in Genova, housing a collection of religious, historical and artistic treasures is one of the most important in Italy. The initial design challenge was the direct connection with the cathedral, allowing the museum's exhibits to be used during certain liturgical functions.
The area chosen was the courtyard of the archbishop's palace, adjacent to the apse of Cathedral. The difference in height between the floors of the courtyard and that of the sacristy suggested burying the museum.
The museum architecture was thus configured around closed and defined spaces. In short, cylindrical rooms were shaped, also for static reasons, with domes that allow a minimum amount of natural light to penetrate. (Fig. 22)

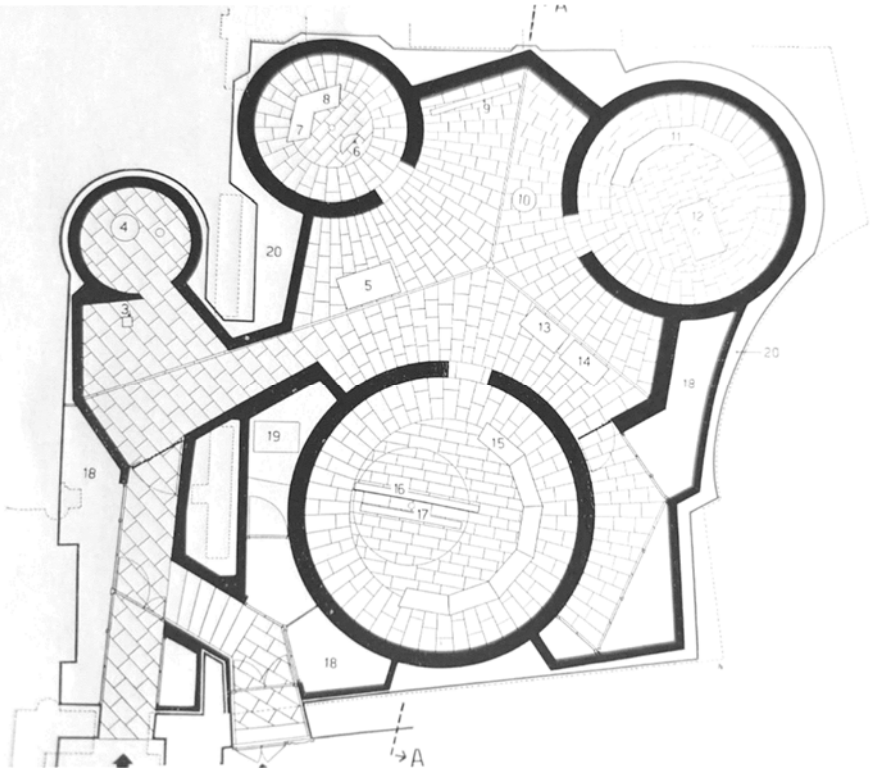


Fig. 22 - Ground floor plan. Distribution of different space. (From R. ALOI, *Musei, Architettura, Tecnica*, Milano 1962, p. 299)

From an initial idea of a series of circular tholos connected by straight paths, the arrangement of these circular spaces of different diameters was finally achieved. Each of three rooms houses a group of ecclesiastical furnishing arranged chronologically.
One of the characteristics is the fixity of the museum with the showcases and supports embedded in the floor.
The main lighting comes from projectors inserted into the roof-impost, along the recessed conduits, while the lighting for the objects displayed in the showcases is inserted into the intrados of these.
In detail it is remembered that the statue of San Lorenzo is placed on hand-forged iron support, with a cruciform section.
The first tholos-houses the sacred basin a glass cup brought to Genoa at the end of the first crusade. This was enclosed in a metal structure in the design of the support.

In a subsequent room the processional chest of Corpus Christi and the reliquary cross of the Zaccaria are presented. (Figs. 23-24)

Fig. 23 - Central room with golden contest. (From R. ALOI, *Musei, Architettura, Tecnica*, Milano 1962, p. 305)

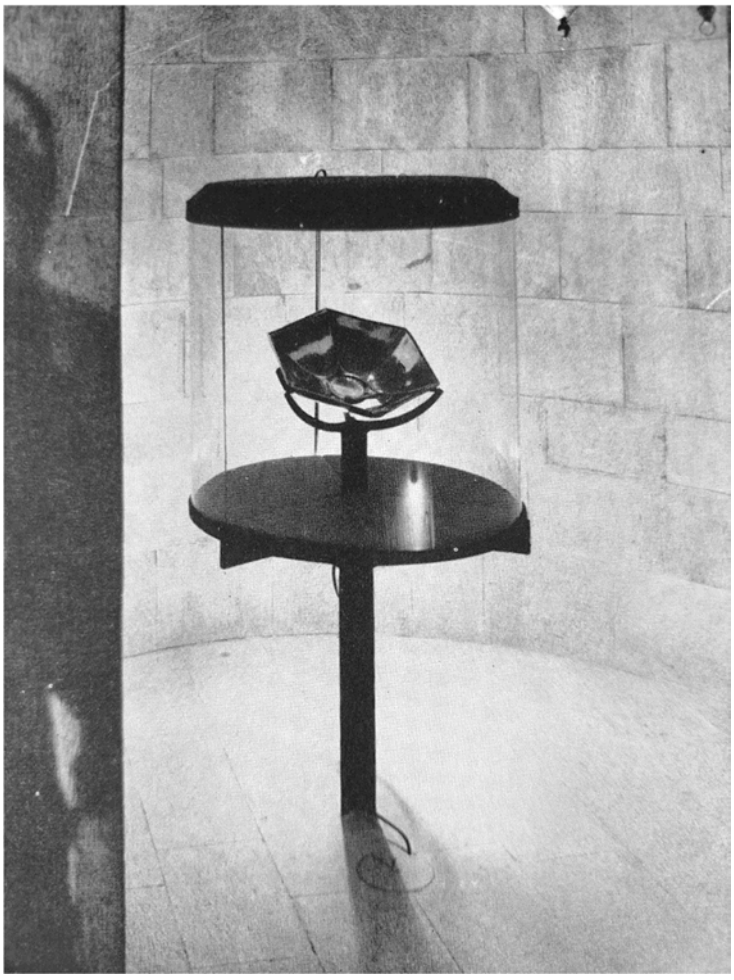


Fig. 24 - The first tholos contains the Holy Grail a Roman glass of the I century. The support and show-glass in trasparency (From R. ALOI, *Musei, Architettura, Tecnica*, Milano 1962, p. 302)

An overall consideration is important all the tholoi are entered one at a time, because the authors has created shaped opening that recall the entrance to the Mycenaean Treasuries. (Fig. 25)

Fig. 25 - The tholos with the poligonal show-cases rend in floor match the silver frontal of the Blessed Sacrament. It is important the detail of "varchi rastremati" (Private collection CB)

A key aspect is the lighting system. This is inserted under the ceiling impost and slides in a black track onto which the spotlights are attached.
This is made of Bakelite, an innovative material for the 1950s. The museum has enjoyed immediate critical acclaim since its inauguration, as demonstrated by its bibliography.
It seems appropriate to reintegrate that some recent interventions have been aimed at quietly modifying the museum to comply with the current regulations.

1.6 Napoli, National Gallery and Capodimonte Museum (1956)

After the war, it was decided to adapt the Royal Palace of Capodimonte to house of the National Gallery. The more required restoration of the collections.
It was decided to intervene in particular on the second floor, to meet the technical and aesthetic needs of a new museum conceived according to the new criteria.
Forty-five new exhibition rooms were created forming a single exhibition space, the functional adaptation was conditioned by the new roof design… (Fig. 26)
For the new roof the inclination of the old one was preserved, like the traditional covering, but the internal space was used to install the services to graduate the light, to support the ceilings, the paintings from the 17th and 18th century require more intense lighting therefore the ceiling of the corresponding rooms is bright and has not been equipped with inclined slats the lateral elements are made of opaline glass. (Fig. 27)
The shape, size and inclination of the luminous surfaces have been designed to avoid reflections on the paintings. (Fig. 28)
Please note that in the nanower rooms slightly curved curtain made of Perspex sheets have been inserted. For the floors of the rooms thus illuminated, dark-coloured floors were chosen to avoid glare. (Fig. 29)
Particular attention was paid to the porcelain section, as well as to the Farnese harmony. The presentation responds to modern needs. The internal fluorescent light of the showcases is also controlled by visitors.

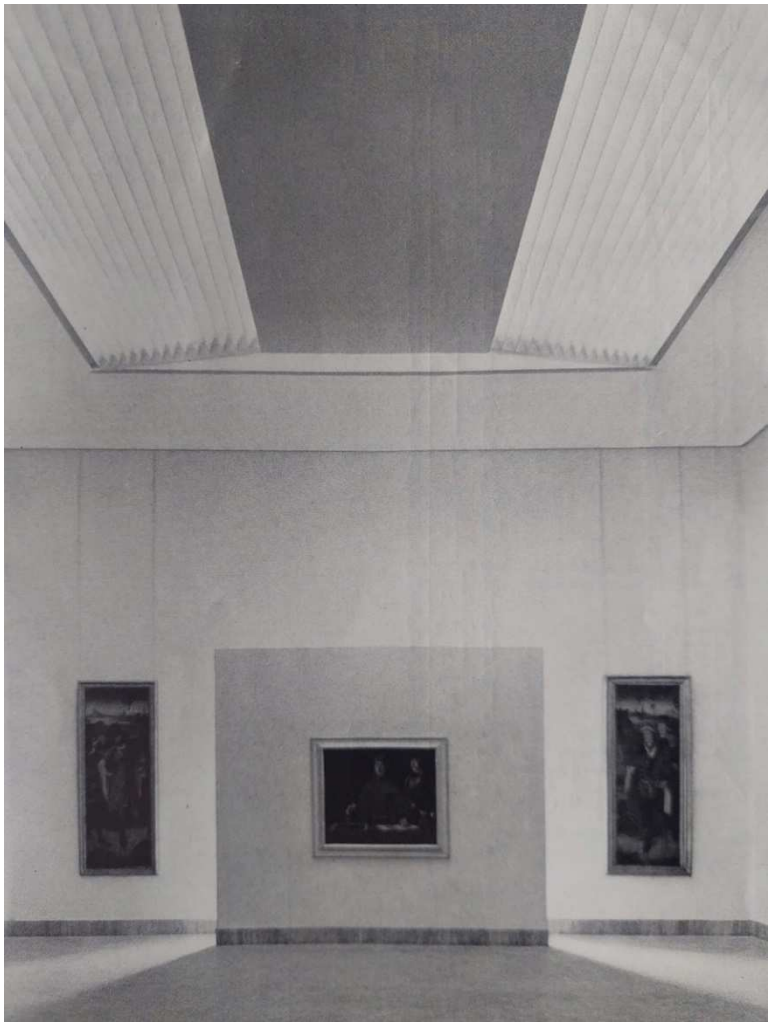


Fig. 26 - Certain windows are screened off by partitions, behind these, the visitors can admire the landscape (From R. ALOI, *Musei, Architettura, Tecnica*, Milano 1962)

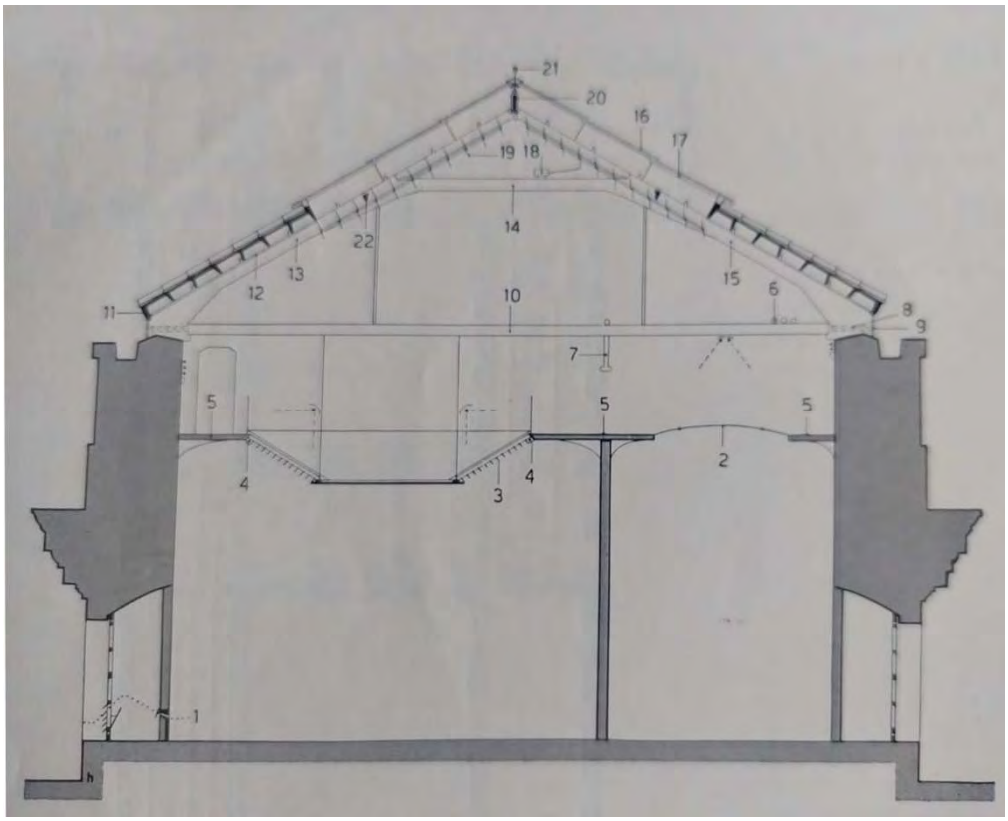


Fig. 27 - Cross section through the new roof covering (From R. ALOI, *Musei, Architettura, Tecnica*, Milano 1962)

Fig. 28 - Tiziano room, the paintings are distribuited over walls draped in silk. (From R. ALOI, *Musei, Architettura, Tecnica*, Milano 1962)

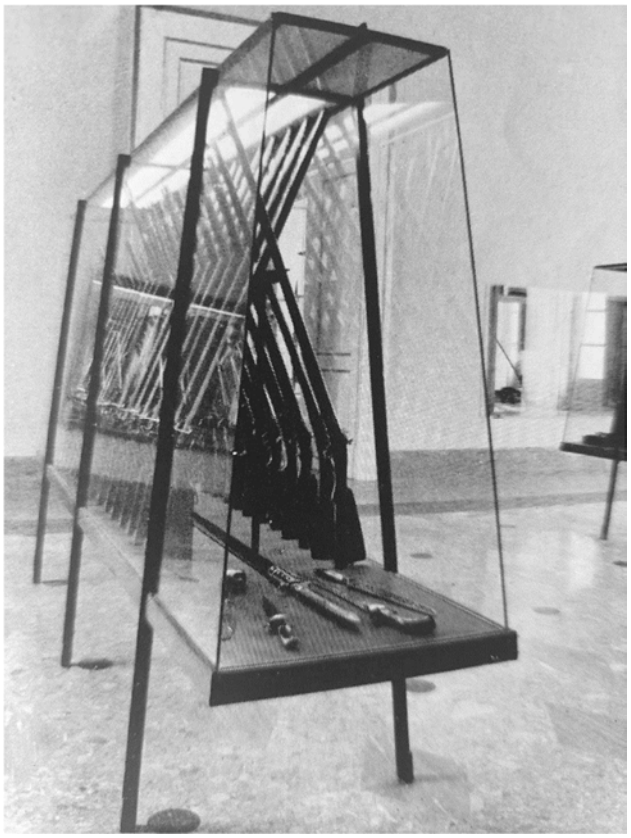


Fig. 29 - Type of showcases in armony section. (From R. ALOI, *Musei, Architettura, Tecnica*, Milano 1962)

1.7 Verona, Castelvecchio Museum (1958-1961)

The Castelvecchio of Verona is a pre-existing 14th century structure, with additions and transformation. The first mayor intervention occurred in the years following the Second World War.
The legendary superintendent Piero Gazzola oversaw a series of preservation and reconstruction project.
It is worth remembering that on April 26th 1946, much of the bridge was destroyed with restorations completed between 1950 and 1955.
Carlo Scarpa worked there from 1958 to 1961, therefore the previous intervention was respected: the battlements and the towers were respected in their interpretation of the past.
The intervention mainly consisted of the interiors, although a study was needed for the external arrangements, such as the green path, the walkways, etc.
In this intervention, some stylistic addition, were removed, some authentic medieval parts were highlighted, new plasters floors, stair, windows and doors were introduced.
Among Scarpa's most significant interventions are the construction of the stairs of the Mastio, in the royal section and in the gallery with the arrangement of the passage to the Morbio gate.
The Museum's adaptation respected the layout of the paths and elevations so as not to erase the so-called medieval character. With the usual attention and creativity but the nerve centre of the museum itinerary is the display of the equestrian statue of Cangrande, the emblem of the Castle. (Fig. 30)

Fig. 30 - Verona, Castelvecchio Museum, Cangrande equestrian statue emblem of the Castle. (CB 1980)

It is recalled that the statue has had several sites in various space of the city and the museum.
Now with Scarpa's arrangement, the statue responds to both the museographic needs and the monumental ones of an isolated and dominant position.
The external location, but at the same time it is protected from the elements. (Fig. 31)

Fig. 31 - External view. (CB 1980)

In the interior layout the works are inserted into the rooms in an almost obligatory relationship, with the search for points of view and light. (Fig. 32)
The exhibition features some new types of suspension rods for flag supports, created for exhibition purposes. (Figs. 33-34)

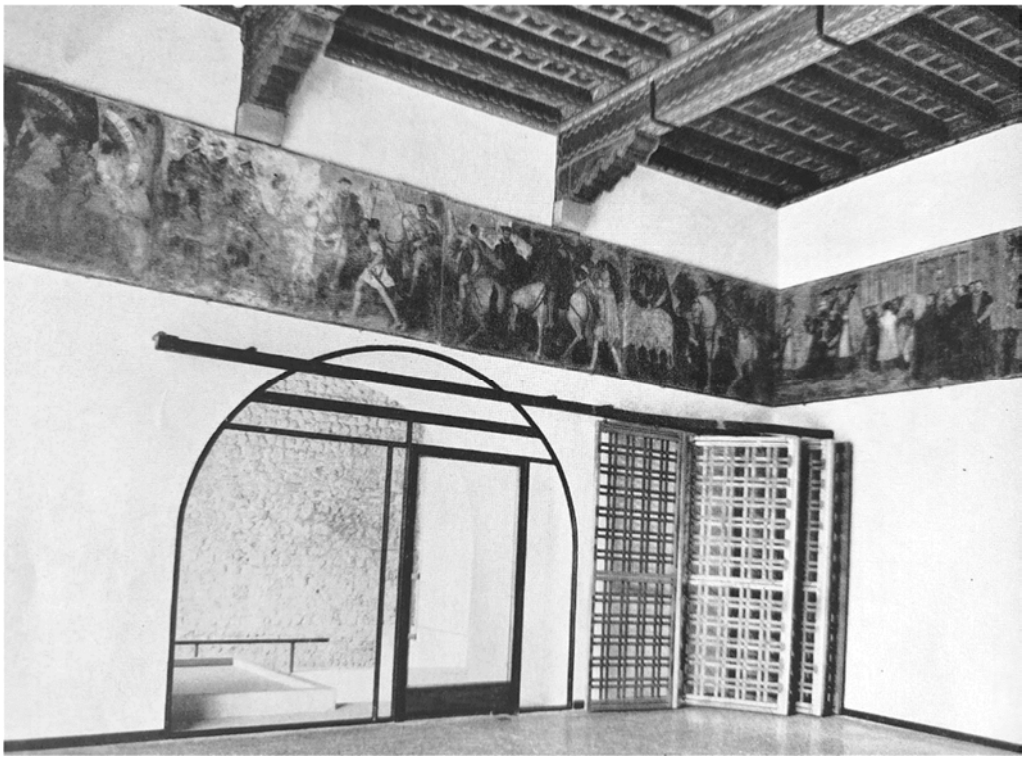


Fig. 32 - New elements inserted in the old room. (CB 1980)

Fig. 33 - Paintings suspended for the exhibition. (CB 1980)

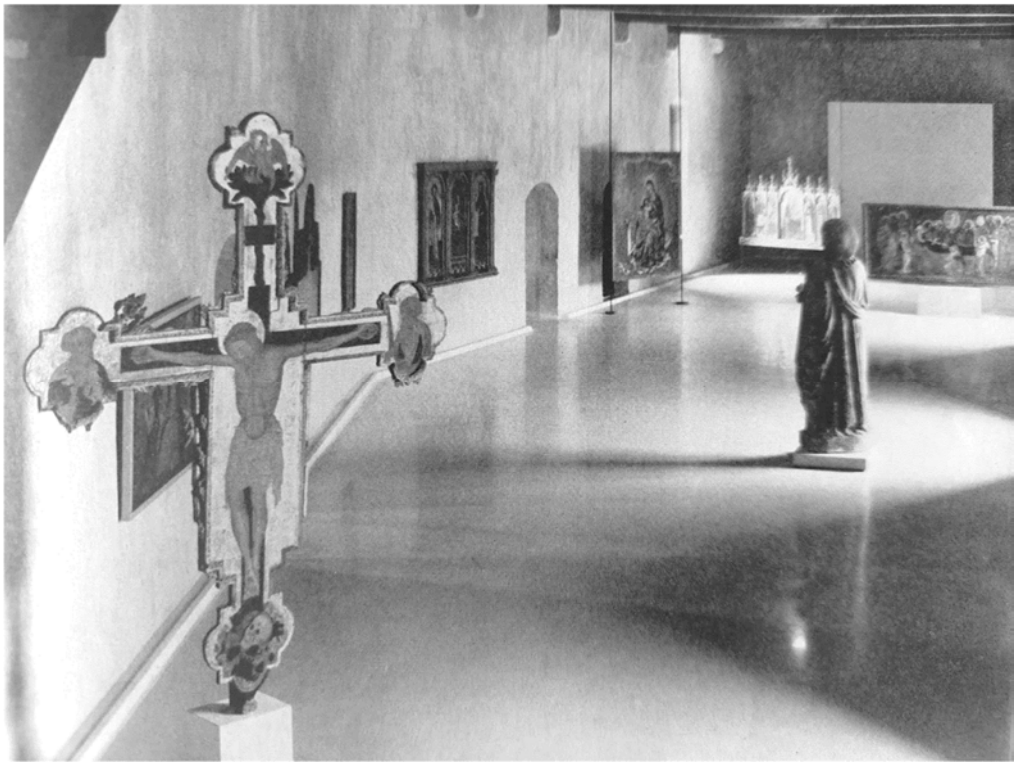


Fig. 34 - Cross inserted in a modern base in the exhibition room. (R. ALOI, *Musei, Architettura, Tecnica*, Milano 1962)

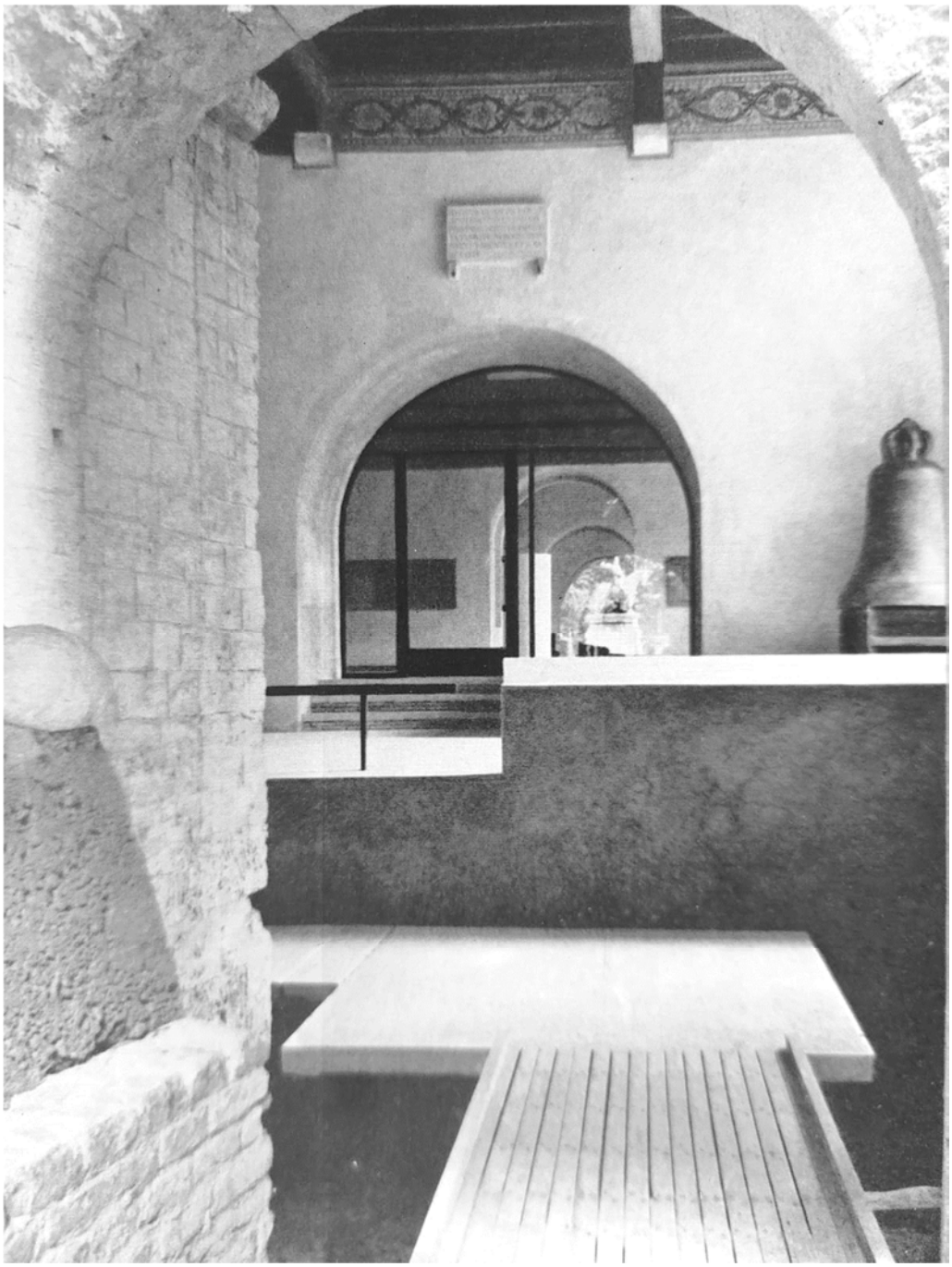


Fig. 35 - Dialogue between contemporary structure and the ancient one. (R. ALOI, *Musei, Architettura, Tecnica*, Milano 1962)

Scarpa's intervention has proven to bring out a passionate dialogue between contemporary structures and the ancient. (Fig. 35)

Consideration

The intervention proved to be an exemplary solution for resolving a degraded architecture and finding a compatible high-quality use that has set an example throughout the world.

1.8 Final considerations

In these exemplary cases, among the many valid ones in Italy, we can grasp several fundamental points of the new museum discipline, and adaptation of ancient pre-existence.
During the period of museum reconstruction, Albini addressed the issues of exhibition flexibility, the valorisation of individual work of art and respect for existing architectural spaces.
At the same time, Carlo Scarpa's lyric poetry always interprets the spatial value of the monument and of the works to be exhibited.
Don't forget the experience of BBPR in Milan for the richness of the decorative apparatus. And again, the experience of the Treasury of San Lorenzo is an example of balance between architecture and the work of art on display.
The author's language controls the volumes and details with geometric rigor. Scarpa, Gardella and Michelucci together, in the renovation of the ancient installations for the Uffizi Gallery in Firenze, they interpret the new prospectives of Italian museums. Here, it is not possible to examine Scarpa's work, which reaches high level (Gipsoteca di Possagno). I would say of poetry, through the study of his works and their presentation.
At this point, we can anticipate Franco Minissi's work. Throughout his architectural work, we see his attention to detail, his research, into new materials, and above all, his interpretation of space to serve the various works to be displayed. In short, a unique work of rare perfection.
The solution adopted in many of them also reflect the promise of flexibility in the critical organization of the collection without altering the existing structure. Hence in many interventions; the fusion of critical restoration and museographic intervention.

Notes

1. Edited by L. GALLO e R. MARSELLI, *L'Arte liberata, capolavori salvati dalla Guerra, periodo 1937-1947*, Roma 16 dicembre 2022/10 aprile 2023, Milano, 2022.

2. B. MOLAJOLI *Il riordinamento dei Musei di Napoli*, in "Bollettino d'Arte", s. IV fasc., apr-giu. 1949, pp. 182-186.

3. See also: *La protezione del patrimonio artistico nazionale delle offese della Guerra aerea*, a cura della Direzione Generale delle Belle Arti, Firenze 1942.

4. See for Critical Restoration C. BELLANCA, *Theory and History of Conservation. Part II,* in publishing.

5. A.C. CIMOLI, *Musei effimeri, Allestimenti di mostre in Italia,* 1949-1963, Milano 2007.

6. See also the contribute by F. Bucci, *Spazi atmosferici, l'architettura delle mostre*, *in I musei e gli allestimenti di Franco Albini,* edited by F. BUCCI e A. ROSSARI, Milano 2016.

7. V. CURZI, *Questioni storico-critiche e pietra professionale: per un'introduzione alla museografia e alla museologia del dopoguerra*, in *Musei italiani del dopoguerra (1945-1977)*, Milano 2022, pp. 7-29.

8. P. MARINI, *Mostra Giovanni Bellini, Venezia, Palazzo Ducale, Appartamento Ducale 12 giugno-5 ottobre 1949,* presentazione e schede di catalogo in *Carlo Scarpa, mostre e musei 1944-1976. Case e paesaggi 1972-1978,* catalogo a cura G. BELTRAMINI, K. W. FORSTER e P. MARINI, Milano 2000, pp. 110-119.

9. P. BUCARELLI, *Mostra di Piet Mondrian a Roma, Allestimento di Carlo Scarpa*, in "L'Architettura, cronaca e storie", a. II, n. 17, 1957, p. 789.

10. For some further information on the first Italian masters of museography: R. ALOI, *Musei, Architettura-Tecnica, museum-architecture-technic*, Milano 1962. It is important: "L'intervento degli architetti nella vita del museo con funzioni di inventori di un organism spaziale e non di decorator della facciata monumentale e ancora per ovvie ragioni: era nell'ordine delle cose che tutti gli altri problemi connessi dell'accumularsi delle opere (la collocazione di essi, l'ordinamento, lo studio, la efficace presentazione al pubblico) passassero in secondo piano; niente del resto, pareva meglio della ospitalità offerta dai vecchi edifici per sistemare le collezioni… A tutti questo l'architetto era chiamare a dare un senso con la sua architettura o con il suo allestimento: quei principi che andavano organizzando la vita scientifica del museo, dovevano avere I loro risultati paralleli nell'organismo architettonico, perché attraverso ad esso fosse esattamente orientate l'interesse del pubblico e guidata la sua attenzione." pp. X-XII.
See also: *Musei e Architettura, l'ICOM*, addressed the theme of the international conference held in May 1961. It seems appropriate to reiterate that these masters of museography held each other in high esteem. One of many examples of this can be found in: "Adunanza del Consiglio Scientifico del Centro di Studi per la Museologia, l'espressione e la comunicazione visive presso l'Università Internazionale dell'Arte il 2 marzo 1974. Sono presenti I Consiglieri negli alter: Franco Albini, Ezio De Felice, Edoardo Detti, Ignazio Gardella, Giuseppe Mazzarial, Franco Minissi, Bruno Molajoli, Carlo Ludovico Ragghianti. Tra gli assenti giustificati: Guglielmo Maetzke, Rodolfo Pellacchini, Carlo Scarpa." From "La Museologia", 2-3, 1973-1974, p. 89.

11. F. ALBINI, *Le funzioni e l'Architettura nel museo, alcune esperienze,* ciclostilato*,* Facoltà di Architettura, Politecnico di Torino, 1954-55, p. 9. C. DI FABIO, *La tecnica e il genio. Novità e approfondimenti sul monumento a Margherita di Brabante,* Museo di Sant'Agostino, Genova 2001.

12. G. GINEX, *Sono Fernanda Wittgens, Una vita per Brera*, Milano 2018.

13. C. BARONI, *Interesse nel museo e significato di un recupero*, in *Museo d'Arte Antica al Castello Sforzesco*, "Città di Milano", n. 3, 1956, pp. 168- 186.

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Chapter 2

Franco Minissi's experience

The decision to dedicate a chapter to Franco Minissi's work in museum restoration and adaptation in various regions of Italy, with references to his international experiences, stems from the need to safeguard and protect some of his projects following the long period of de-Minissisation that began in the mid-1980s. A different fate must be acknowledged for the works of some masters such as Albini and Scarpa, which have instead been protected and restored.[1]
In this chapter we intend to present some exemplary episodes of Franco Minissi's activity. Throughout his long career is an architect and university professor, he was not only the apostle of Brandian Theory in the postulates of reversibility, minimal intervention and compatibility, respecting the different authenticities but at the same time entered, into the critical restoration of Roberto Pane and Renato Bonelli.
Minissi, as it has been written several times,[2] created works than can be considered the "manifesto" of critical restoration, widely diffused and imitated throughout the world, even by some well-known "archistar" in the following years.

Fig. 1 - Franco Minissi during his site visits in Sicily. (Private collection CB)

He managed to demonstrate the reintegration of the image in his restorations, projecting himself in some final works towards a critical-conservative position, with the treatment of the outface finishes of the cloister of the Aidone Museum. He looks from Brandi the idea of the spatial connection between the work and the architectural place and the measure of critical awareness that place produced. The final set of the congress of Venice, precise references of Minissian solutions which seemed to find in some articles.[3]

Minissi wrote in an essay of 1967 that "the museum conceived as a simple warehouse… is being replaced by the museum intended for the enjoyment of an ever-wider public. To this end, both in existing and newly established museums, a revolution is taking place in the principles and means of creating exhibitions that are not only the clearest and most eloquent possible, but above all that perform a stimulating function…".[4]

Franco Minissi wrote, in *Il Museo negli anni '80*, 1983, some important definitions to understand some definitions:

Museology is the matter which verifies the scientific research, conservation classification and order of cultural heritage which for different reasons come into a museum.

Museography is in relationship with exposition criteria and architecture. Had become very important for the renovation of traditional ideas almost museum changing to sortal instrument.[5]

It is recalled that, as written in volume 5, in 1951 Minissi had proposed for protective purpose the recomposition in glass of the wall section of the defensive wall in Gela, Capo Soprano, and a few years later he carried out the protection and spatial reconfiguration of the Villa del Casale in Piazza Armerina.

In these first who decades after the end of the Second World War.

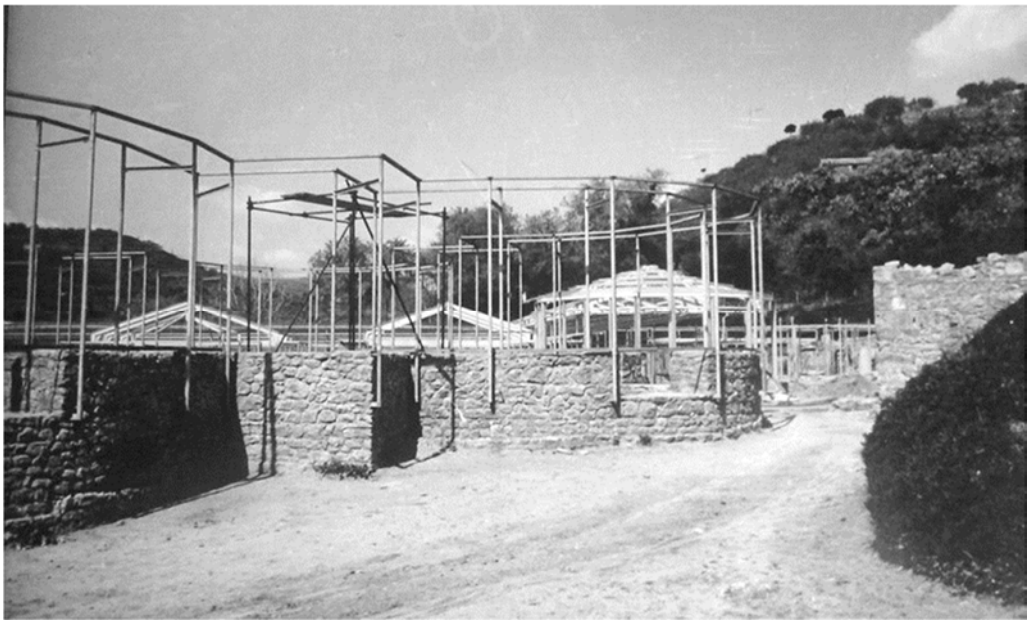


Fig. 2 - Piazza Armerina working in progress (1957). (Private collection CB)

We can remember the museum of the Pharaonic boat, built by Minissi in Egypt, at Giza Pyramid of Cheops (1961-1963).

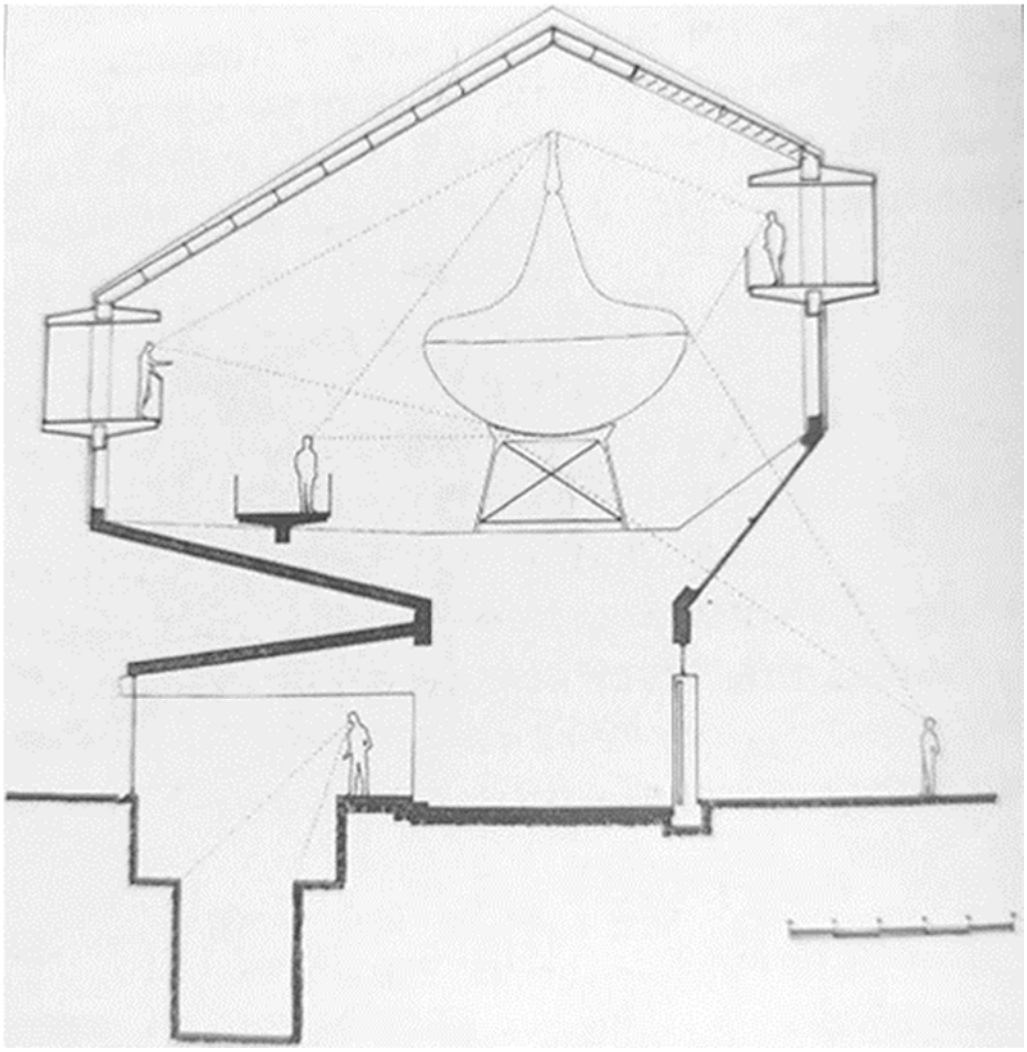


Fig. 3 - Minissi section of the Museum of the Pharaonic boat. (Private collection CB)

Fig. 4 - Inside view of the boat. (From V. CURZI, *Musei italiani del dopoguerra (1945-1977)*, Milano 2022)

Until a few years ago, it was possible to appreciate the parapets made of tempered structural glass, but completely transparent, which anticipated modern museum displays.
Minissi designed them, once again ahead of his time, and created them without references or experiments, working with the contribution of his trusted technicians.[6]

Fig. 5 - Particular for rainwater drainage in Agrigento. (CB 1982)

An enveloping effect is found inside the Ruspoli Castle in Cerveteri (1963-1967).
Here the visitor is drawn into a large transparent show-glasses that allows the wall structure behind to the scene and also allows for the necessary maintenance. Just think of the solution used for the archaeological museum at Palazzo Ferretti in Ancona since 1955 with so-called chamber display cases, with a circular or semi-circular shape.
In the post war period, between constructions and restorations, the "presentation" of the numerous museum's works and their so-called valorisation was very important.
As we have also seen in the previous chapter, the various authors Albini, Scarpa, BBPR, Sanpaolesi, Gazzola, etc… although working with different languages resolved the relationship between pre-existing architecture and different work of art by bringing museography closer to the restoration.

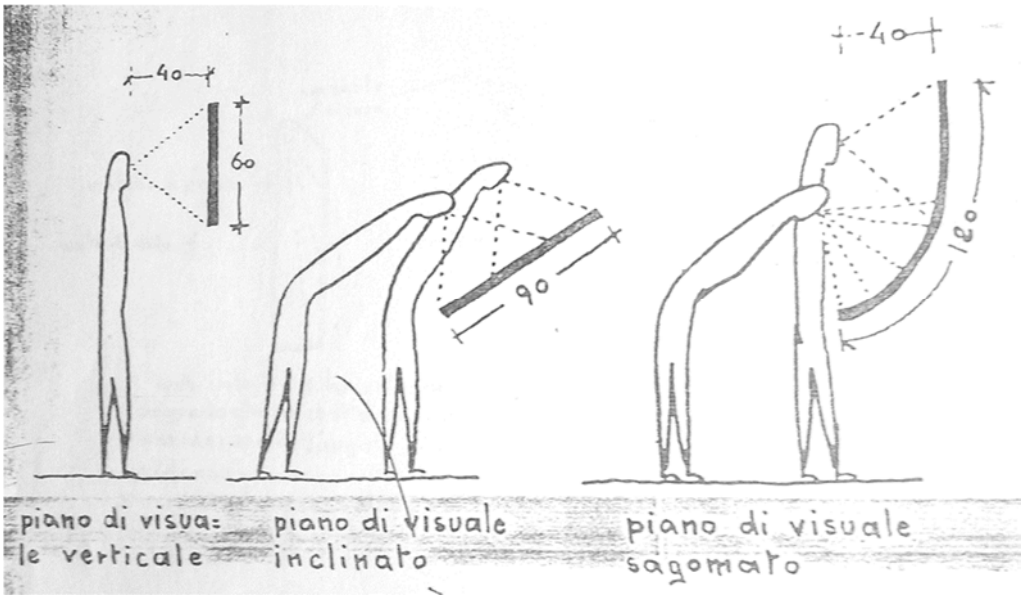


Fig. 6 - Minissi drawing for Zecca Museum (Private collection CB)

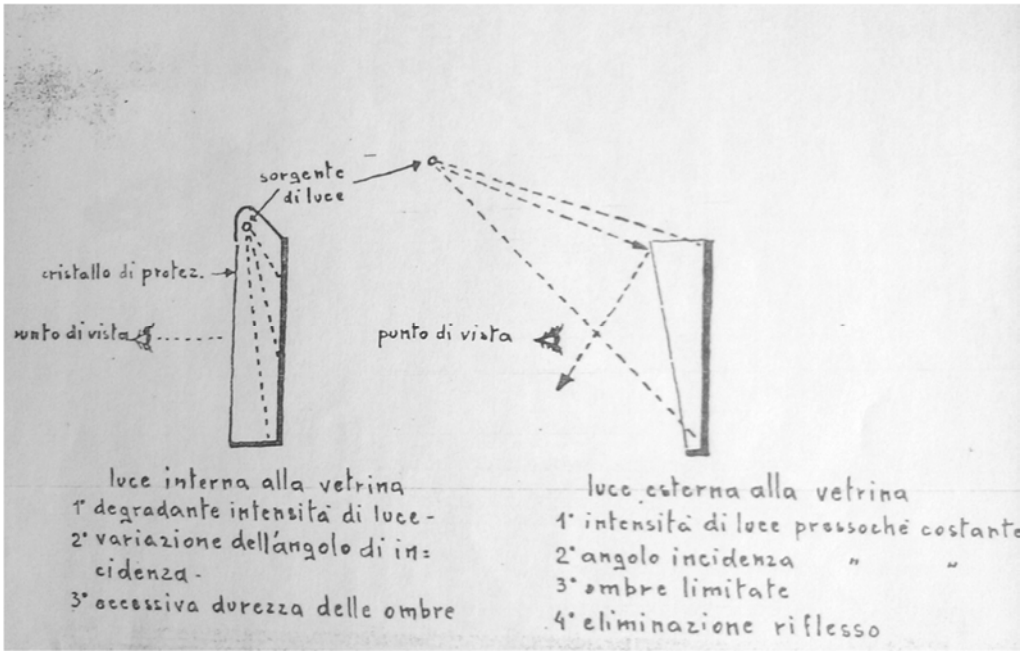


Fig. 7 - Minissi drawing for show cases (Private collection CB)

2.1 Roma, Etruscan Museum of Villa Giulia

Per opera del soprintendente Bartoccini si è avuto il bellissimo riordinamento del Museo Etrusco a Villa Giulia.
Ne è autore l'architetto Franco Minissi, quello del Museo di Viterbo;
il quale ha saputo accordare le qualità d'obbligo di un museo moderno
con la stupenda villa rinascimentale. Come sempre in simili casi,
il lavoro fu criticato per il suo modernismo. A me sembra eccellente;
la principale qualità di un museo infatti è che gli oggetti si possono vedere bene e avvicinare in maniera confidenziale. A Villa Giulia si convive con gli oggetti esposti; per esempio le statue etrusche; gli sposi coricati sopra il sarcofago,
con le mani parlanti che, fissandole a lungo,
sembrano muoversi proprio come quelle dei morti.

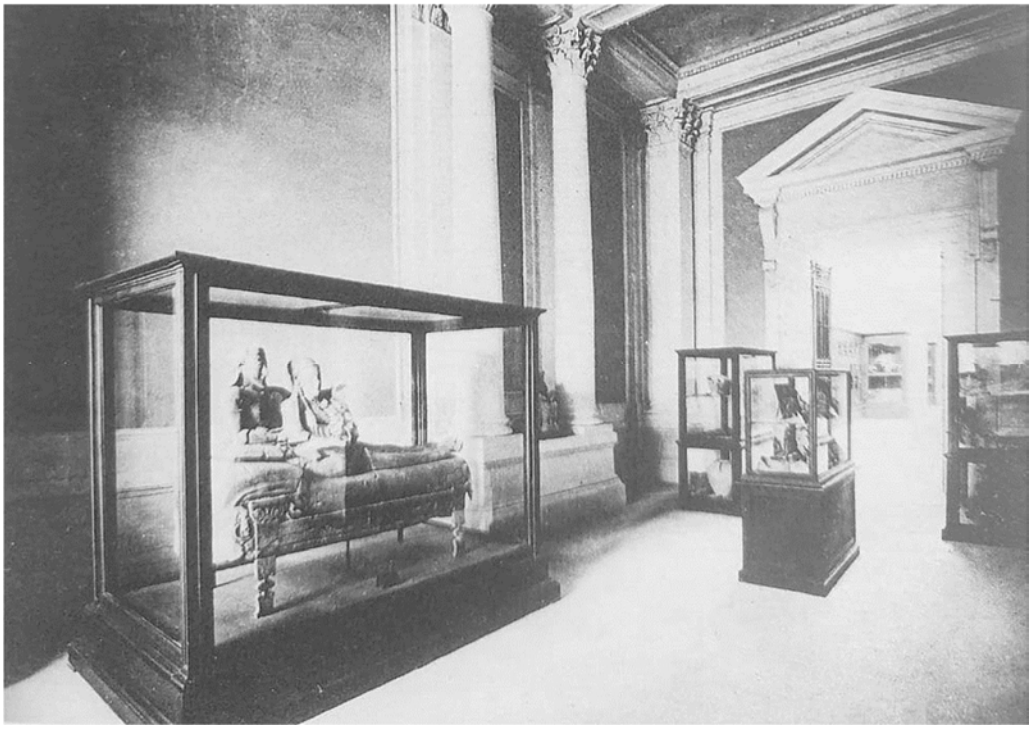
Guido Piovene, *Viaggio in Italia* (1957)

Introduction

Renato Bartoccini, in the presentation of the 1955 volume at the inauguration of the new museum, describes the significant moment of the historic event.
"Founded in 1889, the National Museum of Villa Giulia was beginning to show its age, and in the now outdated concept of the organization of materials".[7]
The museum initially was made up with finds from Civita Castellana, and from various centres in the Faliscan territory, at Satricum, Alatri and Segni, from the Barberini collection and with material from the Kircherian Museum and it was supported by successful excavations at Cerveteri, Vulci and Veio, and by donation of the Castellani collection.[8]
The problem of reorganization and with modern criteria more evitable environment, was becoming important, also with the increase in Etruscan studies.
The superintendent continues in the new system, having already created two distinct museums, the first intended so satisfy the interest of scholars and the public due to the variety and beauty of its finds, the second more particularly dedicated to specialists.
He concludes that an airier and more rational layout has been created in the large, suspended gallery created in the height of the ancient spaces. Not to forget the presentation of the "Sarcophagus of the Sposi" with the reintegration. And also, Bartoccini greats Minissi for the solution between the necessity of an Archaeological Museum and new arrangement.

Ancient museum

We think that it is appropriate to present the project and construction of the Etruscan Museum of Villa Giulia through the description of the author himself.
The Villa Giulia Museum, like most Italian museums, is housed in a monumental building of great architectural value and with its own salient characteristics, which contrast with the needs of a rational museographic distribution.
"The Sixteenth- century architectural jewel, the Villa of Pope Giulio II and its nymphaeum, appears totally enclosed for the adaptation to a museum, by two longitudinal buildings, constructed at later times, one to the south, the other to the north around 1925.

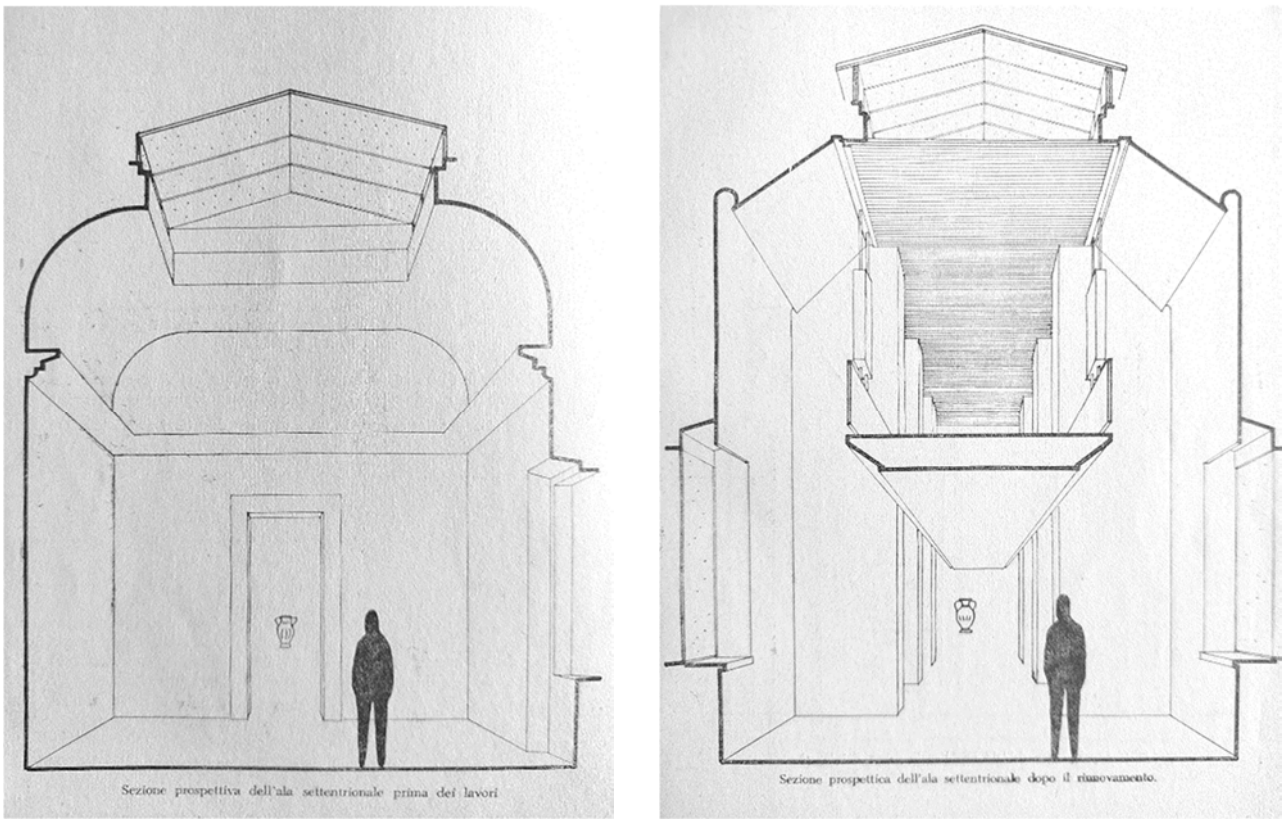


Figs. 8-9 - Roma, Villa Giulia Etruscan Museum, old layout from the early XX century. (Private collection CB)

The initial defect was aggravated by the continuous increase in material that for over fifty years had flowed so much through new discoveries, purchases and donations that Villa Giulia had become more of an enormous archaeological deposit that a museum.
Inside the ancient showcases, the objects were arranged according to a prevailing criterion of custody and conservation: they were therefore stacked, superimposed and often hidden one from each other.
The available space is limited given the unalterable nature of the architectural volume: the visitor's paths were disordered and discontinuous and it was impossible to create a logical and complete path through the different rooms.
The light was poorly distributed, and the works were poorly illuminated.
The show cases were crowded, tall and gloomy with background that cancelled out any prominence.
The visitor from the first room, was tired by optical and intellectual fatigue".

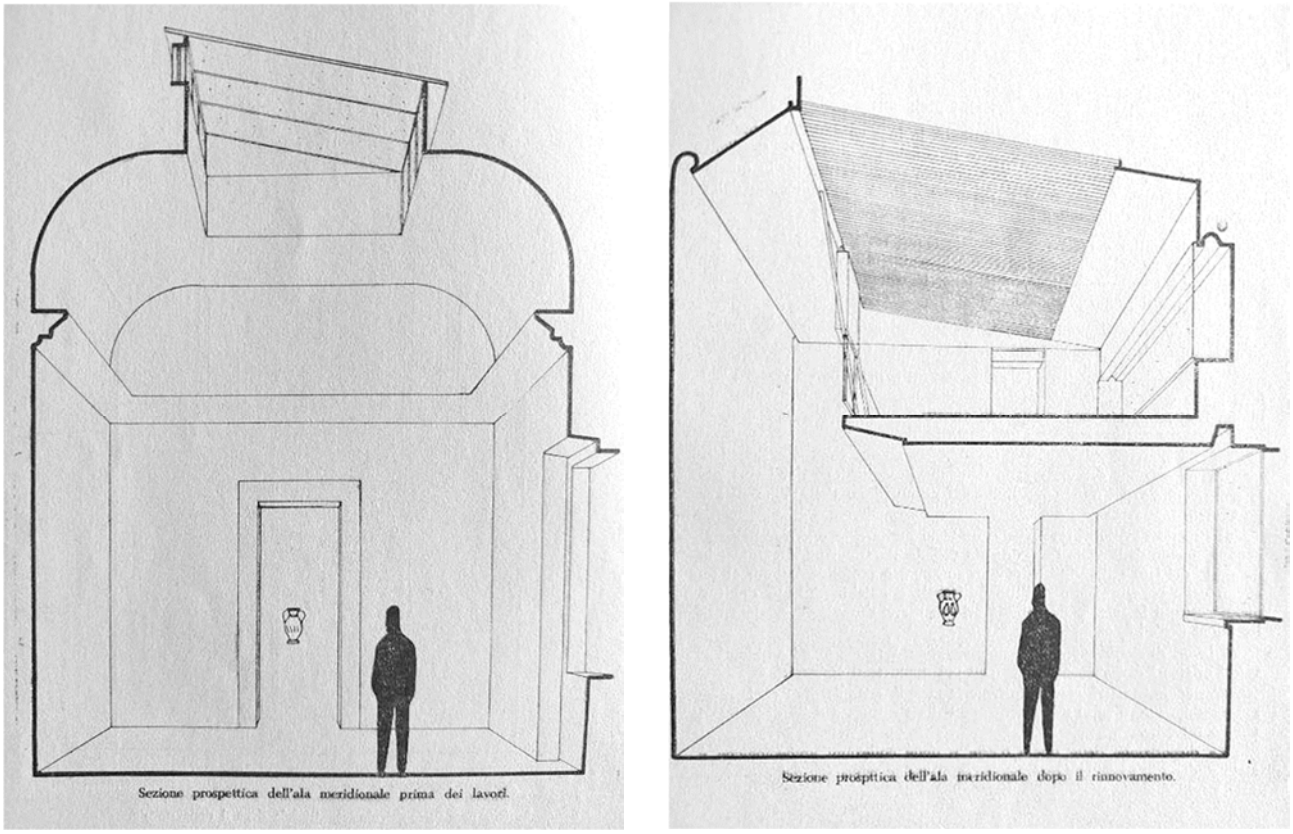
The project

Some of the author's writings reveal the essence of the design decisions.
The decision was made on abandoned the idea of expansion, and instead exploring appropriate solutions to adapt the existing spaces to modern museological criteria.
The project was entrusted by the general director Professor De Angelis d'Ossat in May 1953, and the project was delivered in October of the same year. The "principal criteria" were based on two fundamental principles:
1. To create a single organism of the entire architectural complex for a more rational museographic distribution.



Figs. 10-11 - Northern perspective section before the works. Northern section after museum insertion.
(R. VIGHI, F. MINISSI, *Il nuovo museo di Villa Giulia,* Roma 1955)

2. Study and create every furnishing solution primarily with the aim of best presenting the objects on display.



Figs. 12-13 - Southern perspective section before the works. Perspective section of the southern after the museum adaptation. (R. VIGHI, F. MINISSI, *Il nuovo museo di Villa Giulia,* Roma 1955)

With the architectural intervention, connect the spaces intended for exhibition in an interrupted sequence and at the same time increase the usable space without the slightest alteration in the volume and architectural features.
The project still includes the creation of clear, flowing and complete paths and the harmonization between space, man and objects in the interiors.
It is also planned to increase natural light and also provide artificial light.
With the installation works we want to obtain the greatest enjoyment and understanding of the works on display.
The museographic criteria include: the best conditions for visibility of the works of art, the elimination of any disturbing or distracting element, the bringing of the visitor into as close contact with the works as possible and finally the provision of explanations.[4]

The realization

The adaptation of an intermediate floor inserted in its modern wings has allowed to increase the surfaces to use in two thirds, and above all the continuation of the paths on an elevated floor from which it is possible to obtain a connection with the first floor of the Villa.

We tried to ensure that the intermediate floor would enter into the interior space of the rooms as independent elements.

For the construction solutions, the use of load-bearing structures was adopted, which were as independent as possible from the existing ones so as not to disturb the static equilibrium.

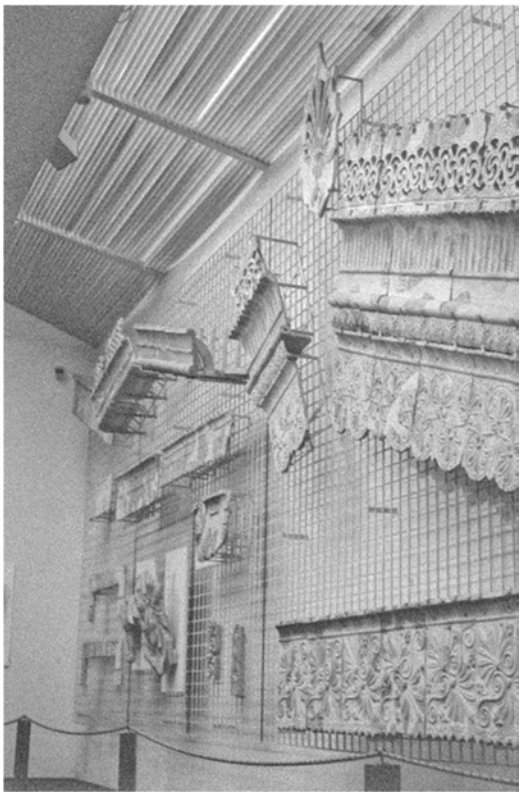


Fig. 14 - Fragments of the temple, set up on a metal support allows to have a perception of the whole. (CB 1983)

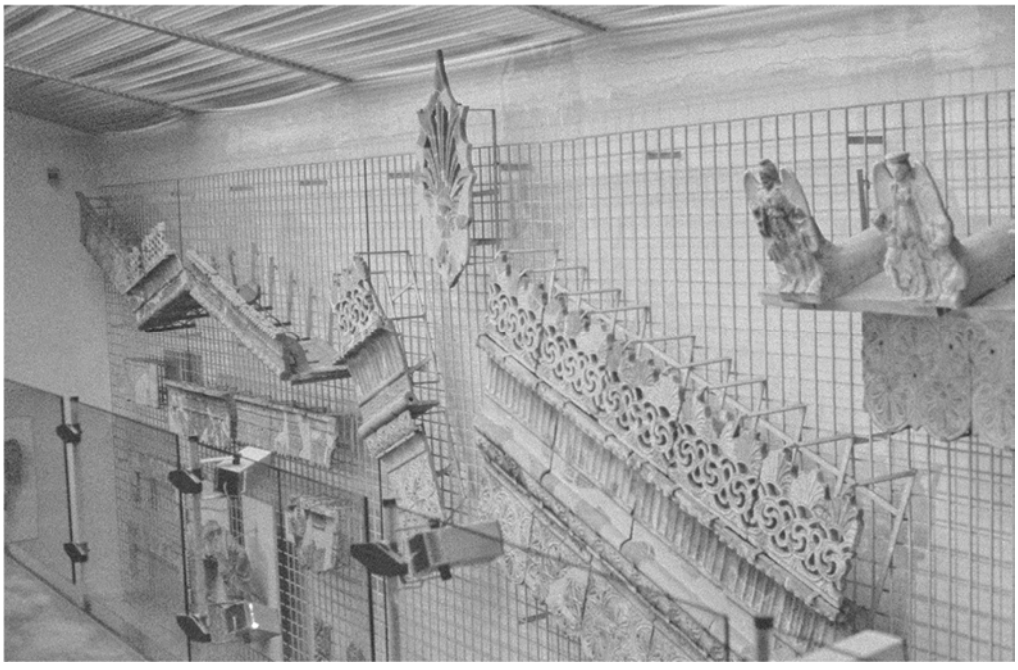


Fig. 15 - The same fragments with the new walkway offer a close-up view the spirit of the new museum layout. Offers these possibilities to better grasp the detail even from non-specialist. (CB 1983)

Natural light has been intensified where possible and inappropriate (improper) additions such as imitative and suitable decorations have been eliminated.
Absolute respect for the pre-existing structure was limited to the consolidation of the vaults of the portico painted by Giovanni da Udine.
The arrangement of the works of art and archaeological collections has been designed in such a way that the display cases are separated by the wall structure, like discreet guests from the monumental environments.

Fig. 16 - "Sarcophagus of Sposi" from Cerveteri, ground floor. In the design and construction of Minissi, the Octagonal room is the fulcrum of the entire museum itinerary. (CB 1982)

The showcases

The showcases were designed and created to contain the individual works in such a way as to eliminate disturbing and distracting elements.

Extensive use was made of glass with a load-hearing function while wall and parapet show cases were reserved for the presentation of goals that did not require multilevel view.

The wish to highlight the great creative innovation that respects the pre-existing structure with the support designed specifically for example for the "Sarcofago degli Sposi" and the wall frame that houses some fragments of the Temple of Veio.

For the latter, the museum's interpretation is innovative.

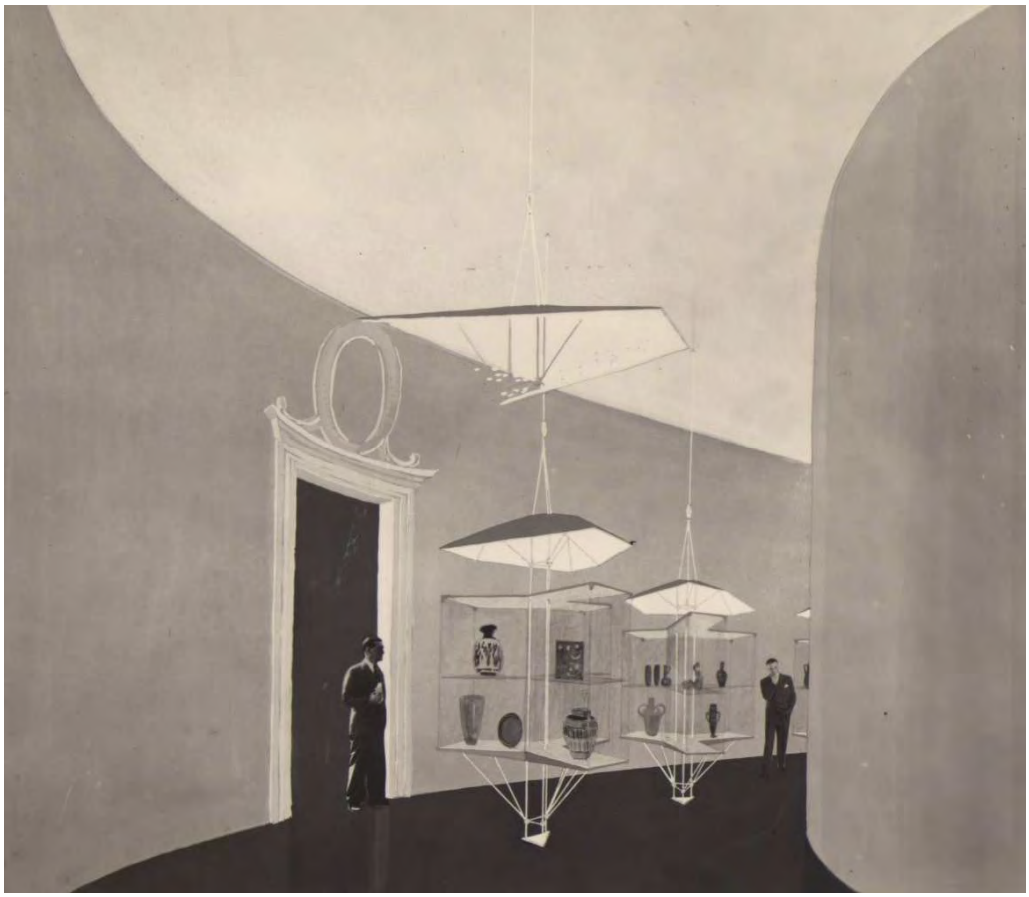
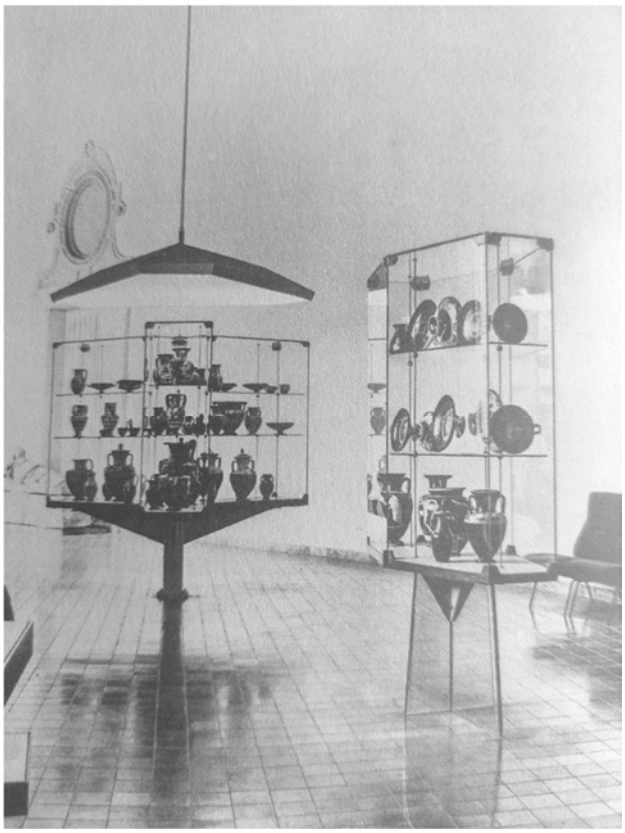
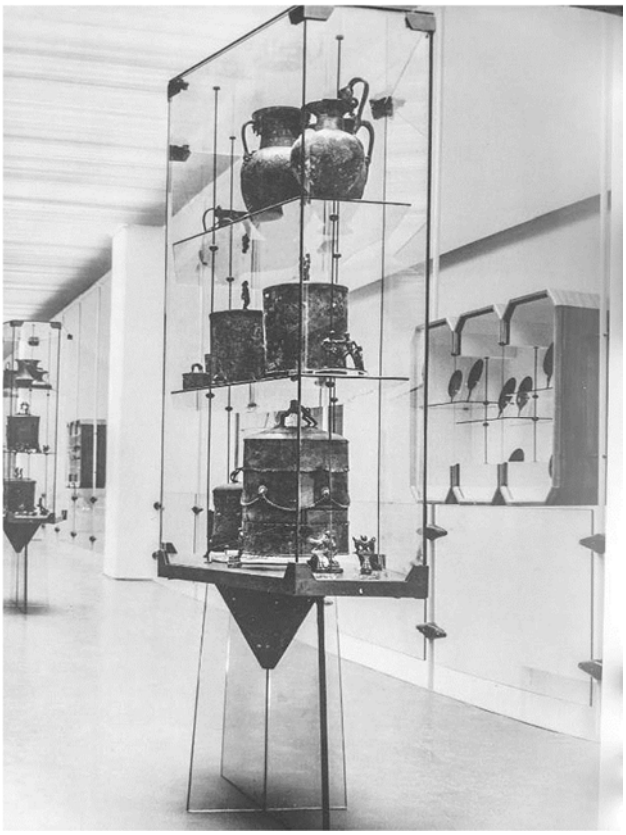


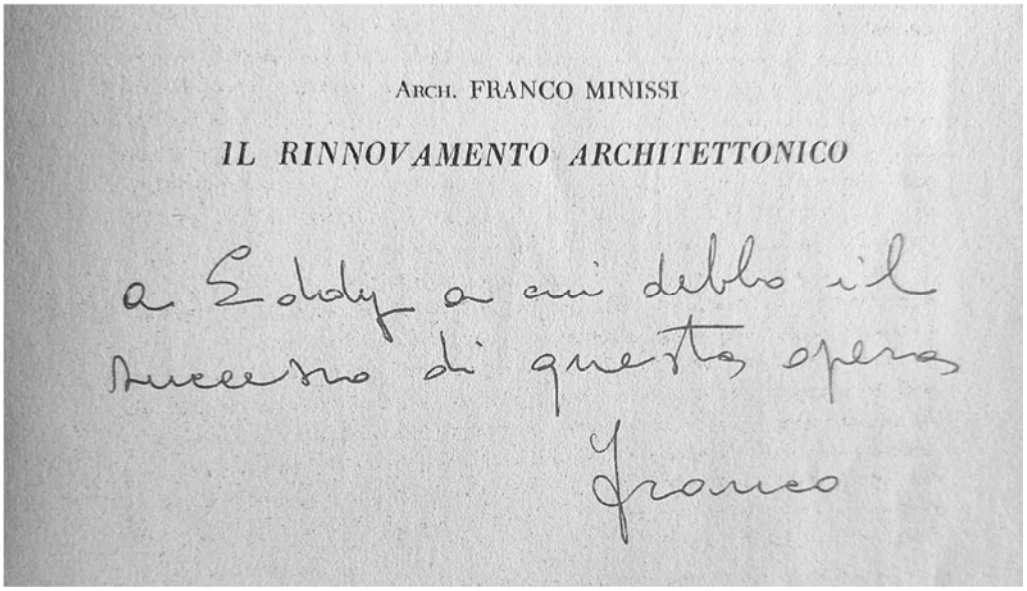
Fig. 17 - Minissi drawing of the show cases. (Private collection CB)

From the ground floor, the architectural elements can be seen from a distance, while from the intermediate floor, the view is closer and allows one to grasp the essence of the adaptation.





Figs. 18-19 - Concentration of a museum space for archeological objects with the adaptation of environment showcases. In these cases, the hemicycle hall with the ceramics from the Castellani Collection set up in 1959. (CB 1980)


ARCH. FRANCO MINISSI

IL RINNOVAMENTO ARCHITETTONICO

a Eddy a cui debbo il successo di questa opera

Franco

Fig. 20 - The dedication from the author of the museum project of Villa Giulia to his wife. (R. VIGHI, F. MINISSI, *Il nuovo museo di Villa Giulia,* Roma 1955)

Fig. 21 - Arrangement with new show-cases. This illustration documents the intervention of the new installation. In this case as in other, we note a sort of "*damnatio memoriae*" of Minissi intervention. (CB 2005)

Considerations

In this episode too, it is clear how much of Minissi's work has been erased, this is part of a brooder problem in Italian museography, which has failed to protect some of the Maestri of Architecture.

2.2 Trapani, Pepoli Museum

The Regional Museum Agostino Pepoli is the result of an adaptation[11] of a pre-existence, the Carmelitane convent of Annunziata, and the direction of Raffaello Delogu and Vincenzo Scuderi and the project of Franco Minissi. The unusual conformation of this pre-existence, made up of an architectural backbone and minor extension, suggested a first basic solution, since at the same time that every respect was imposed for the qualified parts, some creative expression was allowed in the others.

Fig. 22 - Pepoli Museum. The Cloister. (CB 2000)

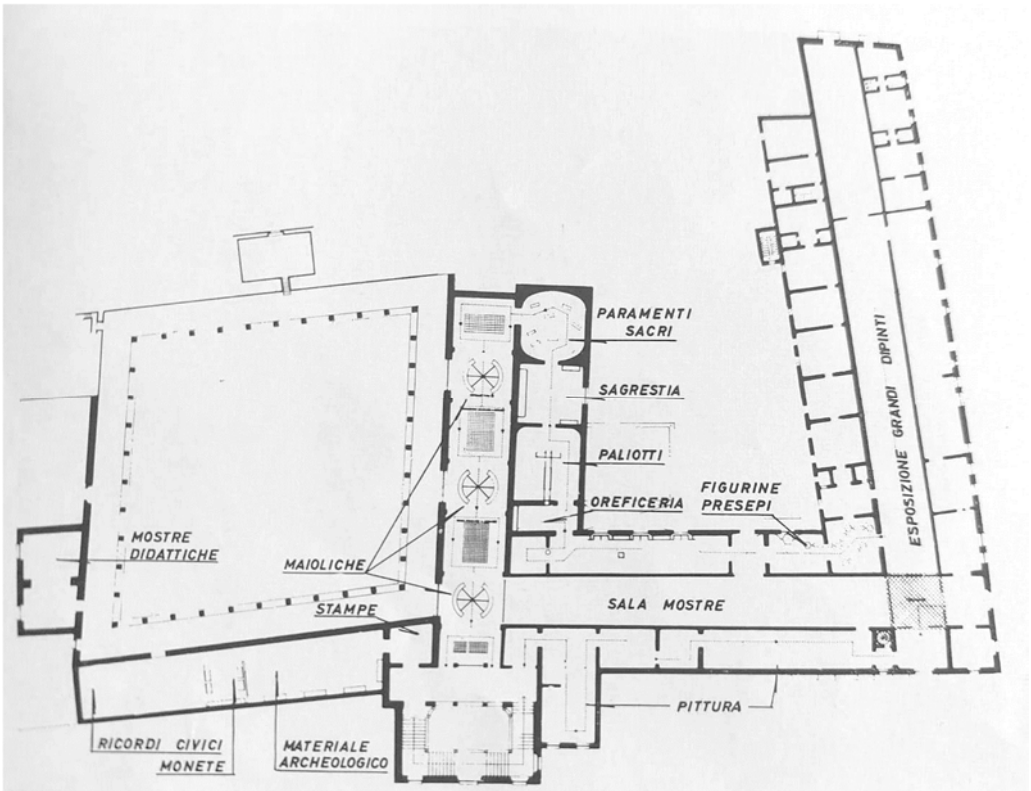


Fig. 23 - Museo Pepoli, general plan from "Architettura, cronache e storia", n. 130, agosto 1966. (*From* R. DELOGU, *Museo Pepoli a Trapani*, in "L'Architettura. Cronache e storia", XII, 130, 1966, pp. 240-242)

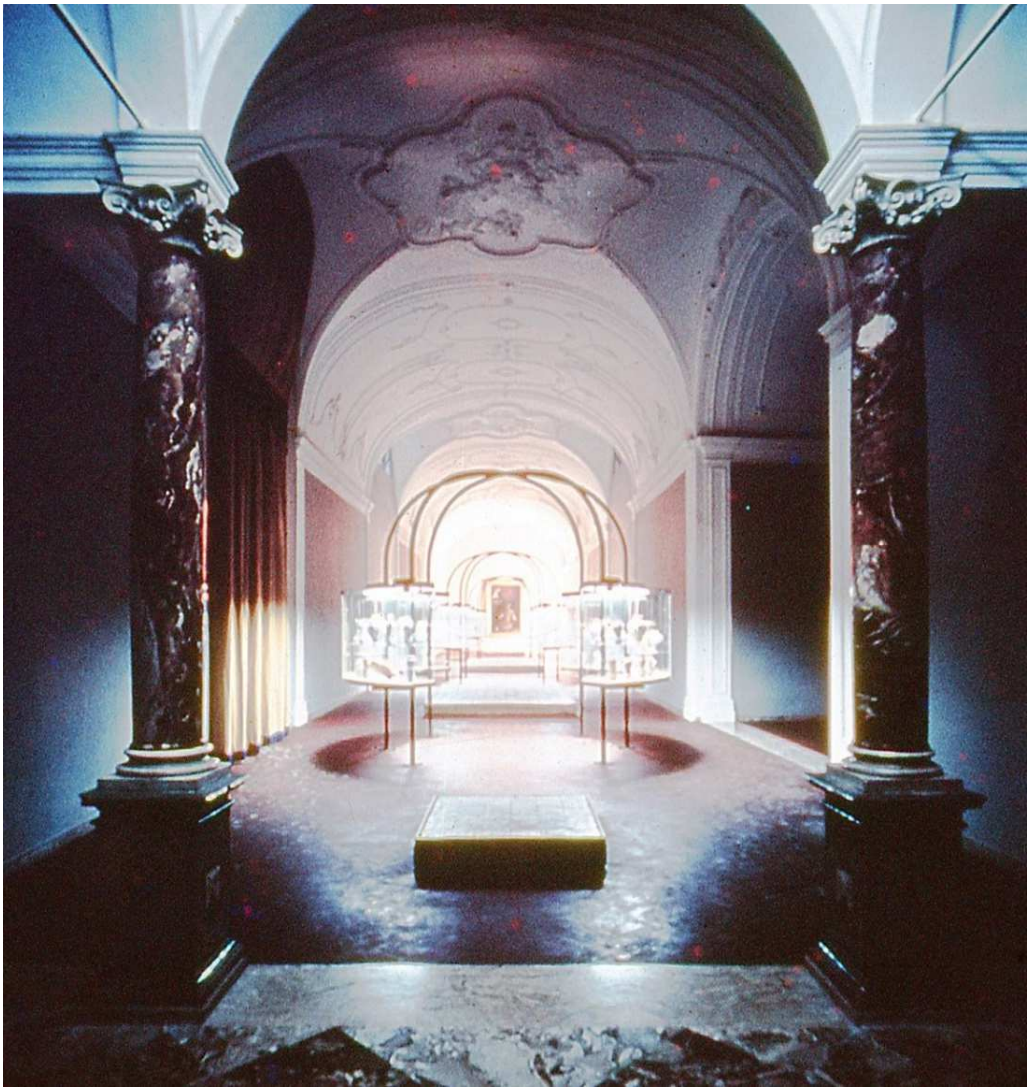


Fig. 24 - Maioliche area. (Private collection CB)

The architectural arrangement and layout of the Trapani Museum required to address a variety of museographic issues due to the architectural nature of the pre-existing architecture and the heterogeneity of the collections to be turned into a museum: for example, coral works, sacred furnishings and vestments, fine handcrafts such as nativity scene figurines, ancient Sicilian ceramics and silver ware.[12]

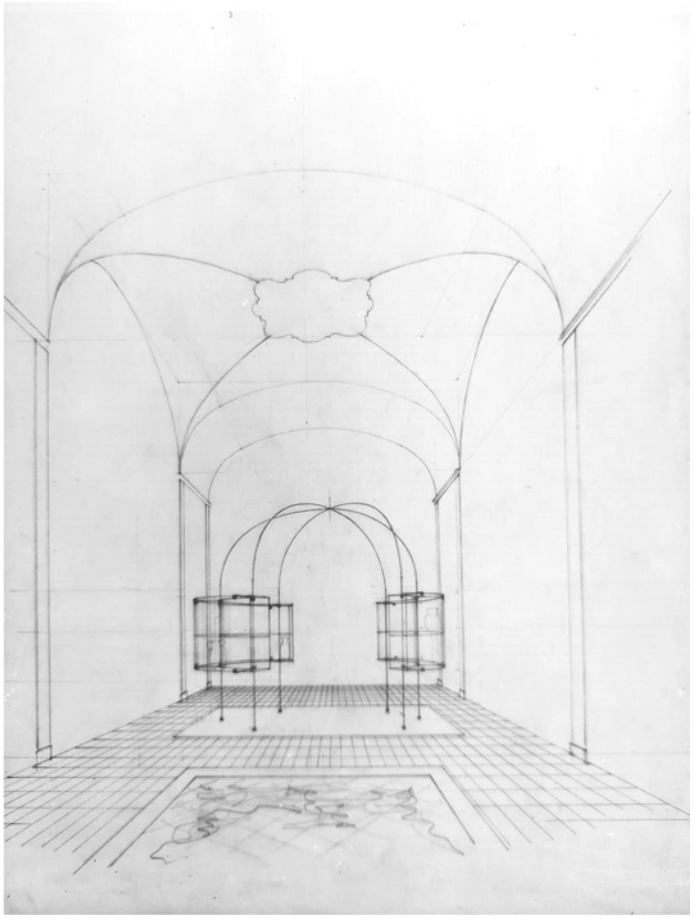


Fig. 25 - Franco Minissi drawing. (Private collection CB)

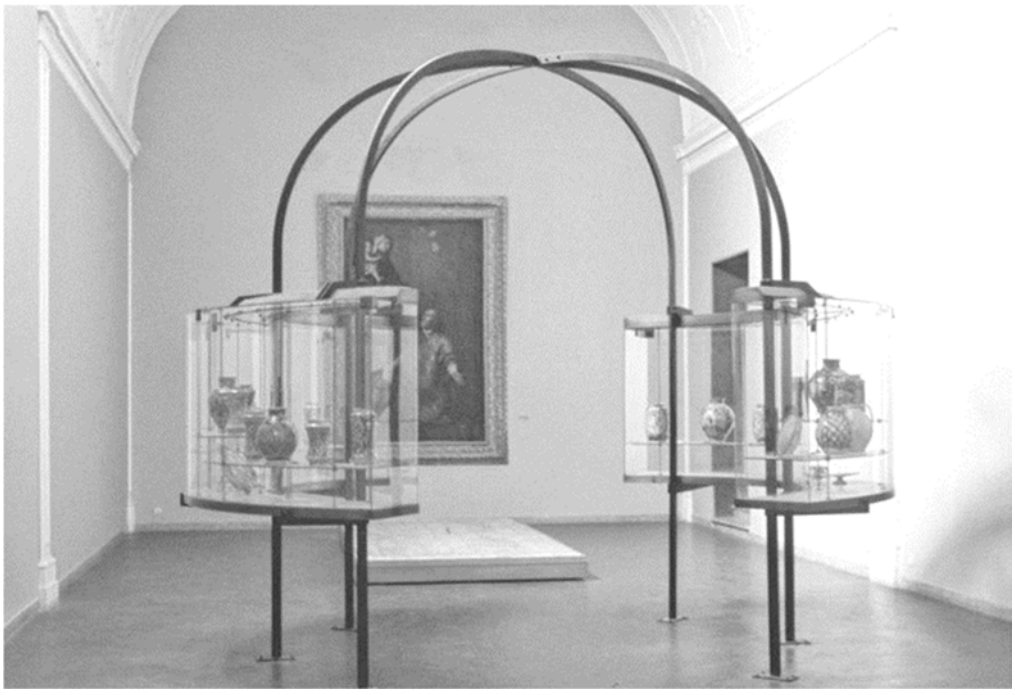


Fig. 26 - The theme of the bell-shaped or clinging show cases fits into the Baroque spatiality. This architectural solution almost expresses a series of pavilion, lacking only a garden creeper. (CB 1983)

We would like to draw attention to some solutions. For the Pinacoteca, in particular for the display of the nativity scene and complete nativity scene, were used the rooms to the sides of the first large gallery.
In their irregular spaces Minissi has modelled the adaptation with a lively distribution of small continuous windows that constitute a real source of concentrated light, attracting the visitor's attentions by abstracting them from the space.
The author continued to design the exhibitions with different display cases depending on the individual items to be displayed of them and without creating excessive and overbearing clutter, as sometimes happens with temporary displays created after his death.

Fig. 27 - The arrangement of the glass cabinets inserted into the Baroque spaces expresses lightness and transparency highlighting the maiolica sides. (CB 1983)

This was the case for sacred vestments with flat display cases made up of two flat sheets of glass illuminated from within to allow visibility from all sides and accentuate the suspension in the void.

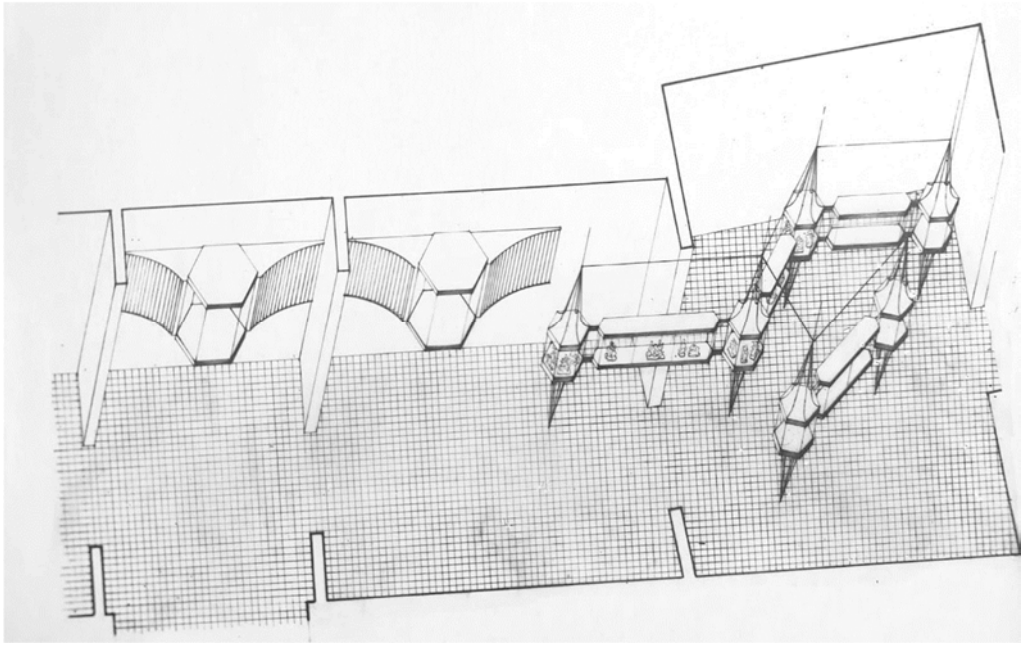


Fig. 28 - Hall of nativity scenes and puppets, axonometric detail. Franco Minissi drawing. (From R. DELOGU, *Museo Pepoli a Trapani*, in "L'Architettura. Cronache e storia", XII, 130, 1966, pp. 240-242)

Figs. 29-30 - Polygonal ribbon show cases from nativity scene figurines. These are designed to accommodate the sinuous shapes of these small objects. They are well proportioned for the limited space. (CB 1983)

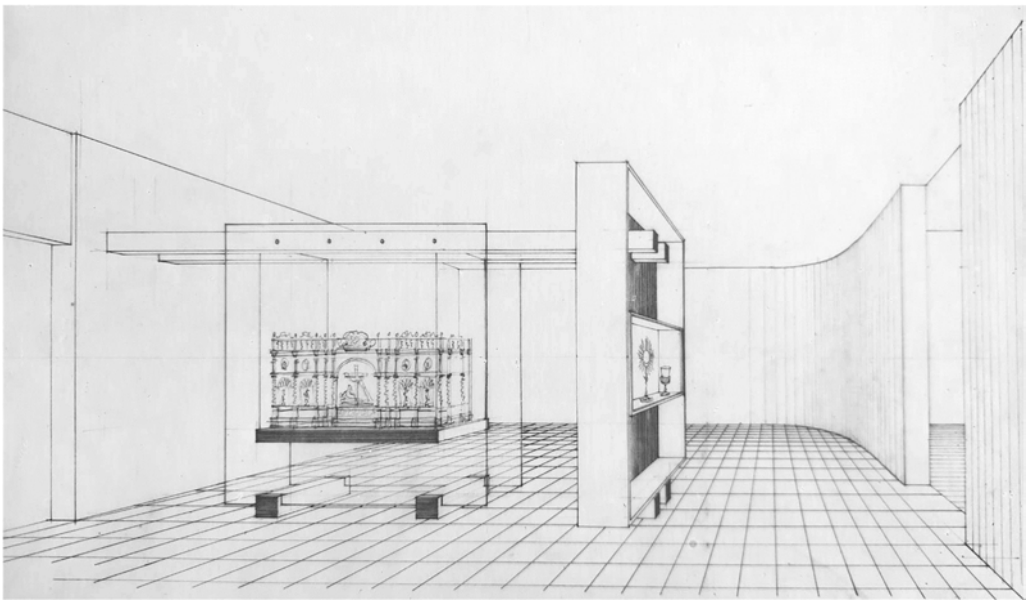


Fig. 31 - Hall of the Silver Altar piece. Franco Minissi drawings. (Private collection CB)

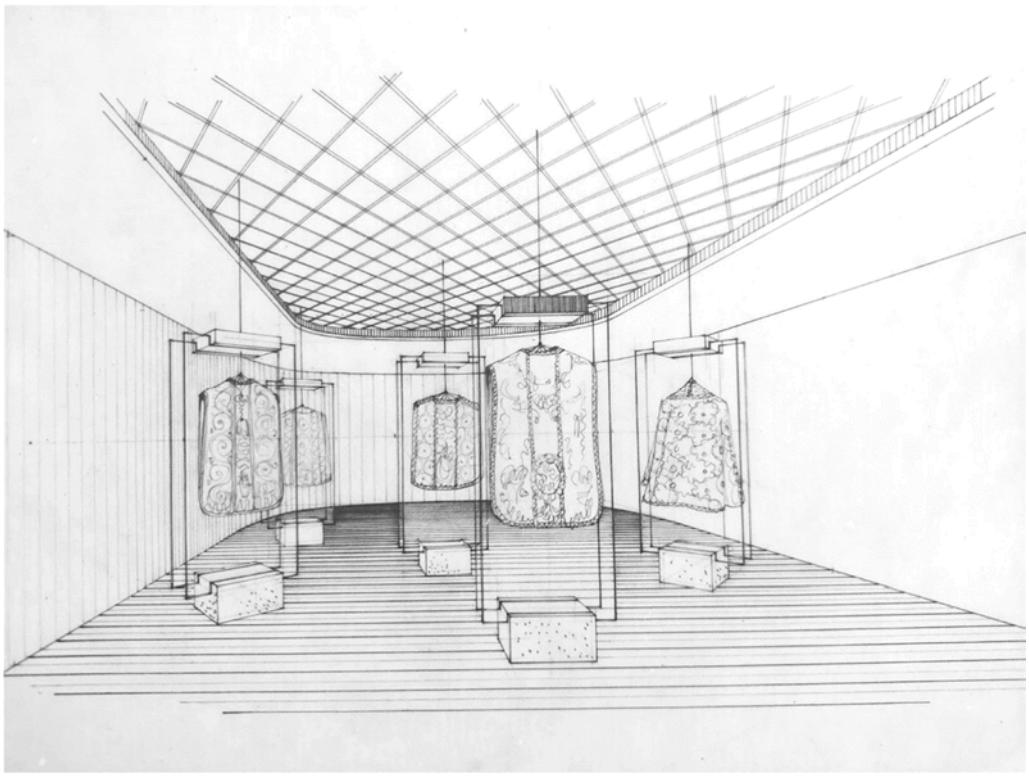


Fig. 32 - Axonometrical sketch of the showcases for ecclesiastical vestments. Note the projection backgrounds superimposed on the walls. Franco Minissi drawing. (Private collection CB)

Finally, for the ceramic collection, special supports were ended that present a dialogue with the architectural organism.

The solution allowed for the creation of accessory elements for the show-glasses which, when connected to them, create real display, nuclei, almost transparent environment within the architectural reality.
These are real suspended of hanging display cases which recall the upper baroque vaults in their expressiveness.
This theme of differently shaped anular display cases will be a constant in the design of Minissi: think for example of the Caltagirone museum.

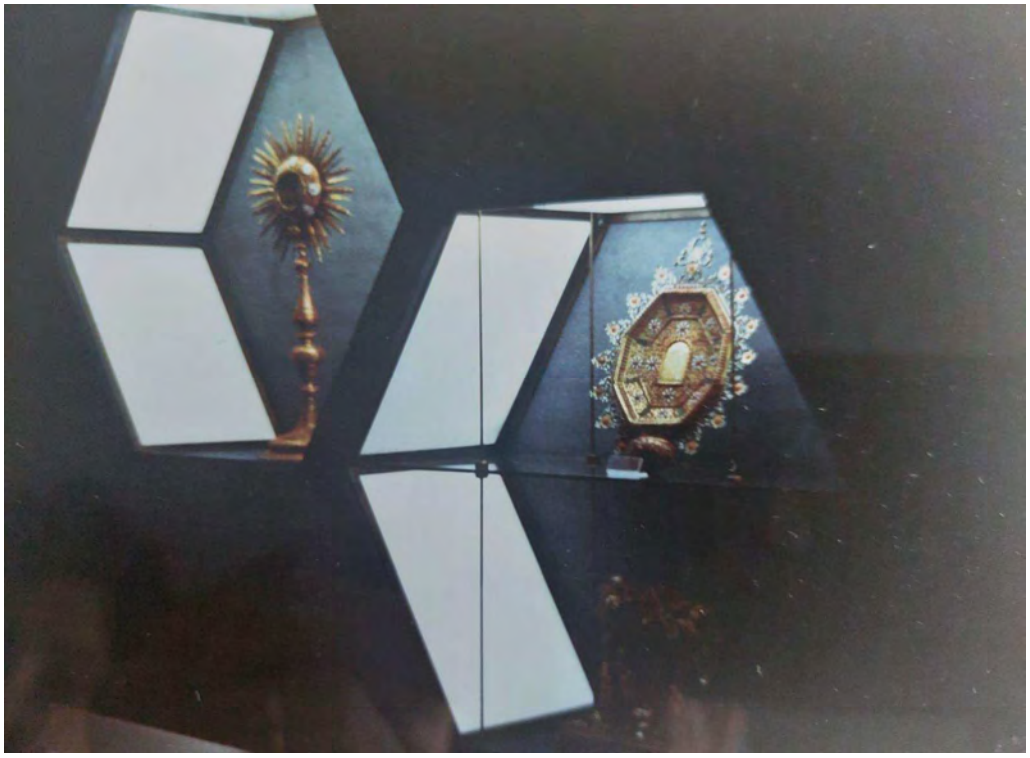


Fig. 33 - Detail of hexagonal showcases for presenting objects of Baroque Trapani goldsmith art and small-sized ecclesiastical furnishing. (CB 1983)

Fig. 34 - The oversize show-cases are strikingly unusual while they were designed specifically for the heritage to be presented in this case; industrial mass-produced systems are adopted. (CB 1996)

Consideration

The observation arises spontaneously when following the death of the museum's creator, new show-cases are presented in a temporary exhibition. These are found to be oversized for the goods to be displayed (monstrances, chalices, pyxes and other small ecclesiastical furnishings).

2.3 Agrigento, Archaeological Museum "Pietro Griffo"

The theme of the dialogue between the ancient and the new, found one of its most exciting moments in the seventies in the Archaeological Museum of Agrigento dedicated to the memory of Pietro Griffo (1967-78).[13]

Premise

The site chosen for the museum, the hill of San Nicole, has a high symbolic value, as it is at the centre of the public area of the classical city.

The museum incorporates the remains of the Cistercian monastery annexed to the church of San Nicola and dates back to the 14th century.

The main decade features a portal inscribed by a quadruple lintel. On the sides there are two buttresses inserted in the 16th century. The interior of the single nave shows some pre-existing features.

The archaeological museum is an architectural work that fits into the process of musealization of Sicily in a highly characterized contents that of the Valley of the Temples.

Fig. 35 - Insertion of the new Archaeological Museum in the Valley of Temples (1968). (Private collection CB)

Fig. 36 - The walkway and the landscape of the Valley of Temples. The lightness of the insertion is evident. (CB 1982)

Fig. 37 - Detail of the walkway leading to the museum. Some construction details can be seen, such as the wooden beams and the slender column metal railings. (CB 1978)

Fig. 38 - The architecture of the new museum and its dialogue with the pre-existing. On the left the Oratory of Phalaris, one can grasp the essence of the horizontal development and the attention to surfaces treatment. In the foreground can see the recently discovered "L'Ekklesiasterion". (CB 1982)

A positive example "to forget the offenses to the landscape and the vulgarity of new constructions".[14] Brandi, in a page of the volume "Sicilia Mia", describes Agrigento disfigured by indecent buildings, but the temples are framed by the sea or immersed in blossoming almond trees.[15]

It can be said that the architecture of the new museum succeeds in synthesizing, harmonizing the coexistence of the new with the set of pre-existing structures.

In the reconfiguration of the cloister, Minissi provides on the first correct applications of the enunciations of the Venice Charter and the reintegration of the image.

Fig. 39 - Agrigento, Convent of San Nicola. Destruction during the war (1943-1944). (Archivio Soprintendenza Agrigento)

Fig. 40 - The cloister in the early 1960s during the first restoration works. (Archivio Soprintendenza Agrigento)

Fig. 41 - The cloister after the critical restoration work. The refined dialogue between old and new is evident, albeit with a language from the late 1960s. In short, it is a testament to the spread of the Venice Charter of 1964. (CB 1978)

In short, a clear interpretation of the critical-restoration is proposed once again and a dialogue between ancient and new.[16]

Minissi, as he confides to his friend Bruno Zevi, imagines a pure stereometric solution, excludes large stained-glass windows and creates a function thinking about the contents, but when possible, it seeks dialogue with the Mediterranean landscape and creates external paths towards the valley.

The new museum was to be low, with a horizontal profile, so that the globe of the church of San Nicola would continue to dominate distant views.

In the project and therefore in the subsequent construction, the partial implying of the hill between the church and the ancient Oratory of Phalaris allowed to contain the height of the Telamon Hall, the true heart of the museum.

The Access to the museum was not designed and built by Minissi according to the shortest route, but was conceived according to museological criteria.[17]

Fig. 42 - The purity of the new architectural volume is highlighted as it interacts with the old. Modern details such as water drainage and the external views of the windows are noteble. (Private collection CB)

Fig. 43 - Below, on other front, you can read the remains on the seat with an epigraph dedicating to Hermes and Menacles. The photograph also highlights the care taken in creating the green. (Private collection CB)

After entering, the visitor is invited to cross a walkway suspended over the excavation area, to turn his gaze towards the Valley of the Temples, to walk alongside the Oratory of Phalaris and then to head towards the remains of the convent and finally enter into the museum.

In short, we find ourselves, involved in a real museographic itinerary.

In museum hosts two distinct sections: one containing collections from excavation in ancient Agrigento, and one dedicated to the territory dependent on the Province.

Fig. 44 - One of the connections between the different sections of the museum. The large glass surface allows for a dialogue with the Mediterranean landscape. (CB 1982)

Thus the intervention includes the musealization of the authentic Telamon in the correct standing position, while outside, in the site, where it was rediscovered, a copy on the ground was placed.[18]

The horizontal position is due to the partial collapse after one of the frequent earthquakes of ancient times.

In this Architecture, was constant the attention to the construction details and the combination with the pre-existing elements.

An important detail emerges in the cloister. Here, one can see the restoration of the remains of the medieval Architecture, with the necessary addition in a modern language, from the late 1960s and 1970s.

Among the numerous details, the different gutters, the entire greenery system, the lighting, the layout of the various show-glasses, and therefore the different educational paths stand out.

And also among the various sections of the museum it is significant, the dialogue between the interior of the museum, and the landscape and the various Mediterranean vegetations.

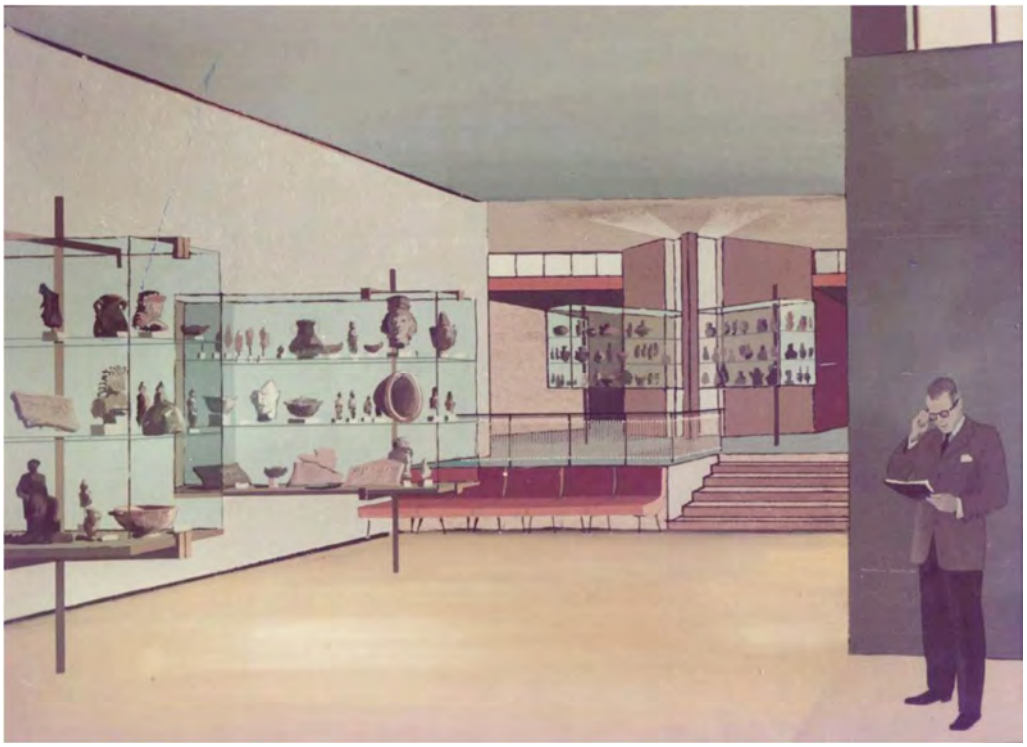


Fig. 45 - Minissi drawing of the museum adaptation. (Private collection CB)

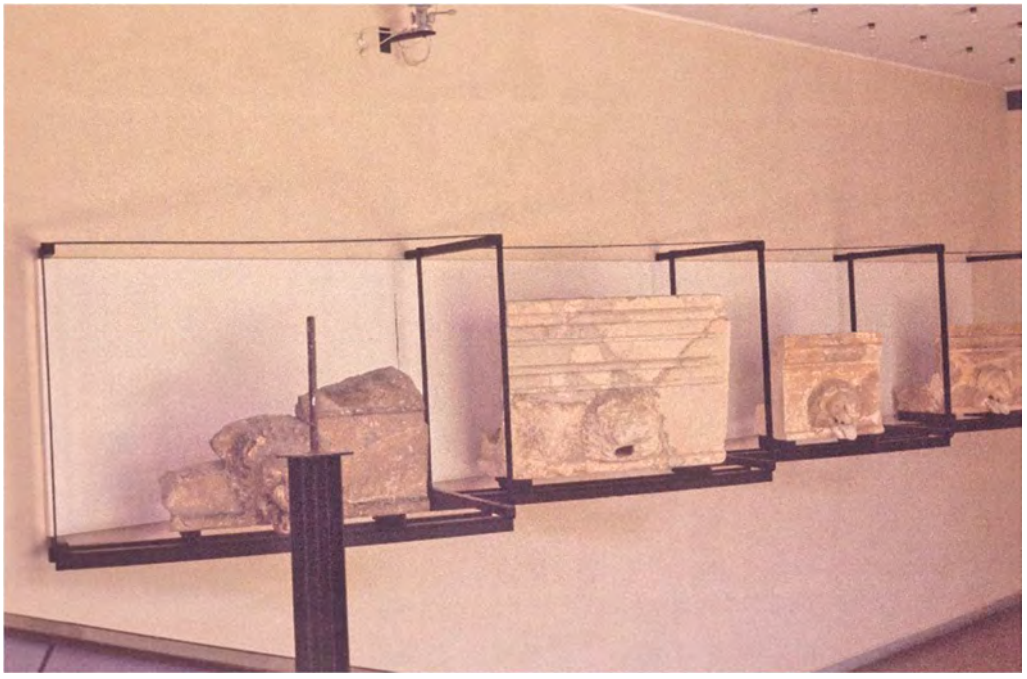


Fig. 46 - Sala IV. The hall of Architectural sculpture, the simple and essential metal support that allow the fragments to be seen all around are highlighted. (C.B. 1982)

It is important to remember that while the museum organism has been created, the elements for the internal layout are simultaneously being designed.
Minissi obtains maximum direct illumination of the archaeological heritage, filtered by suitable diffusing screens, and the elimination of light reflections on the surface of the crystal and on the observers.
The adaption of these concepts allows the creation of different types of display (show glasses) depending on the exhibits. It is recalled that at the end of the seventies, in a second batch of works, the library and a conference hall were inaugurated and the storage rooms were also made available.

This museum, among the first in Italy and in the world, opens up to the territory as an active cultural centre, thanks to the foresight, of the Superintendent Pietro Griffo, then Ernesto De Miro, Gabriella Fiorentini and Franco Minissi himself.

Fig. 47 - View of the Telamon (the copy) lying on the ground so as not to forget the seismic events that destroyed. (C.B. 1982)

Fig. 48 - The Telamon is in the Museum. The large central space was designed to properly accommodate the Telamon in an upright position. Due to its large size, an excavation of several meters exposing the skyline too much. It is interesting to note a reconstructive model of the temple, while the “lacuna”, or look of the fragment with a chromatically, different panel emerges. (CB 1982)

The museum adaptation is also important for the set of different supports and display cases (show-glasses) that present the various collections. We have many different solutions.

Fig. 49 - The Greek ceramics room with show cases anchored to the floor and ceiling, the total transparency allows you to admire the ceramics. (CB 1982)

Each support is based on the individual heritage that needs to be presented. Thus, for the while marble Efebo, it was necessary to find suitable solutions for a correct museography. First, the statue highlights a "lacuna", the lack of a leg, which is filled with a slender metal element. The actual support, is transparent, to convey lightness and avoid competing with the statue.

Figs. 50-51 - Furthermore, the warm coloured real panel plays an important role, allowing the vibration, of the marble to the captured. Another example of support is provided by the brackets that support fragments of the temple frames. And again, a support made in the early eighties to show, protect and present, a small sarcophagus solution found is a support in perspex, light and transparent. (CB 1982)

The various show cases feature works designed in conjunction with his trusted firm, the legendary OMAR of Roma, which creates the author's various executive drawings.

As an example, we would like to present the two levels display case, made up of a slender wooden structure, metal elements and glass.

Its peculiarity is given by the fixing to the floor and so the ceiling.

Another detail is given by the sequence of the position towards the vertical windows. The Hellenistic and roman ceramic are legible.

But probably one of the most interesting ones, also due to its safety considering that it was created in 1967, is that of Attic volute krater by the Niobid painters from the 5th century B.C.

The protective case is made up of a transparent crystal parallelepiped. Inside the base is a slender, essential steel support with a suspended circular base on which the krater is anchored.

Fig. 52 - Archeological Museum "Pietro Griffo", the Attic voluta krater by the Niobid Painter from Gela, dating from the 5th century B.C., in the 1967 exhibition. (CB 1982)

Fig. 53 - In place of the wall on the southern front to avoid erroneous reconstructions, for lightness and clarity, an iron grid was inserted, divided into diamonds and entirely glazed. On the two floors a conference room was created: on the ground floor a library on the upper floor (CB 1978)

Fig. 54 - Inside of the conference room. (CB 1979)

Fig. 55 - Summer setup for classical performances, the structure is reversible respecting all the criteria of minimum intervention, distinguibility and reversibility (CB 1984)

Consideration

The archaeological museum of Agrigento designed by Minissi, and inaugurated in its initial nucleus in 1967, with a second opening in July 1978, is a paradigm of museum architecture but at the same time a "manifesto" of critical Restoration.

At the date of its presentation it was highly innovative.

For historical correctness it seems appropriate to specify that in other European countries, new museum had not been built. It is worth mentioning that in Germany, new museums began to the built in the early 1980s, in Paris, the cultural policy of the president designed and built the Grand Louvre, the Musée d'Orsay, and others; while in the United Kingdom, the Expansion of the Tate dates back to 1987.

Always in the same years in Spain, from the end of the eighties and nineties the new museum activity began with Reina Sofia, expansion of Thyssen Bornemisza, Caixa Forum and expansion of Prado Museum.

To this end, it seems important to reiterate that Agrigento was also a pioneering experiment in materials. Today it requires conservation and integrative interventions aimed at protecting the project and the creation of a master of Museography.

In detail, the most innovative materials of the time, such a Perspex for little domes and skylight as well as the ungalvanized iron profiles for the exterior required conservation and restoration.

2.4 Selinunte, Archaeological Park

An Archaeological Park is nothing other than an immense archaeological museum, or rather a museum that, unlike traditional ones whose contents have been removed, preserves its evidence in its authentic context.
In addition to preserving the finds for themselves, the archaeological park preserves the direct and authentic relationship between them and their landscape. The state of conservation of most of the finds in their ruined condition establishes a particular relationship with the landscape which also contains a notable museum component that must be kept in mind even if it belongs to outdated Romantic conceptions.
It is therefore necessary to preserve the visual relationship that has developed over time between the landscape and the ruin, beyond the latter's scientific documentary value. To this end, it will be permissible to eliminate anything that might be disturbing.
The conservation of the historical stratification of the surrounding, environment and that which occurred on the archaeological pre-existences themselves is admissible only in the case in which such stratification is of great documentary interest.
From these three considerations we can apply them to the archaeological park of Selinunte.

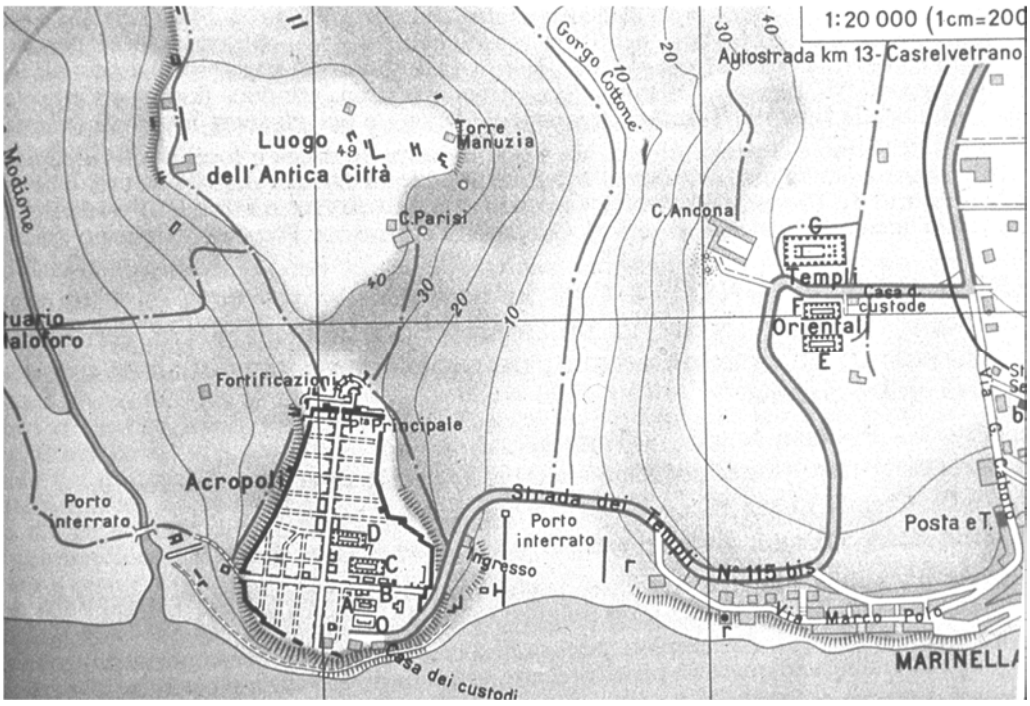


Fig. 56 - Plan of the Archaeological Site. (Map from Touring Club Italia)

Fig. 57 - Beach and improper constructions near the Archaeological area. (CB 1981)

Fig. 58 - Temple E of the Archaeological Park in Selinunte before the restoration (CB 1981)

Fig. 59 - The improper construction near the Archaeological Park. (CB 1981)

2.4.1 The Archaeological Park

A tangible example of the museum outside the museum, or rather the demonstration of the concept of museography and archaeological sites can be found in Selinunte (1980-1985).
The area covered by the Selinunte park is approximately 300 hectares, including the four zones of the archaeological area without any discontinuity (the Sanctuary of the Malophoros, the ancient city on the hill of Manuzza, the Acropolis and the eastern sacred area with the three temples).
The first phase of the park's construction, which involved the acquisition of the land, and a former farm, covering over 3000 spared meters, was incorporated within the perimeter. Was built at the beginning of the 20th century owned by the princes Pignatelli Dragone y Cortes and then by the Florio family.
In this pre-existing building it was decided to accommodate archaeological finds, plants, photographs and educational tools.
The archaeological park comes to be configured as a museum, fulfilling all the tasks and functions in the conservative action constituted by the relationship between the museum documents and the relevant territory.
In the 1970's, the site had an unfortunate relationship with the adjacent illegal settlement but still enjoyed a landscape position of extraordinary environmental quality.
A rich and varied vegetation stands out in the extension of 3000 hectares, with a historical stratification to be reread, composed of the set of pre-existing monumental structures, partly studied and to be investigated up to the presence of rural buildings (for agricultural use).

Fig. 60 - Temple C of the Archaeological Park in Selinunte. (CB 1981)

Fig. 61 - Temple G in Archaeological Park in Selinunte. (CB 1981)

2.4.2. The project

The main operations are: elimination of all roads unrelated to use of the park, and the creation of a proper visitor itinerary or suitable rest points, strengthening the visual relationship between the ruins and the natural landscape as well as the conservation of environmental assets. The creation of an efficient irrigation system is hoped for its conservation. Creation of an access pavilion to the park as a "cultural filter", through which visitors can receive all the necessary information for a cultural visit to this exceptional museum.
Use the existing rural houses to install services for the use and management of the park next to the *antiquarium* located on the former Florio farm.

Finally, reduction of the visual disturbance created by the current construction adjacent to the village of Marinella, which having extended its disorderly offshoots close to the park, is positioned aggressively towards the park.

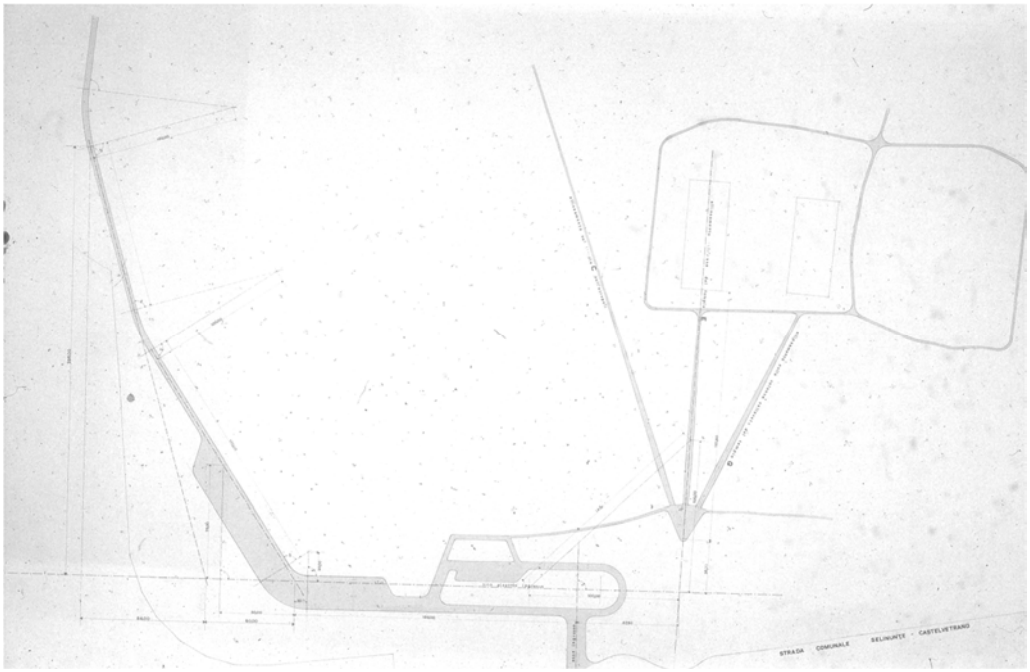


Fig. 62 - Minissi's project of the "artificial duna" and the visual telescopic. (Private collection CB)

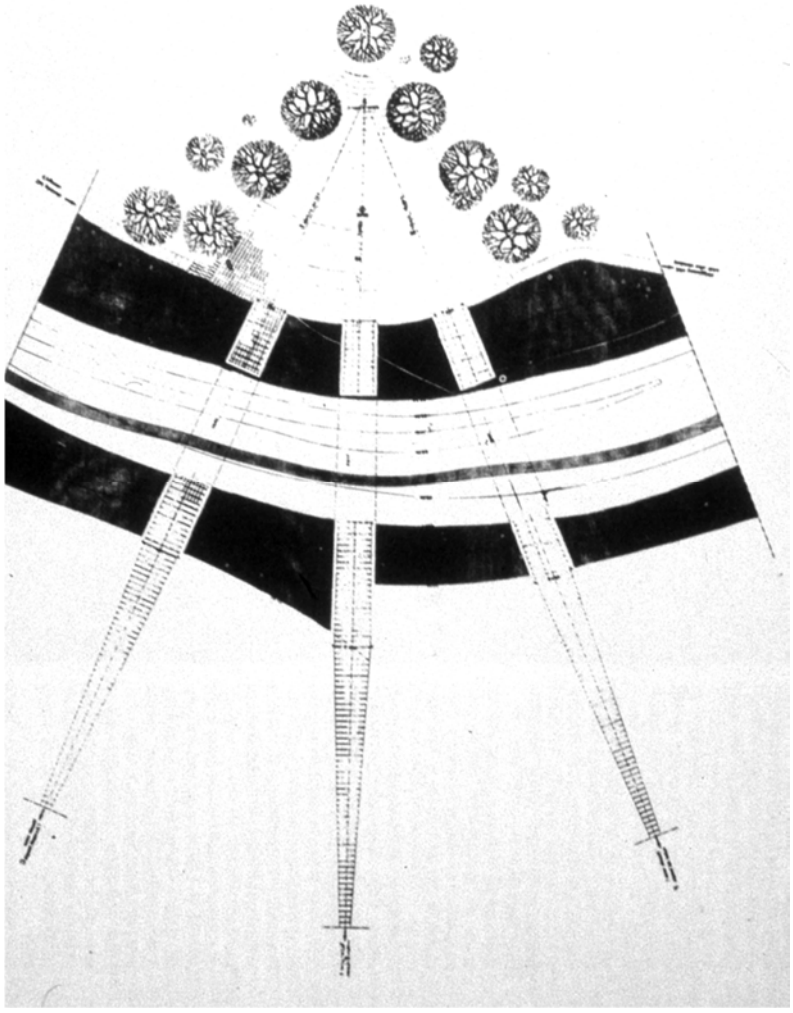


Fig. 63 - Minissi's project of the artificial "duna" and the visual telescope with the new green arrangement. (Private collection CB)

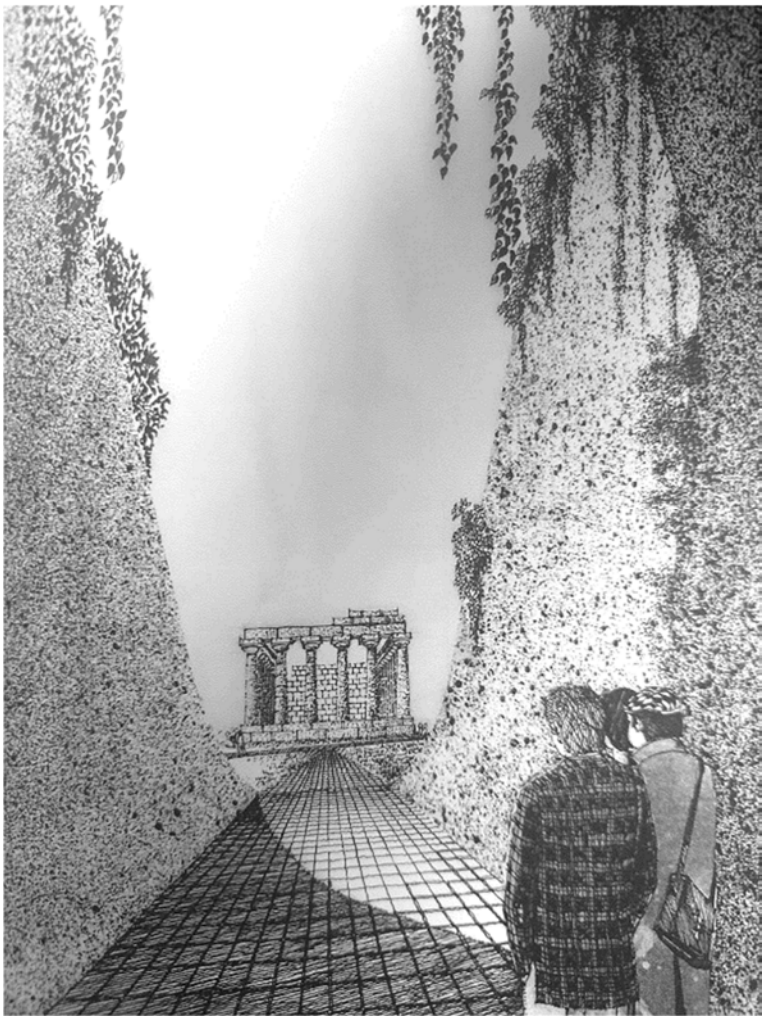


Fig. 64 - Minissi's drawing of the preparing drawing for the projects of the holes. (Private collection CB)

Fig. 65 - Work in progress of the visual telescope. (CB 1981)

The park is designed as an opportunity for learning thus overcoming the obsolete process of musealization by transfer, which is one of the main causes of the systematic dismemberment of archaeological contexts.

The museum is understood not only as a place, but as an essence which contains a complex of interventions aimed at conservation and knowledge. This is intended as an indispensable tool for the conservation of the heritage, and also as a means for further studies and research.
Finally, the park is essential for the civil and cultural growth of every citizen and so the reason to transfer this from the museum to the archaeological park is clear.

Fig. 66 - Minissi's project of the area. (Private collection CB)

Fig. 67 - The realization of the artificial “dune” and visual telescope with the green project. (CB 1990)

Fig. 68 - Temple C of Archaeological Park. (CB 1981)

The key point is the set-up to offer visitor an awareness-raising action.
The construction involved the creation of some visual barriers to direct the gaze with the famous dunes and facilitate frontal views with the trident or rather telescopes oriented towards the temples, E.F.G., and in particular towards the temple of Hera recomposed by Jole Marconi Bovio between 1957 and 1959.
The project included curbing the spread of speculative construction and creating a garden, a public space with "remote" parking.
It should be remembered that the project included the construction of a series of services for the public inside the dune: information service, ticket office, bar, etc.
The project included the construction of a lighting system for the main temples.
It is also remembered that for the creation of the garden, Minissi availed himself with the collaboration of Pietro Porcinai.[19]

Fig. 69 - Temple E of the Archaeological Park after the restoration. (CB 1990)

2.5 Aidone, Ancient Capuchin Monastery and museum adaptation

The Aidone Museum can be considered the last project completed by Franco Minissi in Sicily (1968-1984).[20]
In this episode the author tries to translate the scientific arrangement of archaeological collections into museographic language.
The choice of site for the finds from nearby Morgantina was oriented towards an abandoned 17th century capuchin friary complex with a church, cells and community spaces, a small cloister and garden. It is interesting to note how the windows facing the valley provide a direct link to the site of origin of the archaeological heritage.
The museum collection is divided into 11 rooms and comes from excavations concluded since the 1950s: ceramics, silver, acropolis and architectural elements of various finds. The aim of the museum exhibition is to illustrate the history of the ancient city of Morgantina through its more than a thousand years of history, from the Bronze Age to the Roman era.[21]

Fig. 70 - Morgantina archaeological area during the escavation. On the left the King Gustavo VI Adolfo di Svezia. (Private collection CB)

The museum house the remains of the famous sculpture “the Venus of Morgantina”.
We would like to recall the fruitful collaboration with a cultural mayor of the town, Giuseppe Vinci, a close collaborator of the President of the Sicilian Region at the time.[22]
In choosing the new museum, a certain continuity is created between the old and the current settlement. The founding principle, in this as in other Minissi museums, is given by the character of “discreet hospitality”, in order that the exhibition equipment respects the architectural spaces without renouncing to the organic nature of the arrangement and at the same time provides contemporary signs for the intended use.

This explains the new additions, a recurring theme in Minissi on poetries, such as the staircase with separate routes for going up and down and the large windows that shape the cloister on two levels.

Figs. 71-72 - Detail of the cloister with the insertions of the stained-glass windows on both the ground and first floor. (CB 2021)

These insertions were created to encourage use and the routes, to allow for winter rest in the cloister. The display supports use the quality and quantity of the available space, to achieve the right balance of materials for display. In the ancient refectory, a raised platform and a metal lattice on the ceiling shape the modular support for the show glasses that can be assembled in various ways.
Furthermore, the flexibility of the exposition is guaranteed by the articulation of the internal space of the structures with a free perception of the walking surfaces and the well-known system of hooks for the "grouped show-glasses".

The display cases features, various configurations ranging from cubic case like ones with a metal pillar set into the floor to display cases with various shapes, always designed to suit the exhibits to be presented.
In all of there, connections between the up rights and the shelves are highlighted with the glass simply resting on a brass pin without clamps to facilitate thermal micro-movements.

Fig. 73 - The system of modular show-cases hung from an aerial metal structure peripheral to each room allowed the entire floor area of each room to be left free for viewing, thus permitting the perception of spatial values. (CB 2021)

Fig. 74 - A special transparent show-cases attached to the floor and ceiling and connected by a ribbon to the others in the room, houses the polychRoma terracotta female bust from the first half of the 2nd century B.C. (CB 2021)

Fig. 75 - A new addition with another typological system after Minissi's adaptation. (CB 2021)

Fig. 76 - The statue is a masterpiece of classical Greek art, largest than life, a moving figure in an austere and imposing pose. An Acrolith, that is a sculpture made from different materials: the body is made of soft limestone, while the extremities head and limbs, are made of white marble from the Greek island of Paros. (CB 2021)

Among other constant elements of musealization process, the ancient friars' cells have been preserved in their new use, which in their reality host some specialized sections, such as numismatic and goldsmith's art.
Finally, the church saw the restoration of its historical decorations and stuccoes and was then also adapted as an educational and conference space, preserving the ecclesiastical furnishings. Minissi has revisited it, proposing it as a moment of reflection, for the view from above of the chapel and at the same time as a connection between the two sections of the museum on the first floor.

Fig. 77 - The Church of S. Francesco and new adaptation for cultural events. (CB 2021)

Is also constitutes a museum of itself as a whole.
Particular attention must be paid to the cloister, the treatment of the wall finishes and the water disposal system.
A calibrated conservation of the surfaces suggests an adherence to the critical-conservative statement, as can be seen in the resumption of the mortar filler and in a protective glaze.

Figs. 78-79 - Detail of the stairs. The pecularity is that on one hand you go up and, on the other different side, you go down. (CB 2021)

2.6 Viterbo, the Civic Museum

The constitutive nucleus of the Civic Museum of Viterbo can be traced back to the end of the 15th century, when some casually discovered Etruscan sarcophagi were collected in the Palazzo Comunale. This first group of finds was enriched in the following centuries with new findings and private legacies until, in the early 1800s, the Accademia degli Ardenti of Viterbo "requested the City to hand over antique objects and some premises for didactic and scientific aims". This first attempt, however, was unsuccessful; only after 1870, with the growing influx into the city warehouses of paintings and of various objects coming from the numerous ecclesiastic properties suppressed, the need for a reorganisation emerged and, finally, in 1912, an exhibition was defined within the Church of S. Maria della Verità and the museum was inaugurated on the 12th of June the same year.
There it remained until World War II, when the material was removed to protect it from air raids. After the war, there was a twofold need for the restoration of the church and the reorganisation of the museum in the premises adjacent to the convent, which had been partly used as a school from before the war.
The action of restoration and protection was initiated by the Superintendency of the Monuments of Lazio at the time, first with Alberto Terenzio, then with Carlo Ceschi, concertedly with the Superintendency for the Antiquities of Southern Etruria and with the Superintendency for Galleries and for Medieval and Modern Works of Art in Lazio.

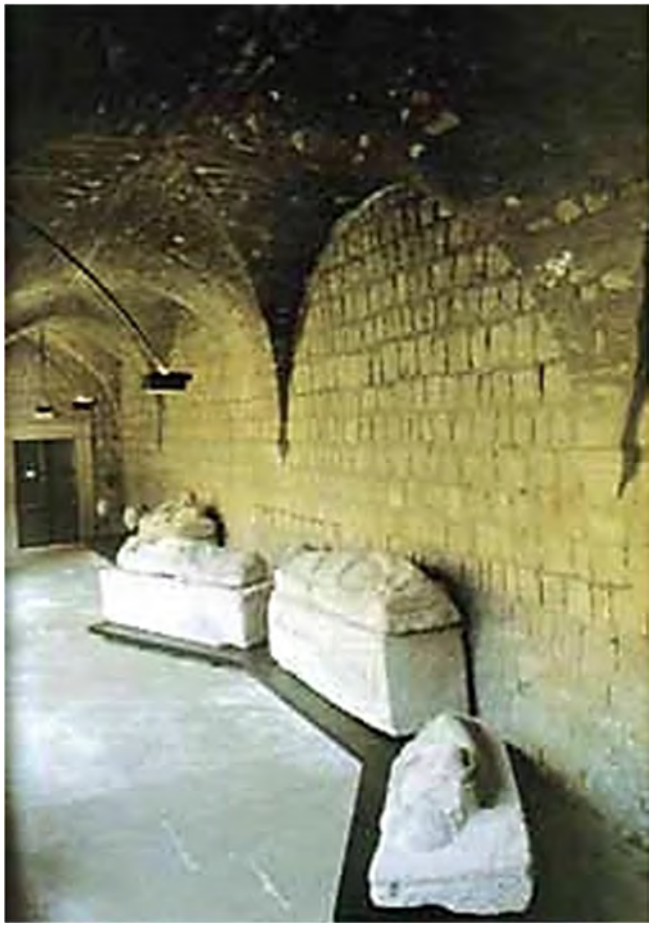


Fig. 80 - Sarcophagi from Etruscan aristocratic tombs inserted in the medieval Cloister of the Church of Santa Maria della Verità. (CB 1994)

At present, the emergent architectural element of the entire monumental complex, in addition to the church, remains the medieval cloister, which exhibits two constructive phases. The western, northern and eastern sides date back to the 13th century and show more basic stylistic features, while the more 'flowery' southern side is from the 14th century.

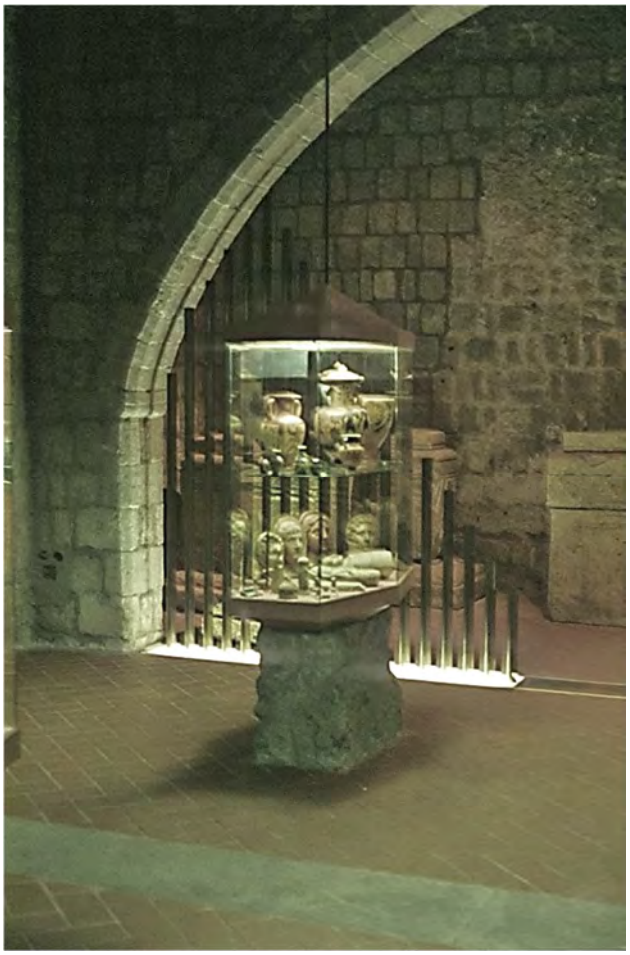


Fig. 81 - Show case of the first nucleo of Viterbo Museum 1955. (CB 1994)

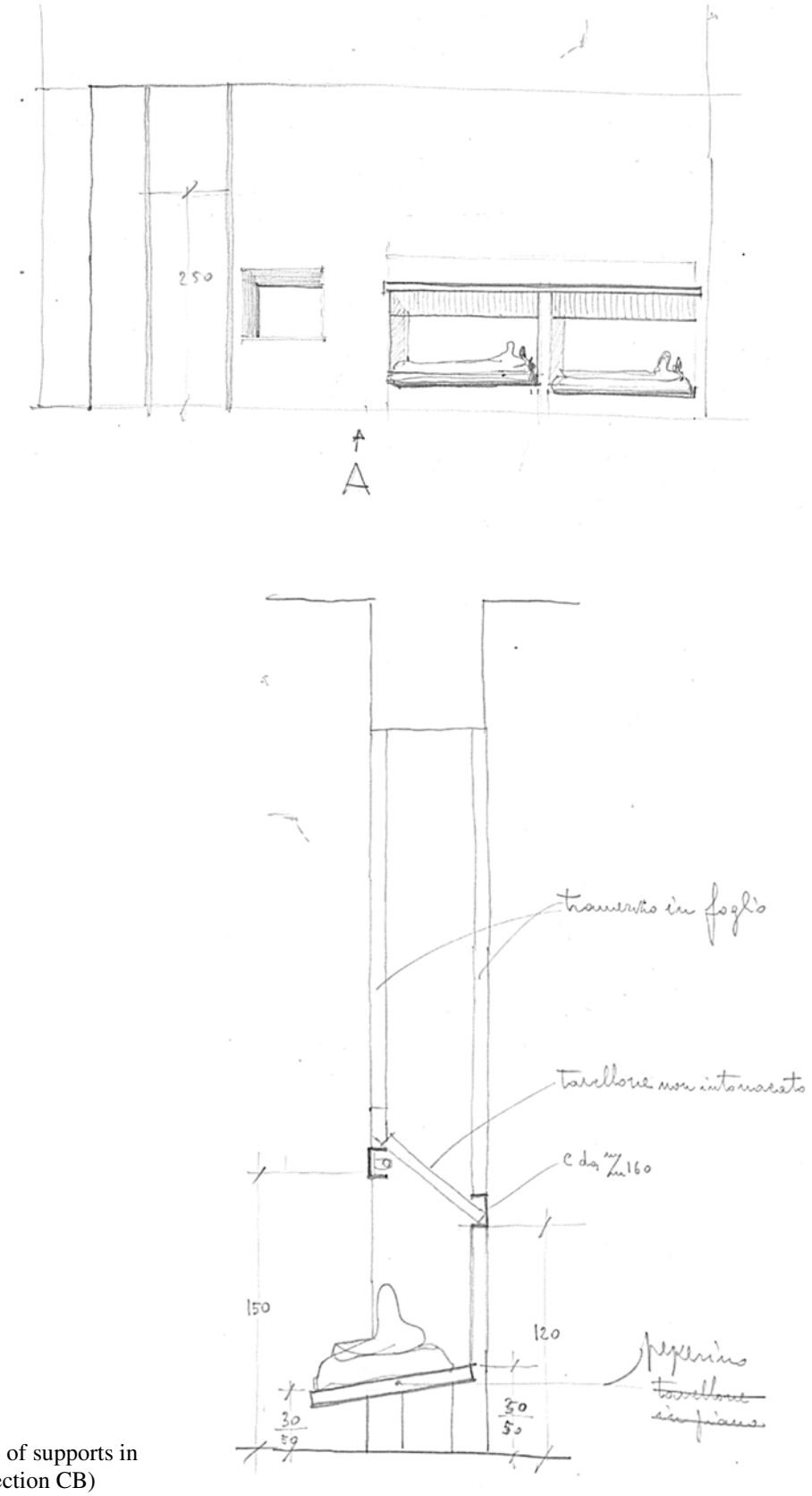
Fig. 82 - Detail of some fragments attached on a grill to protect the wall. (CB 1994)

Franco Minissi's set-up

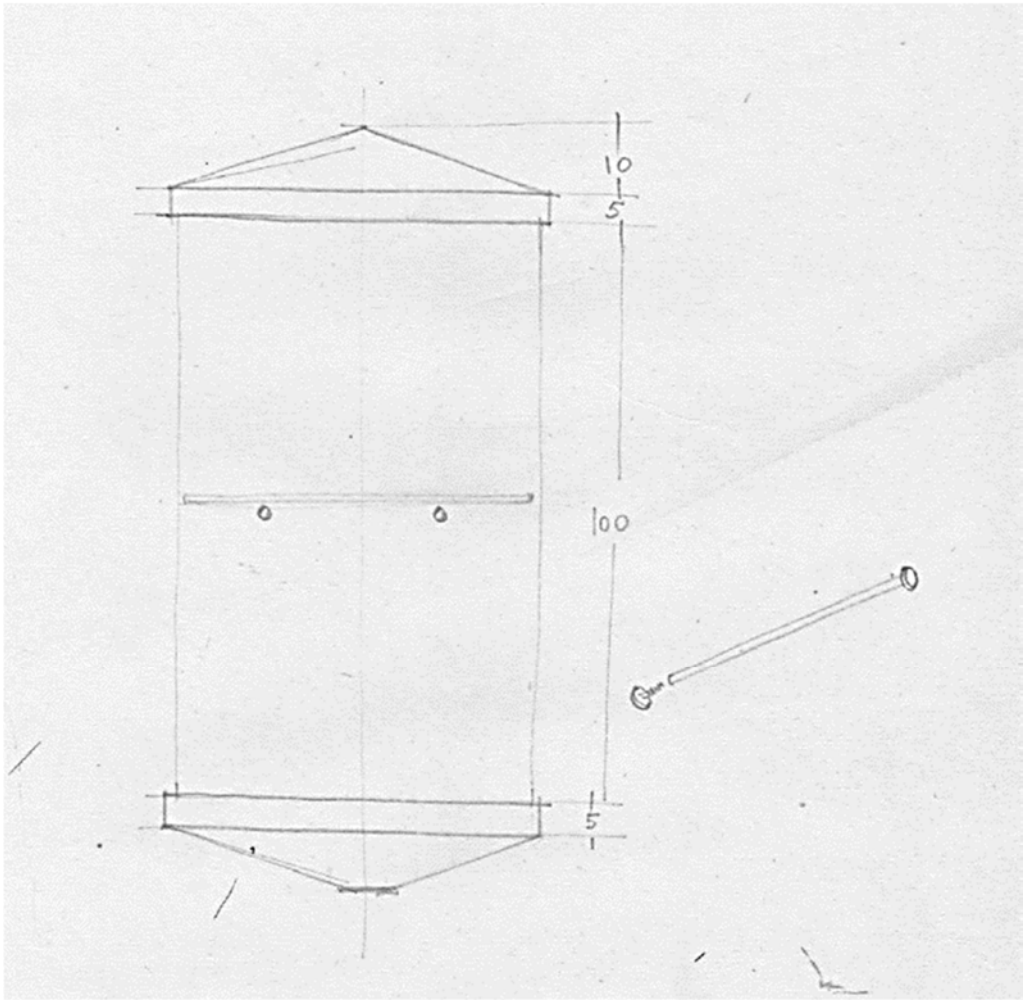
The new seat of the Civic Museum of Viterbo was presented in December 1994 in the complex of the Servites of Monte Senario, near the northern limits of the city walls, not far from Porta Romana.

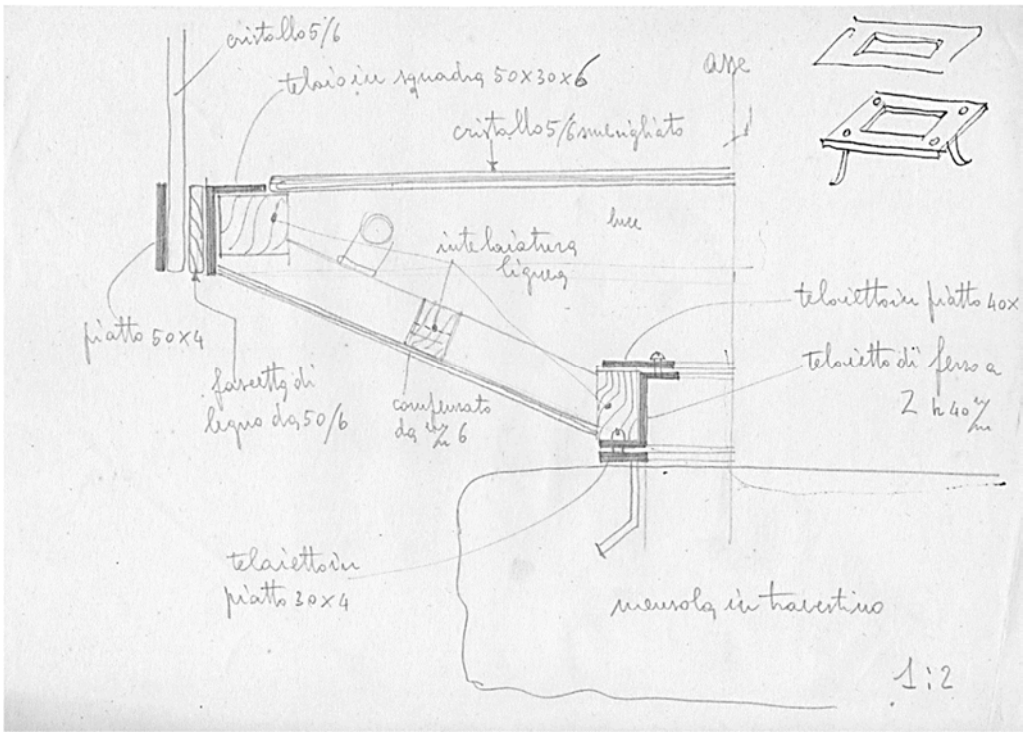
A preliminary nucleus for the museum, as has already been mentioned, was set up in 1912, inside the Church of S. Maria della Verità;[23] then from 1954 to 1955, Franco Minissi initiated the first adaptation of the current configuration of the ancient refectory hall, realizing one of the first episodes of modern museography.[24] The current museum is therefore composed of an archaeological section on the ground floor, by a picture gallery on the first floor and a sector on applied arts and collections of historical interest on the second floor.

After passing through the entrance, one feels a sense of being almost drawn in, stemming directly from the contrast of the light profiles inserted to support the didactic signs, along with a series of light fixtures. Above these slender frames can be seen the consolidated medieval cross vaults, but left visibly without the pristine of the surface finishings.



Figs. 83-84 - Minissi's sketches of supports in Viterbo Museum. (Private collection CB)





Figs. 85-86 - Minissi's sketches of show cases for Viterbo Museum. (Private collection CB)

This first operative choice shows the architect's desire to respect the essence of the monument, of its constructive history and of previous restorations (figs. 1-2). The intervention can be delineated in two distinct, but clearly related stages: the first consists in the restoration of the monument by means of a series of solutions,[25] the second is of an exhibitive character, in which the architectural poetic of the author is expressed, consisting of contemporary insertions.[26]

The first section of the museum is set up in the cloister: it is composed of archaeological finds, mostly sarcophagi, from the aristocratic tombs of the Alethna of Musarna and of those of Norchia of the Smurina. The medieval cloister of S. Maria della Verità presents itself, therefore, with its 'gallery' of Etruscan sarcophagi, but without the habitual enfilade of findings arranged in succession or with distinctly pre-eminent exhibitive supports; these were proposed with attention for the best possible perception of the exhibits to be shown.[27] The exhibitive vocation of the objects is highlighted by the creation of supports with a minimal, plastic profile, with a distinct and clear tonality. These bases for the sarcophagi are composed of a load-bearing metallic structure with tubular sections and with strengthening crosspieces, while the exhibitive level is composed of a fireproof ligneous conglomerate with a frontal panel coated in anti-scratch plastic laminate. The essentiality of the exhibitive dimensions can be found in the metallic supports which present some head sculptures at the appropriate height and in the correct posture.

The set-up of the cloister shows a copious presence of exhibits; of this the author was well aware: in fact, during the planning and the implementation, the dilemma of the use of historical edifices to host museum collections had emerged again. The final result achieved summarises the agreement between museology and museography, i.e., the close collaboration between the museum managers and the planner. In fact, the aim was to achieve a compatible solution whilst paying historical respect to the discovery of the sarcophagi found almost all grouped together.

Fig. 87 - Lights and panels at the entrance to the section. (CB 1994)

Fig. 88 - Detail of the archaeological section. (CB 1994)

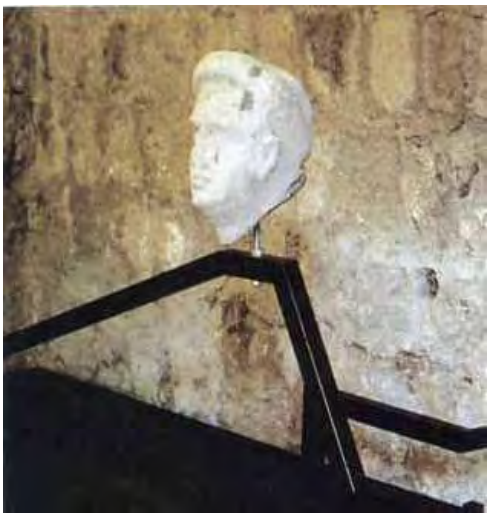


Fig. 89 - Detail of an exhibited testina in the Cloister. Note the correct position and the bare essentiality of the support to facilitate its reading. (CB 1994)

Fig. 90 - Detail of the archaeological section set up on the ground floor. (CB 1994)

Fig. 91 - Detail of the set-up of the funerary urn protected by a perspex glass case. (CB 1994)

The other archaeological sections of the museum were set up on the ground floor, in interior locales. The ancient refectory, articulated by six stone arches, constitutes the true 'exhibition hall' and maintains the layout realised by Minissi himself in the '50s.[28] The solution adopted consisted in presenting, in a group of glass cases situated on a stone base, the finds from various sites of southern Etruria. In the recent set-up some additions were introduced, others came subsequently; among the former, one may note a sequence of declining shelves with small crockery discovered recently. Two series of diaphragms were then realised with some organ pipes and with illumination from the floor. The route in the archaeological section proceeds to other rooms where various funerary furnishings, memorial stones and two sarcophagi of the Imperial age are proposed. These sarcophagi are arranged obliquely in a corner, upon a triangular shelf of double height which chromatically sets off the decorative and expressive contents. This latter support is different from those in the cloister, as its external finishing is constituted by a carpet which approaches the two sarcophagi.

The artificial illumination is directed from the ceiling and filtered through a grid that is common in the author's expressive language. The route between these settings is articulated through the existing apertures and culminates in the last room, where the configuration could be described as 'enveloping'.[29] Here the visitor is directed by precise perspective cones focussing on the individual objects. The planning choices, whilst evaluating the individual episodes, are unitary, both with the various materials adopted for the supports as with the simple, undulated white sheet used here for the first time, and the use of Perspex to support some smaller sculptures.[30] A vaulted, hexagonal-section system with relative mini-domes, created to overcome the difficulties set by the presence of the two masonry arches which divide the environment, contains a display stand with a cinerary urn, giving life to a circular reliquary in acrylic.

Lastly, among the supports employed in this archaeological section, the theme of the black metallic grid emerges, which facilitates the reading of epigraphs and architectural elements which would otherwise be difficult to perceive".

The sections hosting the medieval and the modern historical-artistic properties were organized and presented in the upper levels of the museum. One of the rooms exhibits the 'spatial re-evocation' of a chapel delimitated from above by a vaulted ceiling. The new architectural plan was realized with the aid of simple, white, circle-section metal, which envelop and present the paintings. The very chromatic schemata of the finishings of the surfaces, grey and blue, ease the reading of the paintings.

Fig. 92 - Foreshortening of the set-up of a hall on the ground floor. (CB 1994)

The works of Sebastiano del Piombo, the Pietà and the flagellation, previously situated in the Spreca Chapel of S. Maria della Verità, have been set into a spatial metallic frame, which now allows the reading also of the 'back' of the panels, with charcoal and sanguine drawings.[31]

The didactic function which museography carries out is also expressed with these simple thoughts, which are also useful for a better understanding of the 'property' exhibited. The same datum has been made to emerge also in the adjoining room, where a lunette by the School of Luca della Robbia has been situated, originally from the Church of S. Giovanni Battista, along with other coeval paintings. This setting, like the previous one, has been reshaped, creating reversible diaphragms, consisting in vertical panels and gridded false ceiling suspended on braces, yet not competing too much with the present architecture or degrading the existing space. The settings, in the conception and realization of this museum, albeit limited, are articulated with oeuvres and careful efforts have been made to avoid the expressive annulment of the existent architecture; furthermore, it has been tried to bring forward the potential expressiveness of the oeuvres, without mortifying the simple architectural essence of the space.

With this aim, Minissi had often proposed the suspended and transparent support, so as to offer the maximum visibility of the oeuvre to be examined while, at the same time, reducing to the bare necessities the supports 'planted' on the ground in small environments. The example here is supplied by the presentation of the bronze ewer of the 13th century, in the shape of a lion. The employment of polycarbonate panels suspended from the ceiling with a load-bearing *lamellare* grid allowed the overcoming of many difficulties.

Fig. 93 - Suspended perspex exhibition case hanging from the false ceiling for the 13th-century bronze ewer. (CB 1994)

Fig. 94 - A painting exhibited in the pinacoteque on the first floor. Note the exhibitory support, a linear panel with delicate colours. (CB 1994)

The approach of the various experiences on the topic of the support of Sino-American or French conception is evident: one need only draw the reader's attention to some examples from the Grand Louvre to the Orsay, perhaps dense with rather pre-eminent supports with respect to the oeuvres to be exhibited. Again, on the topic of the exhibitive method, the spatiality of the great trussed hall permits the reading of the individual oeuvres of Viterbese masters from the 16th to the 18th century from various angles. The application of the two-sided panel, with the lower part anchored to the ground with joining plates and fixed with box-shaped stirrups to the chain of the trusses, offers the possibility of keeping the hall free of excessive encumbrances.

This arrangement turned out to be effective for the reading of the oeuvres also with the precious aid of a careful lighting plan, as there is a complete absence of the regrettable inconveniences of finding shadows cast on the paintings.

In the surveys subsequent to the inauguration, some additions to the lighting plan have been noted, with the consequent projection of shadows on the oeuvres in addition to lights rebounded into the eyes of visitors. This aspect urges a reflection on the modality of interventions to be implemented in museum conversions, particularly when the author passes away with the program still to be completely implemented.

The exhibitive space arranged in the last level of the museum is reserved for applied arts. The route starts with a numismatic section, followed by pharmaceutical ceramics, dating from the middle of the 16th century to the early 18th century, to culminate with the presentation of the drawings on the machines of Santa Rosa, all of which have been inserted in glass cases, some console cases, others suspended. The last room, besides presenting a gallery of portraits from the 18th and the 19th century, unsectioned, offers an unusual possibility: a gap opens which inserts an emergency stairwell which also carried out an ideal function of an 'overhand' over the picture gallery below with simplicity and without the stress of forced forms.

This stairwell allows a diversified view of the trussed hall, which is useful for an ensemble view, but clearly not for the examination of the paintings.

After analyzing the essential contents of the museum and its set-up, it seems opportune to draw attention to some other considerations of a general character. In summary, while the realization of the archaeological section exhibits a certain, almost emotive tension of the architect in his attempt to dialogue with the continuous process of musealization, especially when he intervenes on a characterized and limiting existing architecture (such as in the cloister or in some rooms of the ground floor,) in other sections, the poetic of the architect manages to almost 'free itself ', without methodological failings and continues to instinctively follow the language of the objects to be presented and musealized. Minissi affirms that every finding or "group of objects has particular and idiosyncratic exhibitive needs, on which depends the greater or lesser efficacy of visual communication".[32]

From these theoretical reflections of the author himself, it is felt that one has discovered one of the most recent implementational translations of the enunciations of 'critical restoration' in a museum context.[33]

The whole is saturated with exhibitive mastery, in the continuous search for dialogue with the existing architectural space, in which efforts have been made to promote the aesthetic instance. At the same time, one can perceive, in addition to the critical awareness of the architectural intervention, the application in the executive details of reversibility and of the same expressive distinguishability of the set-up. In fact, no entry has been made into the 'vortex' of many museographic operations where, "setting off on the search of a high formal quality"[34], one neglects the two guiding elements in the set-up: that constituted by the museum collections to be exhibited and that of the hosting historical venue, with the risk of allowing the prevailing over the whole "of the new insertions of prevailing formal value, rather than remaining in the service of the expressive qualities of the oeuvres".[35]

Fig. 95 - Two-sided panels for the exhibition of pictorial oeuvres by Viterbese masters in the great trussed Hall. (CB 1994)

Fig. 96 - The ideal spatial reproposal of a chapel with the paintings of Sebastiano del Piombo. (CB 1994)

Notes

1. Franco Minissi (1919-1996). Minissi degrees in Architecture at 22 years old with the most qualification 110/110 cum laude, the year 1941. In 1945, Carlo Ludovico Ragghianti called him to take part in the "Sottosegretariato alle Belle Arti" with Bruno Zevi. During the year 1950 he began to work as one architect in the "Istituto Centrale del Restauro" ICR. Cesare Brandi, gave him the mission of taking care and restore some archaeological sites and one of the first is Gela. With Brandi began the difficult work of protecting the beautiful mosaics of the roman Villa del Casale in Piazza Armerina. Here, Minissi employed innovative technics for the protection of the mosaics and also to enjoy the visit with the concept of "musealizzazione in loco", which inspired other interventions as those in Eraclea Minoa or San Nicolò Regale. At the middle fifties began to do a lot of museographic works, most of then in Sicily with very high level, done with the best professionals of the sector in an interdisciplinary work. We can remember Gela museum, "Museo Diocesano" in Agrigento, Pepoli museum, "Castello Ursino" museum, Minerva, Centuripe, ceramics museum in Caltagirone, Erma Museum "Paolo Orsi Museum" in Siracusa and others Minissi studied an important historical and graphical documentation of the gone between Enna and Siracusa, principally in the small cities, reconstructed after the earthquakes. In 1952, Guglielmo De Angelis d'Ossat, "Direttore generale delle Antichità e Belle Arti", ordered him to transform and put order in the etrusc museum of Villa Giulia in Roma. Then Palazzo Ferretti in Ancona (1955-'58; 1980-'92), Civico Museum in Viterbo, Civitavecchia Museum, Ruspoli Castle in Cerveteri…, and some other. Minissi became important in all the world and so UNESCO ordered him the project of Jerusalm Museum, the protection of Bonanipak in Mexico, the museum of ACCRA, the Valletta in Malta, Museum for the royal ship in El Cairo and cousolent in Seoul. All this activity was possible with his family and principaly in his house in Bracciano, where he has left us. But we must not forget him as University professor from 1945 as voluntary assistant in "Facoltà di Architettura di Roma" from 1964, in "Scuola di perfezionamento", in the Facoltà di Lettere e Filosofia di Roma with G.C. Argan, in Firenze from 1970 in the Università Internazionale dell'Arte and in "Facoltà di Architettura" of Roma from 1974, Restauro dei Monumenti and then Museografia. He has trasformed his experience and his studies. He had always made protagonist to the work of art.

2. D. BERNINI, *Colloqui con Franco Minissi sul museo*, Roma, 1998. S. RANELLUCCI, *Franco Minissi. Un maestro per il museo e il restauro,* Roma, 2019, C. BELLANCA, *Franco Minissi in Sicilia*, in V. CURZI, *Musei italiani del dopoguerra (1945-1977),* Milano 2022, pp. 265-286.

3. For the Venice charter see the Atti del II Congresso Internazionale degli Architetti e Tecnici del Restauro, *Il monumento per l'uomo*, Venice 25-31 may 1964, Padua 1971, pp. lXIX-lXXXI (English text), pp. XcIII-XcV (french text); C. BELLANCA, S. MORA, *Franco Minissi, un protagonista da riscoprire per la Carta di Venezia*, in *1964-2024 La Carta di Venezia. Riflessioni teoriche e prassi operative nel progetto di restauro*, Firenze 2024; C. BELLANCA, *La teoria di Brandi: validità e diffusione per il futuro del restauro*, in *Atti del Convegno in onore di Cesare Brandi*, "Cesare Brandi e le frontiere del restauro", 29-30 nov. and 1 dic. 2023, in publishing.

4. F. MINISSI, *Le caratteristiche del museo moderno hanno funzione educativa e culturale*, in "La Sicilia" 8 giugno 1967.

5. F. MINISSI, Co*nservazione dei Beni Artistici e Ambientali. Restauro e musealizzazione,* Roma, 1978; F. MINISSI, *Il museo degli anni '80*, Roma 1983, pp. 13-15; see also: F. MINISSI, *Conservazione, vitalizzazione, musealizzazione,* Roma 1988.

6. OMAR: has been the trusted company for technical installations. In particular, for the various museum display cases and for the treatment of Perspex.

7. R. BARTOCCINI, *Presentazione,* in R. VIGHI, F. MINISSI, *Il nuovo museo di Villa Giulia,* Roma 1955, p. 7.

8. ID. *Presentazione*, in Ibidem, p. 7.

9. F. MINISSI, *Il rinnovamento architettonico*, in Ibidem, p. 13.

10. F. MINISSI, *Il rinnovamento architettonico,* in Ibidem, p. 16.

11. Adjacent to the Sanctuary of SS. Annunziata, where the famous marble statue of the Madonna di Trapani, attributed to Nino Pisano and dating back to around 1360, is venerated. The museum was established in 1909 with material from various Fardella, Pepoli, Hernandez colletions. In 1925, it become a state museum, until the post-was years when it was reorganized, dedicating it to goldsmithing, coral, objects and nativity scenes and transferring the archaeological collections to another sites. See also: G. BELLAFIORE, *La civiltà artistica della Sicilia dalla preistoria ad oggi,* Firenze 1962; edited by M.G. AURIGEMMA, *Musei della Sicilia. Percorsi e storia di raccolte pubbliche e private*, Roma 1993, p. 190.

12. Among the valuable coral works, Trapani had an important production and processing centre, so much that it became a peculiarity of the place. It's worth remembering that 18th century, Neapolitan nativity scenes, Sicilian Majolica jewels and sacred vestments are preserved here. Not to mention the precious Trapani corals and examples of the artificial naturalness of the clothing and stucco of Trapani's *cachert*.

13. Pietro Griffo. He was an archaeologist, best known for his work as Superintendent of Antiquities of Agrigento (1941-1968) and for his role in the creation of archaeological museum of Agrigento. Later, from 1969, he directed the Archaeological superintendency of Lazio.

14. C. BELLANCA, *Franco Minissi in Sicilia,* in V. CURZI, *Musei italiani del dopoguerra (1945-1977),* Milano 2022, p. 278.

15. C. BRANDI, *Sicilia mia,* Palermo 1989, p. 20.

16. On the Critical Restoration, the bibliography an unfinishing. Please see: C. BELLANCA, *Theory and History of conservation. Part. II*, Roma

17. The conference on July 7 and 8, 1978 in Agrigento was personally significant for my education the meeting had been facilitated by my father, who had accompanied me to Agrigento for the inaugural ceremony for the museum addition. On that occasion, I had a kind of epiphany: I met professor Minissi, along with other Italian restoration professors, among whom I remember professor Roberto Di Stefano and Gaetano Miarelli Mariani.

18. Telamone almost eight meters, high, belonging to the temple of Olimpion Zeus, had been dissembled of the ground for over a century and a half. On the Telamone we can remember this: in ancient times, the Telamon elevation, along with 17 other similar examples that have entirely disappeared when together with the semi-columns of the peristasis in the intercolumniation area, they supported the weight of the entablature. See P. GRIFFO, *Sul museo archeologico Nazionale di Agrigento*, Roma 1977.

19. Pietro Porcinai (Fiesole, 1910 - Firenze, 1986) was an Italian landscape architect. He designed landscapes on a wide variety of scales: from gardens to urban parks, industrial areas to tourist villages, motorways to agricultural areas. His more than 1,100 projects, carried out in various countries around the world, also include landscape gardens, i.e. gardens in which man seems to have done nothing.
After 1949, he had the opportunity to gain valuable international experience: the design of green areas in Berlin's Hansaviertel district (1956); consultancy for Abu Simbel (1963); the project for the exterior layout of the Pompidou Centre (1973); the project for parks in Saudi Arabian cities (1975 - 1976); the competition for Abidjan (1979) and the competition for the Parc de La Villette (1982). He collaborated with Ludovico Belgioioso and Ernesto Nathan Rogers, Riccardo Morandi, Oscar Niemeyer, Renzo Piano and Richard Rogers, Carlo Scarpa, Franco Albini and others.

For other information about him see: P. PORCINAI, A. MORDINI, *Giardini d'occidente e d'oriente,* 1966; M. MATTEINI, *Pietro Porcinai: architetto del giardino e del paesaggio*, Milano 1993; M. Pozzana, I *giardini del 20. secolo: l'opera di Pietro Porcinai*, Firenze 1998; V. CORBARI*, Pietro Porcinai e l'Italia della corsa al mare: progetti di paesaggio per nuovi turismi,* Macerata 2014.

20. The installation work was directed with intelligence and customary expertise by superintendent Ernesto De Miro (1926-2025) and with the active collaboration of Malcon Bell, director of the American Mission in Morgantina.

21. The identification of the site, proposed by several scholars, was confirmed in 1955 and in 1957 when K. T. Erim proposed identifying it with Morgantina based on the literary sources of Strabone, Tucidide and Livio, and an historical numismatic evidence. It was a collaborative effort between various scholars, including E. Sioqvist and R. Stillwell (Princeton University) and then H.A. Delen from Illinios and M. Bell from Virginia without forgetting the presence of the King of Sweden Gustavo. It should be remembered that in 1986 this was illegally sold to the Paul Getty museum in Malibu, which never went into detail, for a sum of 18 million dollars. In 2011, the American Museum was forced to return in to Italy.

22. It is worth remembering that the then president of Regional Government, Giuseppe D'Angelo, then councillor for Tourism, together with a group of collaborators contributed to the economic and cultural revival of Sicily. This group of people understood how the establishment of new museum and archaeological sites was a cultural and tourist attraction. Considering also the creation of new hotels and the adaptation of existing structures as accommodation facilities. See also C. BELLANCA, *Franco Minissi in Sicilia*, in *Musei italiani del dopoguerra (1945-1977). Ricognizioni storiche e prospettive future*, edited by V. CURZI, Milano 2022, pp. 265-286.

23. For some details on the first nucleus of the Civic Museum of Viterbo set up inside the Church of S. Maria della Verità and inaugurated on 16 June 1912, see the contributions of C. PINZI, *Chiostro di S. Maria della Trinità* and A. MUÑOZ, *Uno sguardo al nuovo Museo Civico di Viterbo*, in VV.AA., *Per l'inaugurazione del Museo Civico di Viterbo*, Viterbo 1912, pp. 28-32 and 33-45; also, A. SCRIATTOLI, *Viterbo nei suoi monumenti*, Roma 1915-1920, pp. 337-393.

24. Museography is understood as a discipline, "a unique joining of science, history, aestheticity and fashion", in C. BRANDI, *Teoria del restauro*, Roma 1963, p. 123. On the concept of museography, see some clarifications by Minissi himself: "museography, as the methodological study of the architecture of the museum and of exhibitive criteria... has taken on a determining role in the process of renewal of the museum, in order that it overcome the traditional schemata of a conservation aimed at private use". And again: "the specificity of the exhibitive function... sets specific conditions and limitations on the creativity of the architect which are not shared with any other architectural themes", p. 13, p. 15.

25. The procedure adopted by Minissi consists in the concretisation of the applicational attitudes derived from the concept of restoration understood as "the methodological moment of recognition of the oeuvre, in its physical consistency and in its twofold aesthetic and historical polarity, in view of its transmission to posterity". C. BRANDI, *Teoria del restauro*, Torino 1977, p. 6.

26. On the topic of insertions, the reference is prevalently of a Brandian nature, see: C. BRANDI, *L'inserzione del nuovo nel vecchio*, in *Struttura e Architettura*, Torino 1967, ed. 1975, pp. 308-315. In his long, professional and didactic activity, franco Minissi always insisted on the importance of the theoretical-conceptual schemata for a definition of the various sectors of the museum. for an exhaustive treatise, see f. MINISSI, *Il museo negli anni 80*, Roma 1983, in particular pp. 68-72 and pp. 100-104. Important references for the understanding of museum spaces can be found in the first issues of the periodical "Museum" and in the prior "Mouseion".

27. Some realisations from recent years in Europe are brought to attention for comparison: the Glyptothek in Munich, the Grand Louvre in Paris and the extension to Vatican Museums, where the supports are predominant.

28. "The dimensional limitedness and the strong characterisation of the architectural space made the latter assume the very physiognomy of museographic space", F. MINISSI, *Il museo negli anni 80*, Roma 1983, p. 66.

29. On the topic of supports and "hanging" glass cases, see other interventions, such as the solutions adopted for the Pepoli Museum in Trapani and the Varisano in Enna. "A recollection, a condensation of attention on the oeuvres have been, at times, achieved by articulating the environments... or manoeuvring the spaces with fullness, emptiness, shadows and contrast, composite and branching transparencies"; C. RAGGHIANTI, *Arte, fare e vedere dall'arte al museo*, Firenze 1974, p. 173.

30. The research on the support was one of the other stages of Minissi's planning activity. See the entire route of the Museum of Villa Giulia in Roma in the 50s or the Archaeological Museum of Agrigento. In addition, see also the various Antiquaria realised in the 1980s in Sicily, up to the latest realisations for temporary exhibitions such as "Riscoprire Pompei", held at the Palazzo dei Conservatori in Roma in 1994.

31. C. BRANDI, *Il restauro della Pietà di Sebastiano del Piombo*, in "In situ la Tuscia, 1946-1979: restauri, interventi, ricordi", ed. P. ANTONUCCI, Viterbo 1996, pp. 67-82.

32. F. MINISSI, *Il museo negli anni 80*, Roma 1983, p. 53.

33. For a more in-depth look at critical restoration, see the writings of Cesare Brandi, Roberto Pane, Renato Bonelli and Giovanni Carbonara. In particular, see G. CARBONARA, *Teoria e metodo del restauro*, in *Trattato di restauro architettonico*, ed. G. CARBONARA, UTET, Torino 1996, vol. I, pp. 3-107 and ID., *Avvicinamento al restauro, teoria, storia, monumenti*, Napoli 1997, especially the first, third and fourth parts.

34. F. MINISSI, *Il Museo negli anni 80*, Roma 1983, p. 55.

35. Ibidem

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Chapter 3

Guido Canali's experience

Cecilia Antonini Lanari

In this chapter we intend to present some exemplary episodes of Guido Canali's activity. For years he has been committed to restoring, through careful restoration and design work, a number of extraordinary historical complexes, including the Palazzo della Pilotta (extension of the National Gallery, restoration of the 17th-century stables on the ground floor and the Cortile del Guazzatoio, in various stages, from 1970 to 2008) and the former hospital of Santa Maria della Scala in Siena (from 1992 to 2005 approximately). Still in the field of museums and contextual restoration: the Museo dell'Opera del Duomo at Palazzo Reale in Milan and the design of a new underground museum beneath the main nave of the Duomo itself; the Museo delle Statue-Stele in the Castello del Piagnaro in Pontremoli.

He has set up and curated several exhibitions in Italy and abroad: repeated appearances at the Venice Biennales, again in Padua, Munich, Mainz, at the Milan Triennale, and at the Museo del Compasso d'Oro. He has received numerous awards and won national and international prizes.

Canali (Fig. 1) uses to define his intervention of restoration "soft" to explain the respect for the pre-existence and its history. The restoration is dictated by the existing architecture, and additions made for practical reasons or to comply with regulations are recognisable and reversible: in all his works, the existing and the new are clearly legible and distinguishable, and the solutions for introducing new technologies and systems always respect the architectural fabric.

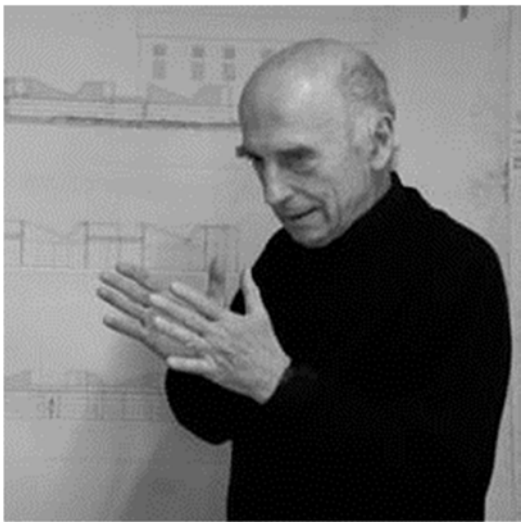


Fig. 1 - Guido Canali. (From https://img.edilportale.com/profile-image/Thumb2_fbc38b84-78bd-412c-93e1-1d14c6c62b6f.jpg, last visit September 2025)

Extremely attentive to detail, existing materials and material compatibility. In his work, he pays close attention to vertical and horizontal connections: walkways are used to connect architectural structures and also to display museum collections. Vertical connections, staircases and lifts are also studied in detail to comply with the principle of minimal intervention and legal requirements.
In today's Italy, where many constantly criticise the relationship between the ancient and the contemporary, Canali's work, like that of many of his predecessors such as Franco Minissi, demonstrates the possibility of combining architecture from different eras and the coherence of using abandoned and disused architecture for compatible purposes, always with respect for what already exists.

3.1 Parma, Pilotta

Between the end of the fifties and the beginning of the sixties there began to be talk of a restoration project of the Pilotta in Parma, with particular regard to the surviving parts. In these years, the project and intervention was entrusted to the Canali studio of Parma, led by the architect Guido Canali, which was responsible for the restoration of the National Gallery of Parma, intervening on a complex pre-existing building from a historical, artistic and architectural point of view due to its large size, seismic and war damage and the conformations of the rooms it houses. (Figs. 2-3)
The restoration and adaptation, due to lack of funds, continued for more than thirty years and, in this long period, various superintendents have followed one another, some of whom have been active supporters of Guido Canali's work. We remember, in the role of Architectural and Environmental Superintendent, Augusta Ghidiglia Quintavalle, in the Sixties (1960-1973), Umberto Baldini (1973-1974), Andrea Emiliani (1974), Mazzino Fossi (1975-1976), Eugenio Riccomini, at the end of the Seventies and for almost all of the 80s (1977-1988), and Lucia Fornari Schianchi, first director of the Gallery from 1976 and then regent since 1988, superintendent from 1991 to 2004 and again between 2006 and 2010.

Fig. 2 - Pilotta outside. (CAL 2023)

In 1975, museographic attention began to be paid to the Pilotta, which was about to become the seat of the National Gallery of Parma, with particular attention to having a general and complete program, especially by the Superintendent of Galleries and Medieval and Modern Works of Art for the provinces of Parma and Piacenza, Prof. Andrea Emiliani.
The main objectives of the first interventions of the seventies were the liberation of architecture and static consolidation; liberation from the partitions of perforations that divided the military environments, the false ceilings, the plasters and the "fake antique" fixtures and consolidation of the structures following the war damage, the tampering of the military occupation, the seismic event of 1971 and the vibrations caused by urban traffic. The roof trusses were restored and consolidated with the help of a metal frame inserted in an insulating package above and two continuous ribbon skylights were created along the secondary framework that guarantee zenith light to the rooms.

Fig. 3 - Pilotta outside. (CAL 2023)

The complex houses the Farnese Theatre, destroyed by bombing in 1944 and rebuilt between 1956 and 1960 according to the first project by the architect Giovan Battista Aleotti of 1617-1618. In the 1970s project, the architect Canali envisaged above all a new functionalization of the theater as part of the museum itinerary, since it was not possible to exercise the completely the authentic function as it does not comply with the safety regulations in force: the sporadic performances can be enjoyed by a maximum of three hundred spectators for safety reasons.

The theater was inserted at the beginning of the visit route, introducing a reversible and small walkway, to connect the cavea to the stage, allowing users to immerse themselves in the "seventeenth-century" theatrical environment and from spectators to become "actors" in the path. (Figs. 4-5)

Fig. 4 - Canali's project. View of the walkway to the stage. (From E. MAUGERI, *Parma e la sua Galleria*, in "Attualità", 1987, p. 18)

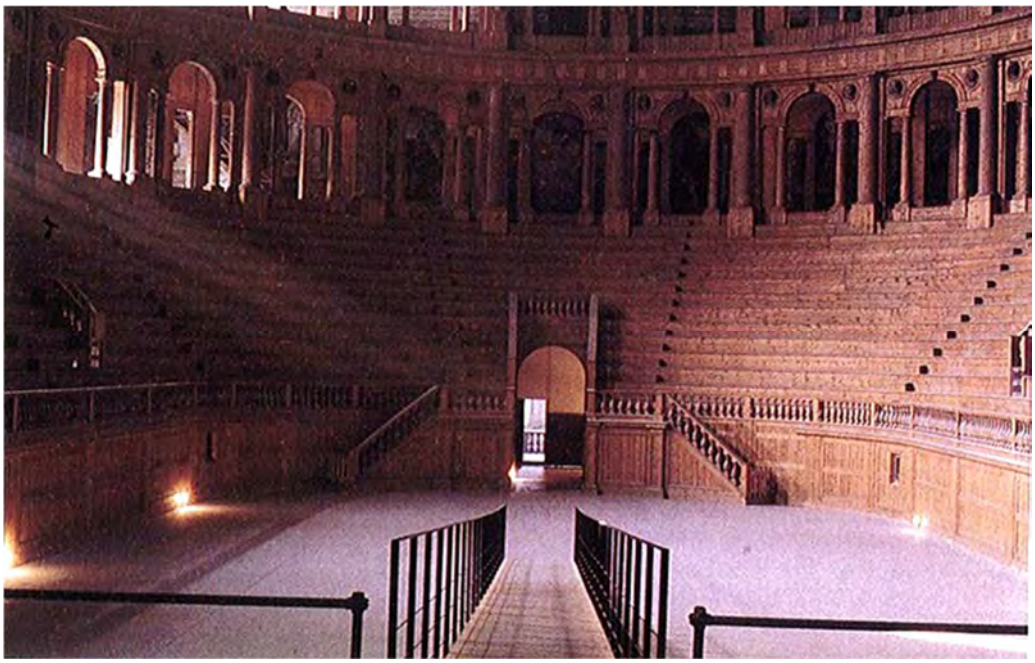


Fig. 5 - Canali's project. View from of the walkway from the stage. (From E. MAUGERI, *Parma e la sua Galleria*, in "Attualità", 1987, p. 18)

In addition to the consolidation and liberation of the architecture, the restoration project also included the connection of "sleeves" hitherto isolated from each other and disjointed through the introduction of "modern metal prostheses", as defined by the architect Canali himself, such as bridges, mezzanines, walkways, stairs and elevators, guaranteeing the visitor a continuous path that is as fluid and intuitive as possible. In those years, moreover, the first legislation on the overcoming of architectural barriers was introduced (Law no. 118/1971) which regulates the conformation of stairs, ramps, lifts and pedestrian paths both in new buildings and in pre-existing public buildings or for public use. (Figs. 6-7)

Fig. 6 - Drawing of the metal walkways connecting rooms. (From A. C. QUINTAVALLE, *Il "caso Parma": progetti per l'area della Pilotta/Guido Canali. Galleria Nazionale nel Palazzo della Pilotta, Parma*, in "Domus", n° 683, Edizioni Domus, Milano 1987, pp. 38-44)

Fig. 7 - Metal walkways connecting the two blocks of the architecture. This new connecting allows museum visitors to move around smoothly. (CAL 2023)

In these years, the intervention also included the north wing (1971-1975), in which, apart from the wooden trusses and the wall, no other architectural element was spared from the occupation of the fifties. During the restoration of the flooring on the first floor, the extrados of the barrel vault with a diameter of 12 meters of the underlying stables emerged, which the architect wanted to make a museum in situ as a testimony of seventeenth-century wall technology. Leaving the structure of the vault below visible for the Office directed by Prof. Andrea Emiliani (director of the Pilotta in 1975) compromised the complete usability of the environment even if it fulfilled the architect's desire to highlight "the suspension of the current structure of the path with respect to the authentic containment structure".

The restoration of these rooms also wanted to restore the large size of the old barn, compromised by improper additions related to use, allowing the reading of the large classrooms present, modular for the entire complex. In this period, the idea of creating a lattice deck of construction site pipes also used as a support for the exhibition panels, defined by the principles
of transparency, flexibility, reversibility, distinctness, lightness and cost-effectiveness, matured. The choice of this first exhibition solution is given by the architect's desire not to create a "monotonous warehouse" with flat paintings hanging from the curtain walls (Fig. 8). In addition, the panels in front of the path and the walking surface detached from the perimeter walls highlight the stratification and authenticity of the brick curtains, thanks to the perspective escape and the zenith light of the continuous ribbon skylights present in the roof pitches that highlight the texture.

Fig. 8 - Canali's project.

The upper room of the room is completely suspended on tubulars, and also in those years, the Office of Professor Andrea Emiliani, considers it unsuitable for the exhibition of ancient paintings for reasons of perspective focus: this structure, according to the Superintendent, generates a void-full grid which makes even simple suspension operations more complex and is far from guaranteeing the traditional perspective for which the paintings were born. He proposes, therefore, to exhibit in this space the contemporary art paintings owned by the State University of Parma, which have fewer problems related to perspective vision.[1]
Priority is also given to summer-winter air conditioning systems (to maintain the temperature between 14-18 degrees in winter and 20-25 in summer and the relative humidity of 65%), to filtering the daylight that enters from the numerous and large windows and skylights to avoid damage to the works, a system of sunshades for the west wing, hit by the morning sun and the insertion of insulating material to maintain the thermo-hygromatric quality. The fire extinguishing system and smoke detector are also introduced. (Figs. 9-10)

Fig. 9 - Canali drawing for the exhibition room. (From G. CANALI, Ampliamento della Galleria Nazionale e restauro della Pilotta: il progetto, in Galleria Nazionale di Parma, Milano 1997)

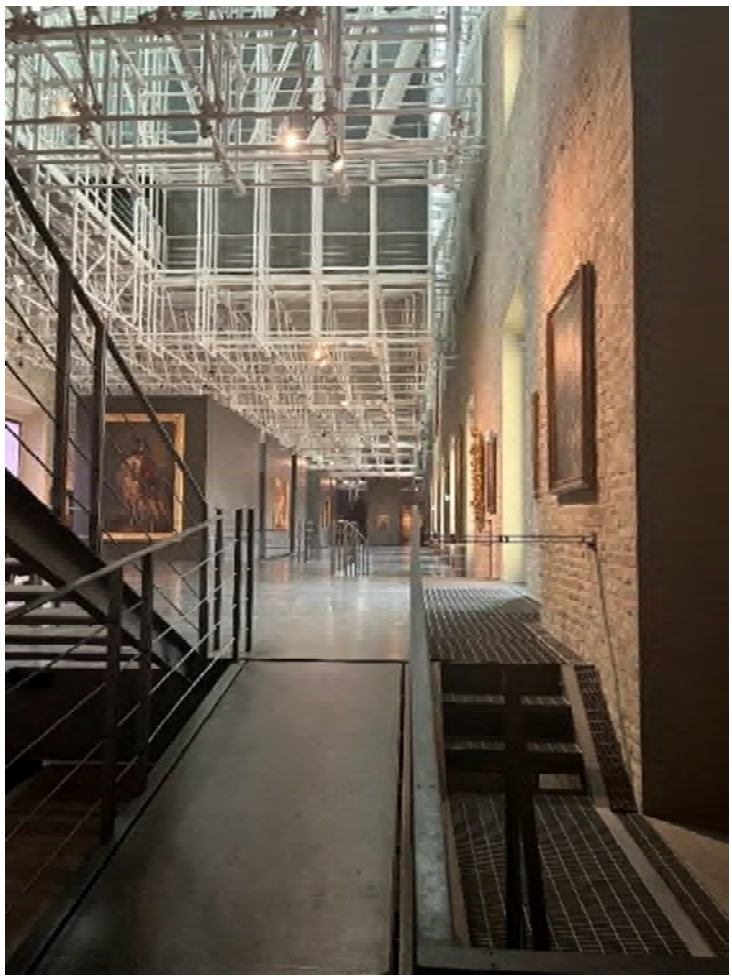


Fig. 10 - Set-up being modified (CAL 2023)

In this first phase of restoration, the architect had to deal with numerous problems related not only to the war and seismic damage of the complex, but also to the large size and complexity of the height of the building for which there was the risk of wasting the available space and isolating the large rooms, making future visitors lose interest not only in the works on display, but for the same architecture of the Pilotta.
In the seventies, in the Farnese Theater, in the north wing, restored, and in the west wing, still under construction, temporary exhibitions were set up on a project by the arch. Canali and Italo Lupi.
Some of these installations later became definitive and still persist today, such as the straight sheet metal staircase along the axis of the north wing.
Work is carried out in the nineteenth-century hall, known as the hall of Maria Luigia, adjacent to the Theatre; it is proposed to improve accessibility to reopen a door that opens on the left side of the theatre which could allow access to visit the Hall and at the same time give a decisive role to the Farnese Theatre in the visit itinerary.[2] Both these rooms would become a historical and community representation of the Palazzo della Pilotta.

Interventions also in the former Rocchetta Farnese where it is hypothesized to exhibit in the rooms, which in the seventies still retained the valuable architectural and decorative features, either the Correggio collection or the furnishing and decoration materials such as furniture and majolica of the gallery. In these years, some of the main problems faced concerned accessibility to the National Gallery and entrance services and connections between the Farnese Theatre and the rear hall; everything is served by a staircase and an elevator that also make them independent rooms at the Gallery's opening hours.
The Superintendence for Cultural Heritage and Activities organized in those years (1979-80) the great exhibition of the eighteenth-century Emilian also using the hall. From then to 1999 12 exhibitions were held; the exhibition panels of the eighteenth-century Emilian exhibition have been maintained and the electrical system has been adapted to standard no. 46/1990.
The restorations resumed after the exhibition on the eighteenth century, in 1983, in November of which Parma was the protagonist of a strong and destructive seismic event. In the eighties (1986), the works mainly involved the west wing, which had been entirely tampered with during the occupation of the fifties. The work includes the replacement of floors, partitions, plasters and roofs with cheap materials and the elimination of ancient wooden beams. The project involves the restoration of the internal and external walls, the infill rooms, the arches and the ceiling replaced with a reinforced concrete structure during the military occupation, which is reduced to the load-bearing framework of parallel beams to testify to the recent structure while regaining the corrugated intrados like the seventeenth-century wooden one. Already at the end of the eighties, the room returned to being a long corridor whose spaces are marked by high panels transversal to the path in which works of the Tuscan School of the ducal collection, Emilian of the fifteenth and sixteenth centuries and Parma are exhibited. Among them also "La Scapiliata" by Leonardo da Vinci. (Figs. 11-12)

Figs. 11-12 - On the right "La Scapiliata" according to Canali's intervention; on the left its current exhibition. (CAL 2023)

The desire, as in the north wing, to position the panels as far as possible in front of the visitor stems from the desire to keep the attention alive, trying to avoid the flattening of the work of art hanging on the wall; moreover, since almost all works were born as altarpieces, this method of exhibition allows them to be read correctly. (Fig. 13)
Although the Paolo Toschi State Institute of Art was inserted in those years for the entire ground floor and in the southern part of the first floor of the west wing, an area on the first level was granted to the National Gallery, allowing it to expand up to the roof. Also in this room any horizontal structure had been lost since the floors had been made of reinforced brick after the war. The environment is defined in a double exhibition space of transversal panels supported on the ground and ceiling, vertically connected by a metal staircase.

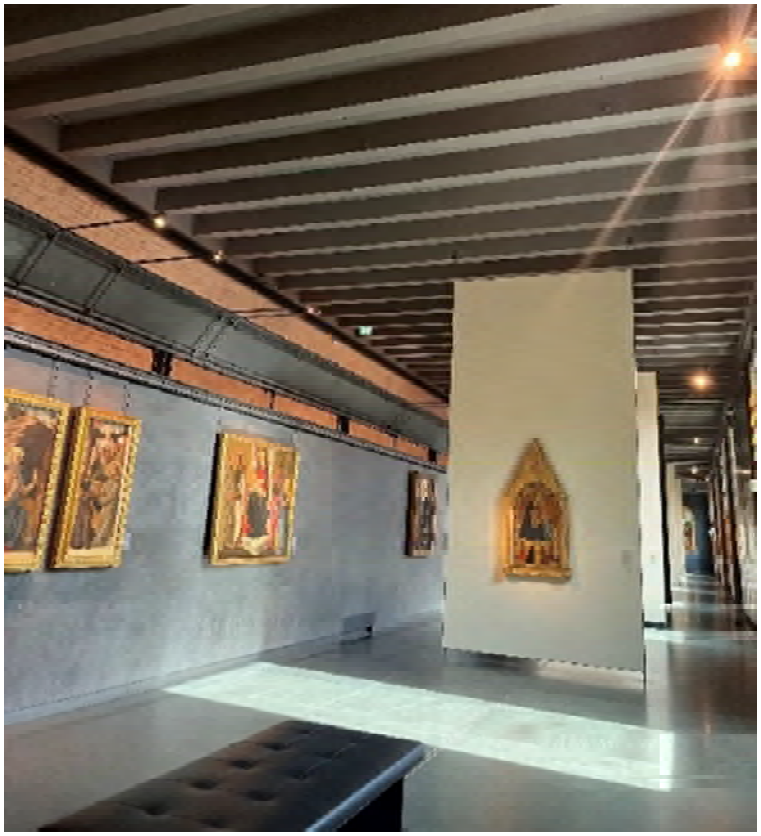


Fig. 13 - The exposition room. (CAL 2023)

In 1986 works were created in the hall behind the stage of the Farnese Theater; this room has several balconies and metal changes in height; The back of the stage is left open with museographic purposes, thus enjoying the architecture. (Figs. 14-15)

Figs. 14-15 - Canali project of the Eighties (above) compared with installation (CAL 2023)

In 1988, Lucia Fornari Schianchi promoted an intervention in the nineteenth-century section of the Gallery, which suffered damage both in 1943 during the war bombing, and in the two earthquakes of 1971 and 1983. The operation was completed in the nineties.
Both the walls and the floors were tampered with the nineteenth-century layout; so large slabs of polished “pietra serena” in neutral gray were restored, which accompanies the brighter gray of the walls on which the paintings are displayed.
"The project is not identified with the vulgar copy of nineteenth-century architecture, an obtuse recopying, but consists in the reasoned re-presentation of the authentic text, evaluating the value, a substantially exact re-proposal integrated by poetry: so this picture gallery really seems to be the successful example, almost the paradigm of philological-poetic restoration" writes Vittorio Savi.[3] Canali renounced the festoons that decorated the entablature of the Gallery and did not attempt to reconstruct the stuccoes; he reinterprets the skylights taking into account Bettoli's first projects in which he inserts a frame of slender slits from which the air conditioning emerges. (Figs. 16-17)
The only elements that he cannot fail to reproduce are the columns of the Great Hall as they define the space and the figural as well as static organization.

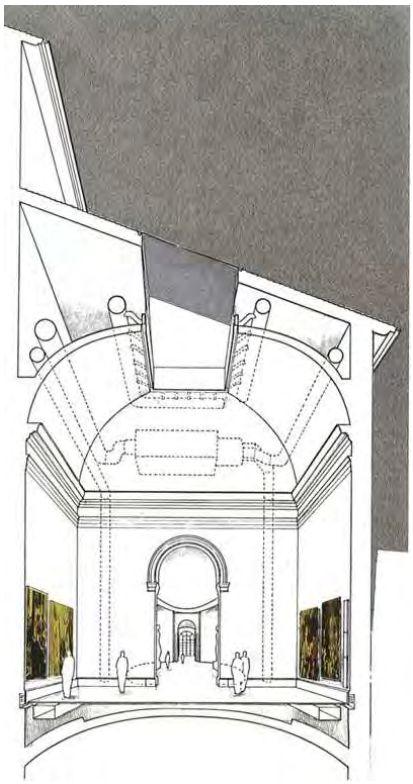


Fig. 16 - Canali's drawing of the Great Hall. (From G. CANALI, *Ampliamento della Galleria Nazionale e restauro della Pilotta: il progetto*, in Galleria Nazionale di Parma, Milano 1997)

Fig. 17 - Great Hall. (CAL 2023)

The technological systems are hidden under the polished surfaces so as to leave the spaces legible and near the openings on the roof, which, through a removable fabric veil, filter natural light.
In 1985 work was carried out on the windows and doors of the east wing, in particular the windows without double stops, drip trays and more were modified and the windows on the first floor towards the courtyard of the Guazzatoio were replaced because they were deformed due to their large size and weight.
In December 1985 the west and north wings of the Palazzo della Pilotta were inaugurated.
In 1988[4] the extraordinary maintenance interventions necessary in the east wing were the replacement of the downspouts and the reconstruction of the horizontal sewerage, the arrangement of the facades with solvent-based siloxane water-repellent materials so as to block capillary water infiltration without changing the appearance and the renovation and arrangement of the existing steel frames and other safety interventions (elevator shaft, existing staircase transformed into smoke-tight conditions, electrical system in accordance with regulations, smoke detection and extinguishing systems).
In those years the degradation present in the courtyards and in the areas in front of the pre-existing building is still evident, the protagonist of numerous newspaper articles and letters to the Ministry.

In 1996 there was talk of the expansion of the Cavallerizza wing. The storms of 1997 brought to light the need for extraordinary maintenance work on the damaged parts of the Palatine Library.
In 1999 the buttress wing was still occupied by the Center for Studies and Archives of Communication (CSAC) of the University of Parma, in particular the departments of art, media, photography, design and entertainment.

Some considerations

Without a doubt, one of the greatest difficulties in the design and restoration and adaptation of the monumental complex is linked to the articulation of the organism and the imposing dimensions: the entire Pilotta, in fact, includes several pre-existing buildings and extends for about 40,000 square meters. The isolated architectural bodies, the environments still destroyed by bombing and made illegible by military occupations and the rich stratigraphy that characterizes Parma architecture were undoubtedly the first challenges that the Canali studio found itself having to face and solve. The common thread and ultimate goal of the entire project is the desire to maintain efficiency, facilitate reading and preserve and transmit the monument to future generations.[5]
The operation carried out is not only a restoration of the material and a "re-functionalization" of the monument, but an intervention that gives new life to the architecture and the surrounding urban environment: the courtyards that organize the space of the Parma Monumental Complex, in addition to welcoming citizens every day as a space for aggregation and rest, occasionally frame cultural representations as in June 1999 during which a stage for the staging of Puccini's Madama Butterfly and an audience for about 2,100 spectators.
It should be noted that access to the museum rooms is provided below the brick ribbed vaults, through the monumental staircase of Vanvitellian inspiration, which leads to the large and rectangular vestibule that filters the rooms of the National Gallery and the Palatine Library.
An imposing wooden portal directs the visitor to the Farnese Theater, from which the exhibition area opens. As explained in the previous chapters, the intervention of the architect Canali envisaged that the Theatre, as well as occasionally as a place of performance, would act as an atrium to the museum space, acting as a filter between the exhibition rooms and the other activities present in the Pilotta complex. There, a barycentric catwalk with the same slope as the stage led the visitor to the condition of an actor. The architect's vision immediately emerges, for whom the museum is an attractive place that cannot be exhausted in a short time with the visit and knowledge of the works of art, but a space to be experienced and frequented, daily, by everyone and not just by a specialized public. In addition, the idea of metaphorically transforming, through the ascent on stage, the visitor from "spectator" to "actor" offered an first vision of the entire museum complex both from an architectural point of view, giving a perception of the work from new points of view, and artistic since it opens up to an active visit. This condition of "actor" accompanies the public along all the exhibition rooms, in which, thanks also to the jumps in height through suspended paths and connecting walkways, it allows you to enjoy the artistic and architectural works at 360 degrees.

The system of panels transversal to the itinerary, as in the north and west wings, guarantee a clear and coherent reading, which leads to accentuating the curiosity of those who visit the rooms, avoiding the flat arrangement of the panels on the wall, which in many cases also hides the architecture that houses it. (Fig. 18)
Guido Canali's architecture allows us to glimpse a coherence that is modulated from time to time with respect to the architectural features, in the search for a linguistic relationship and coexistence between the architecture of the past and the present.

Fig. 18 - Sculptures displayed above the vault structure in the north wing. (CAL 2023)

Another important aspect to be analyzed for an adaptation to museum use is the study of light, natural and artificial. The exhibition spaces are mainly lit from the north and west, with the exception of the south side of the room with the tubular structure (north wing). The study of light that led to defining the arrangement of the panels on which the paintings are displayed is careful and in many areas natural lighting is guaranteed by skylights on the roof that offer a correct zenith light to the hanging works of art, as in the raised level of the west wing.
In some cases, as can be seen in the nineteenth-century hall, the natural light, coming from the skylights on the roof, is filtered by white fabric veils and, to allow a correct reading of the paintings, spotlights have been inserted on the walls.
In summary, it can be said that the work is strongly influenced by the principles of the 1972 Restoration Charter and exemplifies the ideas of the seventies and eighties of the twentieth century: the internal walkways, the metal prostheses connecting the sleeves, the arrangement of the panels and their simple conformation, the didactic exhibition of the extrados of the vaults in the north wing are all examples of restoration and museum adaptation interventions that dialogue with the pre-existing without disfiguring or hiding it, keeping its stratigraphy legible.

3.2 Siena, Santa Maria della Scala

The National Archaeological Museum of Siena has been housed in Santa Maria della Scala since 1993. A competition was held in 1992 for the design of the restoration and conversion into a museum. The winning project was determined at the April 7, 1993 meeting, where the Standing Committee, after also hearing the opinion of the Advisory Commission[6] unanimously declared Parma architect Guido Canali the winner.

Guido Canali's intervention

Architect Canali's work, particularly explicit in the intervention at Santa Maria della Scala in Siena, is defined by him on more than one occasion as a "soft restoration," referring to the principles of critical conservative restoration that was being defined in those years.
The process of liberation of "St. Mary's," as it is often called in the official minutes of the Standing Committee, takes place gradually, ward by ward, and still in 1993 several spaces are for healthcare use. For this reason, one of the first stages of the Canali studio's project is to study, survey, and identify intervention-breaking to allow differentiated accessibility for both construction vehicles and the public through temporary routes. Thus, it is planned to follow unified and not sectoral projects, ensuring better quality of the work.
The project includes the use of some spaces for restoration workshops and a restaurant.
The design defines the demolition of the 1950s Former Clinics to free up the south front for the restaurant and to regain the downstream facing of the Hospital. It also calls for the elimination of all 20th-century partitions and superfetations to regain the spatiality of the premises and allow for historical perception.
Along the connecting line between the old Gothic-Renaissance front and the eighteenth-century additions, action is taken by inserting a skylight that allows lighting of the rooms between the two buttresses or by carving into the vault of the present entrance hall to obtain glimpses of light from the loggia above.
A very delicate and important operation is that related to the vertical and horizontal connections serving the new uses. In particular, Canali has tried to intervene as little as possible, building stairs and elevators where they already exist or "piercing" recent floors in metal profiles and industrial planks. As far as stairs are concerned, the existing 19th-century staircase towards the Fosso di S. Ansano is continued up to street level, thus obtaining an emergency exit; a new main staircase is built between the first and third levels of a 14th-century vaulted room to which spatiality is restored by eliminating a modern attic. Elevators are inserted in place of existing risers and, in the 18th-century body, at newer attics. In general, efforts have been made to avoid demolition of Gothic-Renaissance vaults and wall structures.
In terms of restrooms, too, the designer decided to locate all of them at the basement level so as not to fragment the vaults with partition walls; three cores of services are created: one for the laboratories, one in relation to the museum spaces in the central atrium, and one reserved for the restaurant.

From the entrance at the level of Piazza della Selva, which is referred to in the plans as the "first level," the long "internal street" distributes the rooms of the Archaeological Museum and the Plague and Death Museum and some rooms for restoration workshops. On the level immediately above, the street also connects to some spaces occupied by the Society of Pious Executors Dispositions [7], still partially present in the pre-existence. Many rooms of the "third level," still buried with respect to the level of the cathedral square, are designed to house when necessary the Palio Museum, while others the Diocesan Museum. Thanks to some central paths, there is also access to the oratory of St. Catherine of the Night.[7]

At this elevation, a real junction of the museum itinerary is given by the so-called "Corticella," an inner courtyard which connects to the Santa Caterina della Notte, the Santa Maria sotto le Volte, linked to the Confraternity of the Disciplinati, as well as the granary rooms where the authentic marbles of Jacopo della Quercia's Fonte Gaia are displayed,[8] and the storerooms that house the Santa Maria della Scala Treasury .[9]

In the rooms of the "Fonte Gaia," (Figs. 19-20) one finds a different display system than in the other rooms: some of the marbles are displayed hanging by means of a metal structure with an essential profile from large panels, which rest on a platform covered with yellow fabric and connected to a system of upper uprights fixed to the ceiling that run along the entire vaulted room. The exhibits are illuminated by zenithal light from LEDs hidden beneath a metal panel overhang. Other marble elements are, however, placed on the floor on small metal pedestals and defined by large educational panels.

Figs. 19-20 - Gaia Spring marble display system (CAL 2023)

In the rooms of the first, second and, some of the third level, Canali studies a wooden flooring system placed over the existing one, which, in addition to guiding the expotive path, houses the ducting for air intake and delivery, the various plant networks for signaling, security, etc., hidden from view without going to touch the pre-existing masonry. (Fig. 21)

Fig. 21 - Work in progress on the installation of systems under the wooden platform. (From G. LONGOBARDI, *Complesso museale Santa Maria della Scala* , in "Musei, grandi tascabili architettura", Roma 2011, p. 22)

Along the raised slatted floor, a display structure is placed with display cases sometimes on the floor, sometimes on the wall depending on museum needs, on which historical materials, models, educational and illustrative panels are displayed.[10] (Figs. 22-23)

Fig. 22 - Showcases defining the environment and route. (CAL 2023)

Fig. 23 - Illustrative and educational panels. (CAL 2023)

In addition, particularly on the third level, glass and iron showcases are designed, which are transparent on the sides and opaque above and below; these have lighting spotlights inside them that are suitable for displaying the exhibits, thus ensuring artificial light that allows the works to be fully enjoyed. A particularly important aspect is the choice of the arrangement of the showcases, which, in addition to their function as a container, define the exhibition route from beginning to end. (Fig. 24)

Fig. 24 - Sketches by Guido Canali. (From "Costruire in laterizio", n. 100, Milano 2004, p. 122)

Corresponding to the cathedral square ("fourth level") are numerous museum spaces, such as the Historical Documentary Museum and the Museum of Sienese Art, sacred, such as the Church of the Holy Annunciation, the Chapel of the Relics and the Chapel of the Virgin Mary, and all those services related to exhibition and other activities; in particular, in addition to the information area and bookshop, inserted in what was the Pellegrinaio hall dedicated to women, the project includes the inclusion of a cafeteria, spaces for educational activities, conferences and temporary exhibitions, and access to the offices on the upper floor.
At this level, some plaques of the hospital's activity such as that of the eye department and contagious diseases can be found, left exposed in their authentic position to keep the history of architecture and health activity legible while changing the use of the pre-existence. (Fig. 25)

Fig. 25 - Detail of the plaque of the hospital wards. (CAL 2024)

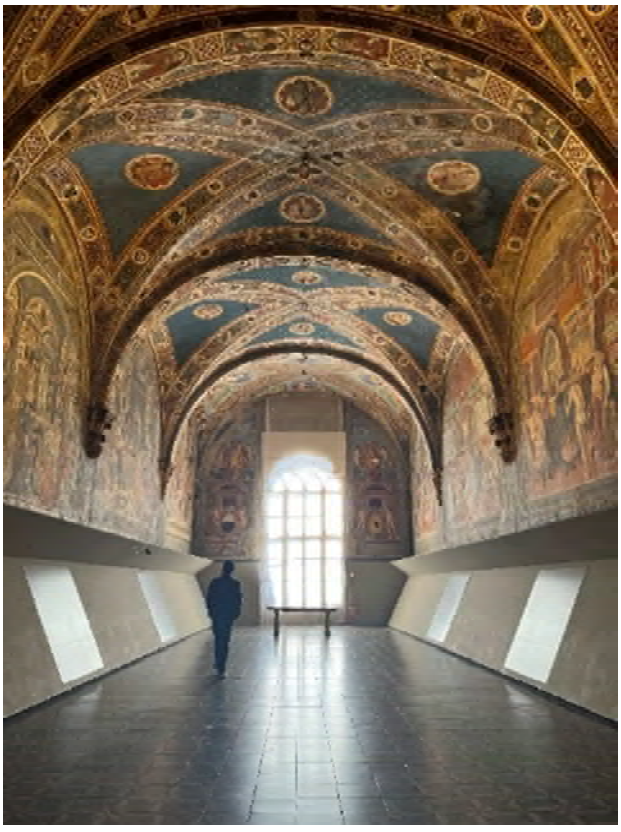
The fifth level mainly houses offices and guest quarters, while the sixth is used again for the exhibition routes of the Diocesan Museum and the Art Gallery of the Museum of Sienese Art; this floor is accessed by the restaurant, the library, and a large room is left for temporary exhibitions and party rooms.
On the penultimate level, in addition to part of the Archaeological and Historical Documentary Museum, are the restaurant areas and the study center, as well as on the eighth and last floors.
Exhibition halls at each elevation are designed in defined, non-dispersive spaces served by the existing large atriums or pathways.

Some consideration

The museum restoration and adaptation work signed by the Canali studio of Parma in the 1990s follows those principles that were becoming increasingly popular in those years, those of critical conservative restoration. Evident is the idea that each monument is a case in itself and therefore it is necessary to follow the correct methodology to carry out the restoration.

Guido Canali with his "soft restoration" of Santa Maria conveys the great historical-critical research and analysis carried out and the importance attached to the preservation of the pre-existence for its history and architecture. One thinks of the tunnels of the basement levels (first, second and third) whose tufa or brick walls have been left free of the outfitting intervention as witnesses of themselves. This design takes up the principles advocated by Franco Minissi of the double level of display, one given by the collection and one given by the architecture itself. The so-called "museum within a museum," where in addition to enjoying the display, one can immerse oneself in the life of the architectural complex. The wooden walkways also underscore the desire for a dual display, to keep the remains on display in harmony but separate from the monument; this technique is also used extensively by architect Minissi, such as at Palazzo Ferretti in Ancona or Palazzo Venezia in Roma, where a platform raised above the floor guides the path and contains plant material.

"[...] storefronts, beyond their primary function, are entrusted with the task of emphasizing the spatiality of environments".[11] Also in the project for the former hospital, again with the aim of respecting the pre-existence and the principles of reversibility and minimal intervention, the storefronts designed by the architect also act as dividers between rooms, guiding the path without the need for tampering with the pre-existence.



Figs. 26-27 - Pellegrinaio Hall. Natural lighting and artificial light arrangement. (CAL 2023)

In addition to the discourse of "hidden" conduits within the raised wooden floor, special attention should be paid to the study and arrangement of artificial lighting, which not only allows proper viewing of the exhibits set up, but also makes the ancient masonry, vaults, and arches become part of the exhibition.
On the upper floors, much use is made of the natural light in the rooms, and the added spotlights are housed in the exhibition supports, panels and display cases, remaining hidden from the visitor's view or resting on the floor, as in the Pellegrinaio room, without affecting the material of the architecture. (Figs. 26-27)
An ever-present issue in the restoration and museum (or generally public function) adaptation of pre-existing architectural features is the placement and implementation of toilets in accordance with the law. In the case of the former Spedale, the architect managed to keep constant the common thread of the entire work, that is, the desire to intervene with a restoration that he himself called "soft" always respecting the existing architecture. Even the restrooms were built following the principle of minimal intervention, leaving the authentic masonry exposed and introducing only the strictly necessary partitions and plant arrangements. (Fig. 28)
The design choices are based on an overall dialogue between different perceptual scales, succeeding in ensuring a unified reading not only of the archaeological elements present, but also of the architectural spaces, giving back to the city a clear and correct reading of the pre-existence and the exhibits.

Fig. 28 - Toilets. It very important the respect of the pre-existence not only in the exposition rooms. (CAL 2023)

3.3. Pontremoli, Piagnaro Castle

The reasons that prompted the restoration and adaptation of the Castle are two: first of all, the desire of the Lunigiana Institute of Castles and the Municipality of Pontremoli to give a compatible use to the pre-existing building so as to ensure better conservation of the asset and also the need to preserve and arrange the archaeological monuments of Lunigiana in a suitable location, the stelae. The Superintendence of Pisa and the Civil Engineers of Massa and Carrara,[12] after evacuating the families who lived there, took care of the restoration financed thanks to the law for war damages.
Adapting the castle to a new function has interrupted its process of degradation and ruin. The intervention, curated by Professor Ambrosi, envisaged allocating the Museum of Lunigiana steles-statues in two main halls of about 140 square meters and other smaller rooms to the illustration of historical events. The rooms on the ground floor, one intended for an armory, the other for an educational exhibition of prehistoric material, complete the itinerary. The former chapel overlooks the internal courtyard, which is designed to be a small conference room for meetings and debates.
In this first phase, the Museum occupies only the first floor, while the ground floor presents the caretaker's house, the weapons room and an archaeological educational room. Room V collects the casts of other Lunigiana stele statues, i.e. copies of privately owned statues and room VI presents the casts ordered with the same typological criterion as the authentic steles of rom III (group A, B and C). (Fig. 29)

Fig. 29 - Museum in 1970s. (From https://archeologiavocidalpassato.com/wp-content/uploads/2015/06/museo_delle_statue_stele_della_lunigiana.jpg, last visit September 2025)

The project for setting up the stele-statues in rooms III and VI sees them displayed on white cement tanks filled with gravel on which the archaeological finds rest. These are grouped according to the intrinsic characteristics of the work, but there is a certain distance from each other so as to allow a global vision and "give its own space" to each stele.

Guido Canali's intervention

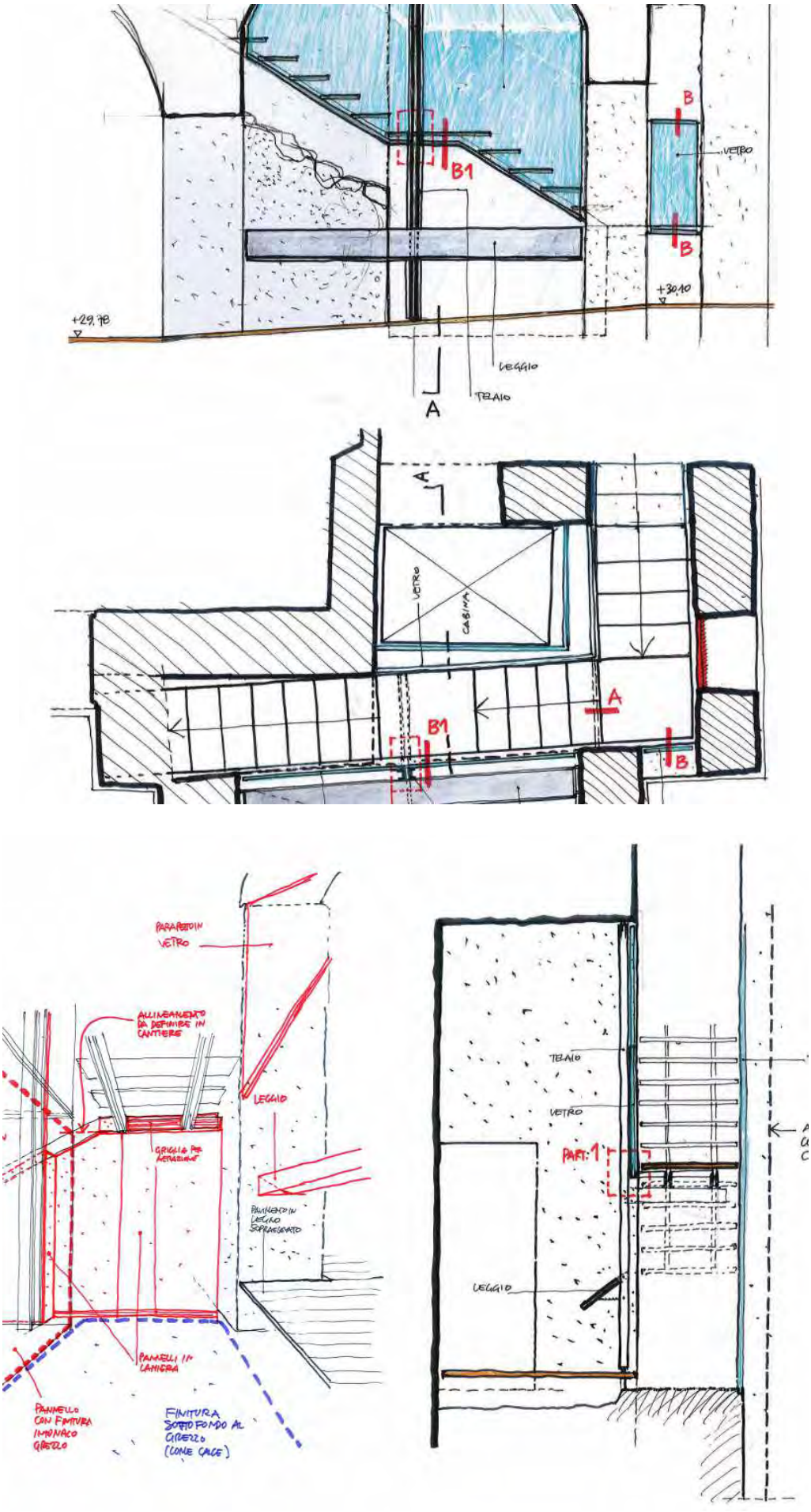
Between 2012 and 2015, the Canali studio intervened in the restoration, expansion and adaptation of the architecture, whose project distributes the museum space in the rooms to the west of the ground floor and on the first floor. In these rooms it was necessary to open new openings in the walls to facilitate the fluidity of the paths and avoid uncertainties in the route that confuse the visitor.

These openings, in compliance with the principle of distinction of the restoration, are identified with a plate in iron sheet with a natural surface at the height of the architrave.

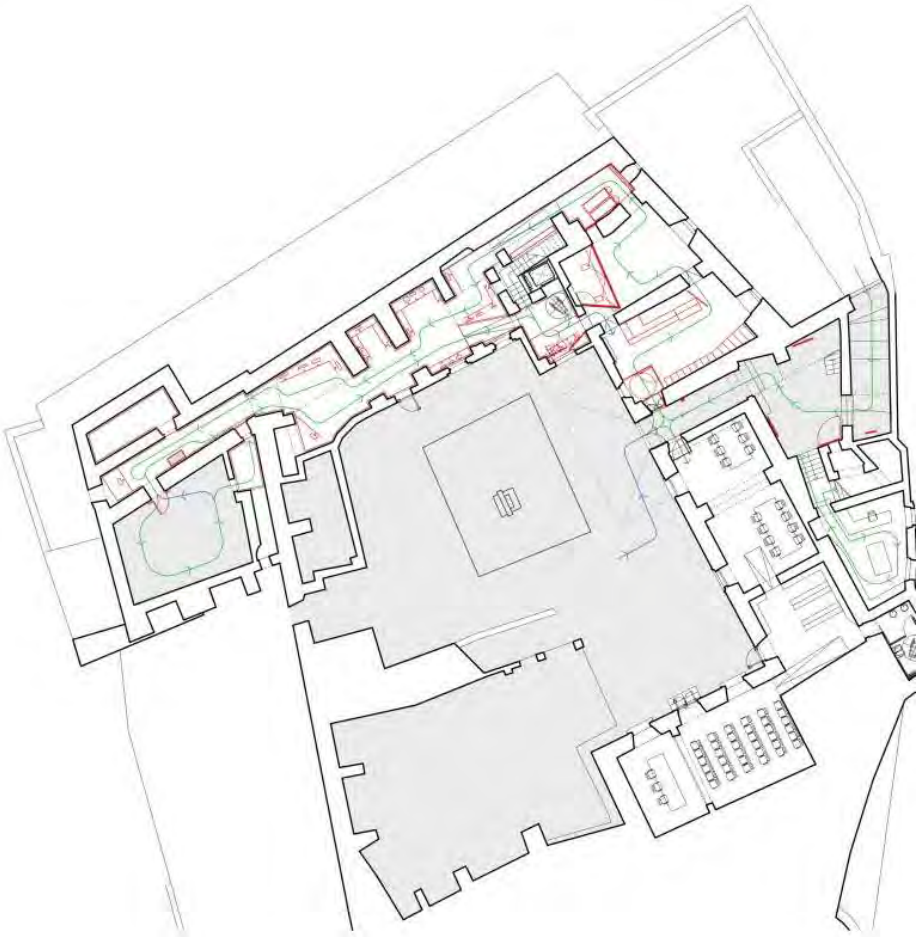
Fig. 30 - First exposition room of the Stele Statue Museum. (CAL 2024)

Fig. 31 - Exposition of a Stele statue with top lighting. (CAL 2024)

From the main entrance through the authentic portal you arrive at the corridor where the ticket office and the beginning of the exhibition itinerary open. From here you enter the first room where an introductory video is projected and then continues along the entire ground floor along the medieval sleeve. (Figs. 30-31)
To reach the rooms on the first floor, a new staircase adjacent to an elevator was necessary, completely overturning the existing path. Upstairs the exhibition continues. In many rooms, "microsurgery" and "punctual prostheses" are carried out in respect of the pre-existing architecture and its stratigraphy.
A new stair-lift body is also built on the upper floor to facilitate access to the video room to the north. (Figs. 32-33)



Figs. 32-33 - Canali drawings about the new stairs project. (From https://www.premio-architettura-toscana.it/nominee/nuovo-museo-delle-statue-stele-lunigianesi-augusto-c-ambrosi-2/, last visit September 2025)



Figs. 34-35 - Project outline of the exhibition itinerary. From G. CANALI, The new layout, in the Museum of the A. C. Ambrosi Stele Statues. Guide to the exhibition, Tuscan cartography for the Municipality of Pontremoli, June 2024 (first edition May 2016) From G. CANALI, *The new layout, in the Museum of the A. C. Ambrosi Stele Statues. Guide to the exhibition*, Tuscan cartography for the Municipality of Pontremoli, June 2024 (first edition May 2016)

The designer also intervened on the flooring, which was covered with a wooden walkway that guides the path, and on the setting up of the stele statues, displayed on a structure with a metal pedestal anchored to the ground or to the masonry; the finds are grouped according to their typological characteristics, but each maintains its own space, as in the project of the seventies. (Figs. 34-35)

Fig. 36 - View of the exhibition system of the stele, ground floor (CAL 2024)

At the foot of each stele, positioned on a metal plate that runs along the entire exposed group, there are educational plaques with indications on the name, place and year of discovery, etc. (Fig. 36)
The lighting remains exclusively artificial and originates from points of light from above fixed to a metal structure, maintaining Ambrosi's idea of half-light on the entire room and particular light on each statue.
"But much also depends on how these ancient complexes are reinterpreted for new exhibition functions. That is, a lot depends on the designers of the set-up who would need great humility and attention. To grasp the suggestions, sometimes even imperceptible, that the ancient emanates. So as to be able to listen to their whispers. Which cannot be heard if the designers are screaming. That is, to get out of metaphor, if they tend to exhibit themselves and their whimsy rather than humbly enhance ancient works. And both the stelae of Lunigiana and the ancient manor emit many whispers and subdued ideas.
Currently the castle, in addition to its primary function as a Museum of Lunigiana stele statues, has other uses. In particular, in the north-west wing there is a guesthouse, created to accommodate pilgrims who traveled the Via Francigena for the Jubilee of 2000; This is active from April to September and consists of six rooms for a total of twenty-one beds. By now the accommodation is not only reserved for pilgrims, but can also be accessed by school groups and other guests.
In addition, some spaces in the north wing of the castle, both internal and external, are reserved for the organization of events and weddings with a civil ceremony.

In order to improve accessibility to the fortress, the Municipality of Pontremoli has built an elevator that goes up from Porta Parma to the Castle; It is accessed via a long corridor along which there are educational panels on the castle and the stele statues. (Figs. 37-38)

Fig. 37 - View of the entrance to the elevators. (CAL 2024)

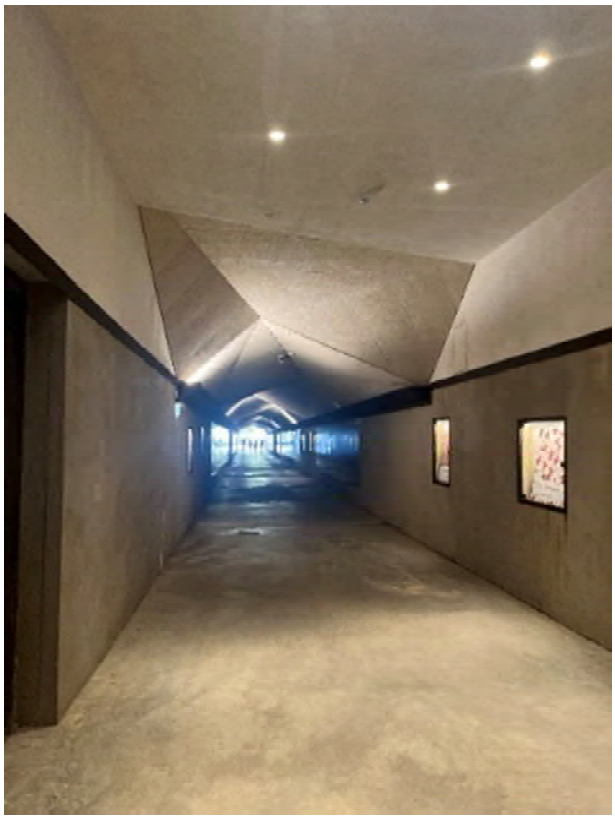


Fig 38 - View of the corridor leading to the elevators. (CAL 2024)

Notes

1. Report on the architectural renovation works of the Palazzo della Pilotta in use and destination of the National Gallery of Parma" signed by the Superintendent Prof. Andrea Emiliani in 1976.

2. "Report on the architectural renovation works of the Palazzo della Pilotta in use and destination of the National Gallery of Parma" signed by the Superintendent Prof. Andrea Emiliani in 1976.

3. Da V. SALVI, *Le sale Ottocentesche*, in "Abitare", n.306, Milan, 1992, pp. 188-193.

4. "Technical report on the wing of the buttresses of the Pilotta di Parma" signed by the Head of the Technical Division ing. Renzo Scipioni on 19 April 1988.

5. Reference is made to art. 4 of the 1972 Restoration Charter in which restoration is defined as "any intervention aimed at maintaining efficiency, facilitating reading and transmitting the works in full to the future...".

6. Composed of Prof. Carlo Bertelli, Prof. Gianni Vittorio Galliani and Prof. Enzo Zacchiroli.

7. The late 17th-century oratory features stuccoes and canvases dedicated to the Virgin and St. Catherine by Sienese painters such as Rutilio Manetti and Francesco Rustici. Currently closed to the public.

8. The Fonte Gaia is a monumental fountain in Siena, located in Piazza del Campo. Because of the outdoor exposure, the weak material used (marble from the Sienese Montagnola) and the barbarity of the participants in the famous Palio di Siena, it was decided in 1859 to replace the authentic work with a copy made of Carrara marble, commissioned from the Sienese purist sculptor Tito Sarrocchi; the remains of the damaged sculpture were restored and are now in the Museum of Santa Maria della Scala.

9. The treasure consists of an important group of relics in containers made of gold, silver, and precious stones from the imperial chapel in Constantinople, including the Holy Nail of the Cross, which belonged to Emperor Constantine and is exceptional both for its religious value and for its integrity.

10. The insertion of the wooden walkways and the exhibition route refers to the project signed by Studio Canali for the Jubilee of 2000 approved and implemented in 1998. The project boards are currently kept in the Archives of the Soprintendenza Archeologica Belle Arti e Paesaggio of Siena.

11. S. RANELLUCCI, *The museographic space discrete guest in monumental spatiality*, in *Franco Minissi. A master for the museum and for restoration*, by S. RANELLUCCI, Roma 2019, p. 29.

12. Superintendence of Pisa, Livorno, Lucca and Massa Carrara. In 1975, the year of the birth of the Ministry for Cultural and Environmental Heritage, the Pisan Office became the Superintendence for Environmental, Architectural, Artistic and Historical Heritage for the provinces of Pisa, Livorno, Lucca, Massa Carrara, preserving the identical territorial articulation. It will be from January 2005, after the establishment of a new Superintendence competent for the provinces of Lucca and Massa Carrara, that the Pisa office will restrict its competence to the provinces of Pisa and Livorno.

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Chapter 4

Andrea Bruno's experience

Cecilia Antonini Lanari

Andrea Bruno, after graduating in 1956 from the Faculty of Architecture at the Polytechnic University of Torino with a thesis on "The restoration and reconstruction of the historic centre of Savona", began his professional career at the Superintendency for Environmental and Architectural Heritage of Piemonte. He was teaching from the 1960s to the early 1990s at the Polytechnic University of Torino and in 1991, he moved to the Polytechnic University of Milano, where he taught architectural restoration; and he did some lectures at ICCROM in Roma.

From 1974, Andrea Bruno was a UNESCO consultant for the restoration and conservation of Cultural Heritage for several years, a position that led him to participate in numerous official missions, particularly in the Middle East and North Africa.

In the mid-1970s, he designed the Italian Embassy in Afghanistan and since 2002 he has been an advisor to UNESCO's Cultural Division for Afghanistan.[1]

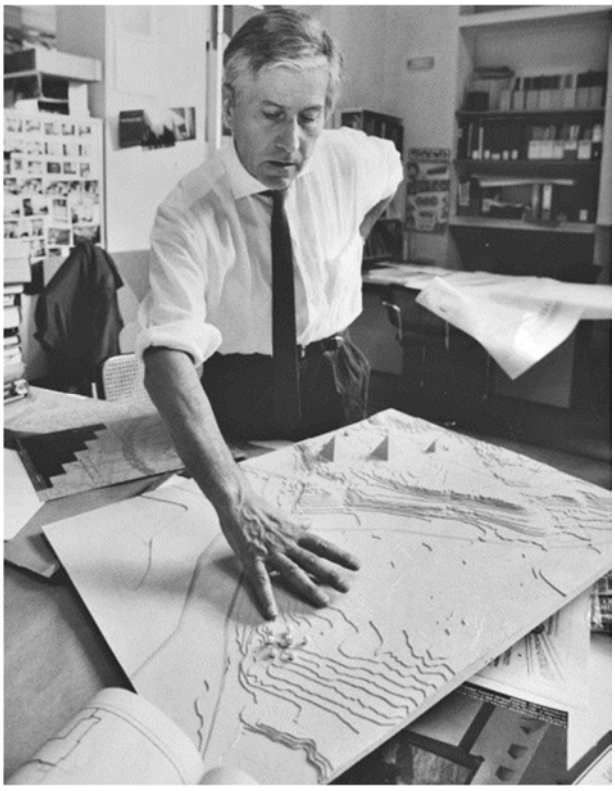


Fig. 1 - Andrea Bruno. (From https://ilgiornaledellarchitettura.com/2025/07/09/andrea-bruno-1931-2025/, last visit October 2025)

In addition to his work in Rivoli, his restoration works and museum adaptation projects for the "MAO - Museo d'Arte Orientale" in Torino, in Palazzo Mazzonis and the in "Museo del Risorgimento di Torino" in Palazzo Carignano are noteworthy. Here, one of the most important actions, before the adaptation work, was the liberation of the central elliptical body from the roof layers that had been improperly added over the years, closing off the existing windows. This liberation allowed the reopening of the ogival windows and the creation of a perimeter path.

Fig. 2 - Palazzo Carignano. The improper addition to the roof before A. Bruno's intervention (From M. MASTROPIETRO (edited by), *Oltre il restauro,* Milano 1996, p. 222)

Fig. 3 - Palazzo Carignano. The roof and the reopening of the Gothic windows after A. Bruno's intervention (From M. MASTROPIETRO (edited by), *Oltre il restauro*, Milano 1996, p. 223)

His work is not limited to Italy, as the architect has also been very active abroad: his best-known projects include the "Maa-Paleokastro museum" in Cipro with the new underground rooms covered by the large dome (Fig. 4); the double architecture for the "Centre d'art contemporain du Mouvement et de la Voix" ("Les Brigittines") in Brussels; the "Musée de l'eau in Pont-en-Royans" in France, where the entrance via a bridge resembles a water conduit and guiding visitors along the route; the "Château de Lichtenberg" in Alsace with its new big architectural volume for the auditorium. Also remember the "Musée d'art et d'histoire Romain Rolland" in Clamecy (Nièvre) housed in the Hôtel de Bellegarde, in the birthplace of Romain Rolland, in that of his grandfather and in a contemporary architecture; the "Musée de la Corse in Corte" and the restoration and musealization of the "archaeological site of the Circus and Amphitheatre" of Tarragona in Spain,[2] in which he managed to preserve the Roman wall, but created a large opening at full height to access the Roman area of the site.

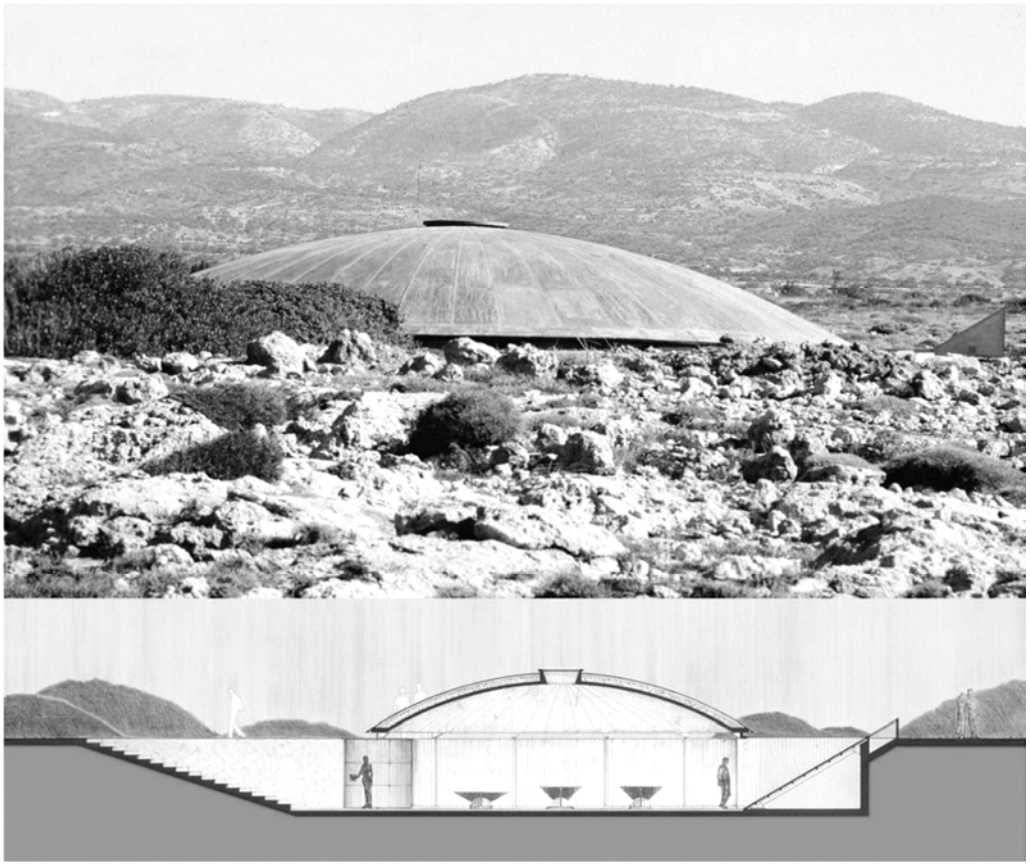


Fig. 4 - The Maa-Paleokastro archaeological museum in Cipro (From A. PANE, *Andrea Bruno. Architetto-restauratore senza confini,* in "Recupero e conservazione magazine" estratto, n. 188, July-August 2025, p. 25)

4.1 Rivoli Castle

In 1947/'48 the Superintendence of Monuments intervened with some works on the roofing damaged by the world conflict and with the restoration of the fixtures. There were also plans to adapt the pre-existence as a "playhouse," but due to problems related to the financial sphere[3] any intervention was blocked. Many possible uses were examined by the rivolese administration.
In 1978 the first collapses of the vault of a large hall on the second floor began. Thus, it was that the period of static uncertainty was interrupted by initiating an operational program. The new cultural climate that was emerging supported the decision to restore and rather the necessity of the large expenditure of money. The restoration and museum adaptation of the Castle was entrusted to the architect Andrea Bruno of Torino. It lasted more than 30 years, thus gave “new life” to the pre-existence that had been interrupted for nearly two hundred years.

Fig. 5 - Juvarra's unfinished after A. Bruno’s restoration. (CAL 2023)

Fig. 6 - Juvarra's unfinished. Facade painted by Juvarra as a proof and restored by A. Bruno. (CAL 2023)

Andrea Bruno's restoration and adaptation

Architect Andrea Bruno in the late 1960s carried out some minor interventions in the pre-existence mainly related to securing the castle and the safety of those who frequent it. A report in March 1968 mentioned the restoration work in Juvarra's[4] atrium and the temporary use that the municipality was making of the ground floor rooms for performances and conferences. It points out the need for working on the stability and efficiency of the roofing and rainwater collector equipment, as well as the exterior windows and doors to make, first of all, the interior rooms healthier.

Roof restoration was addressed as a top priority: for the project to restore the roofs, window frames and partly the facades, signed by Andrea Bruno and consisting of 16 boards, the permission for execution was sought in July 1979.

Specifically, the intervention included the insertion of reinforced concrete beams in some parts of the roof; dismantling and construction of a lateral-concrete slab over the entire roof with new tile covering; insertion of new eaves, downspouts, and flues; and restoration of the copper chimney heads. Several alternative materials to the authentic wooden structure were considered and, in the end, glued laminated timber was chosen, which allows for trusses with a span of twenty-seven meters, making the entire intervention perceptible from anywhere in the interior. The first newly manufactured roof tiles were hooked with special copper brackets onto a thermally insulated and waterproofed wooden board. The roofing package, in compliance with the energy-saving regulations of the time,[5] allowed the attic to be used as an exhibition space. (Fig. 5)

As for the exterior, the masonry parameters were left in face brickwork except for the three bays of the south elevation finished in plaster. The masonry presents as a uniform brick fabric with a few small stone elements present on the east and north elevations.

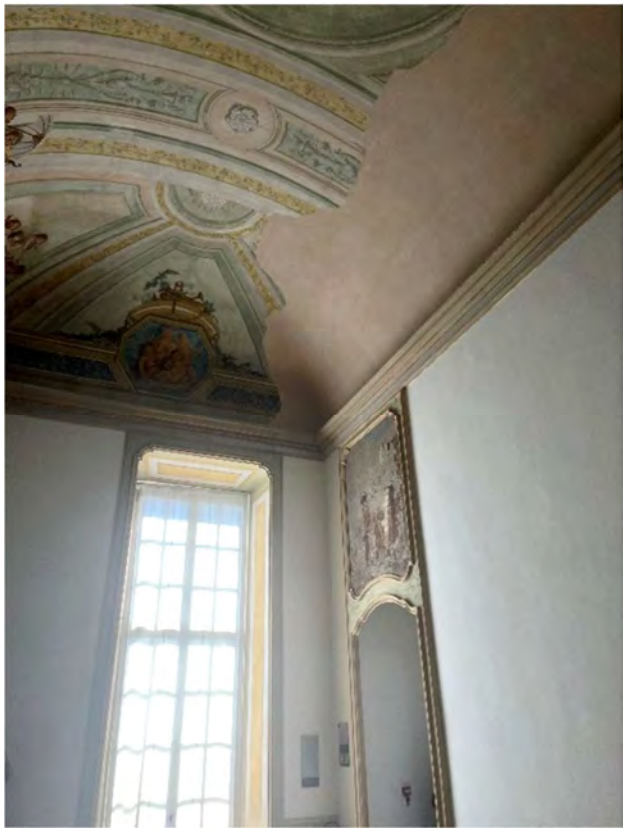
The intervention on the masonry required the adoption of different techniques and technologies depending on the situation: from weeding out earthy deposits to deep consolidation, to the use of the "cuci scuci" technique for reintegration and restoration.

The restoration also intervened in the color of the three bays, going to re-plaster the portion with shading that conforms to the first one: the continuation with the design of the lines of the fixtures creates a scenic fiction in the proportions of the openings, and the window frame seems to have larger dimensions than the real ones; the blue and gray coloring was substituted for the glass in the desire to imitate the reflection of the sky as well. (Fig. 6)

Treatments were also given to all stone elements such as stringcourses, cornices, and vertical edges, as well as waterproofing and stone paving of the north and east terraces and restoration of doorways and some entrance decorations.

In the census of the main causes of the deterioration of the halls, problems of moisture infiltration with swelling of the mortar binders and subsequent detachment leading to decohesion of the plaster to the curl; problems of the cement mortar with the underlying curl to the chipping and detachment of the surface plaster were identified; plaster cracking in vaults; sublimation of salts in the plaster, bacteriological attacks, and micro carbon residues from combustion leading to efflorescence and color alteration; overlapping of different pictorial layers and rotting of wooden artifacts until the detachment of lacquers.

The neglect, lack of maintenance and improper use of the Castle have led to the irreparable loss of much of the artistic heritage, from the furnishings to the decorations in the halls.



Figs. 7-8 - Recognizable reintegration of the surface decorations of the halls. (CAL 2023)

The movable furniture disappeared as early as 1984, while the wainscoting, frames and mirrors, carved wooden fixtures, etc. were mutilated and largely damaged.

In 1984 work was carried out in the various interior rooms of the castle; only one of these rooms remains faithful and well preserved from the seventeenth-century period: the room of Amedeo VIII complete with all the decorations executed by Isidoro Bianchi with some later modifications.

The entire castle preserves, though not in its entirety, some stages of the course of figurative culture in the Piemonte area from the Seventeenth to the Nineteenth century.

In the rooms where the image was partially lost, works were done, avoiding remakes and completions of the missing parts. (Figs. 7-8)

Emphasizing the importance of specialized collaborations and manpower, we highlight the consolidation interventions with micro-stuccoing and injections and the fixing of the pictorial film with small interventions, where possible; for the stuccoes, the reintegration of the gaps of the figurative parts is not plance, but the completion of the repetitive elements such as simple frames.

In terms of flooring, the authentic wooden floors composed of squares mounted on a base structure that supports the elaborate geometric composition have been preserved wherever possible, while in the rooms left without flooring, a coat composed of resin is inserted, such as in the staircase and attic areas; this allows for ease of maintenance, dampening of footfall noise, and resistance to wear and tear.

The lack in the preexistence of adequate vertical connections has always conditioned its use. As the willingness to use the Castle declined in the nineteenth century, the need for new stairs for internal walkability was also put aside. During the military occupation, accessibility to the upper floors was provided by temporary and precarious elements such as ladders or wooden and iron walkways. The architectural conformation of the Castle, in order to allocate it for public use and museum activities, was optimal due to the large and connected rooms, but the criticality of the distributional node of vertical paths remained. Therefore, it was necessary to insert (from scratch) a staircase and an elevator to connect the rooms vertically.
Along this line of thought, architect Bruno introduced a metal and reinforced concrete staircase suspended by means of two steel tie rods from an upper iron beam, which leaves the surrounding walls free. As a result, in fact, of the peeling of modern plasterwork, signs of the staircase's tracing prepared by Randoni[6] were found, left exposed as relics of the unfinished construction site, making them part of the musealization of the architecture. (Fig. 9)

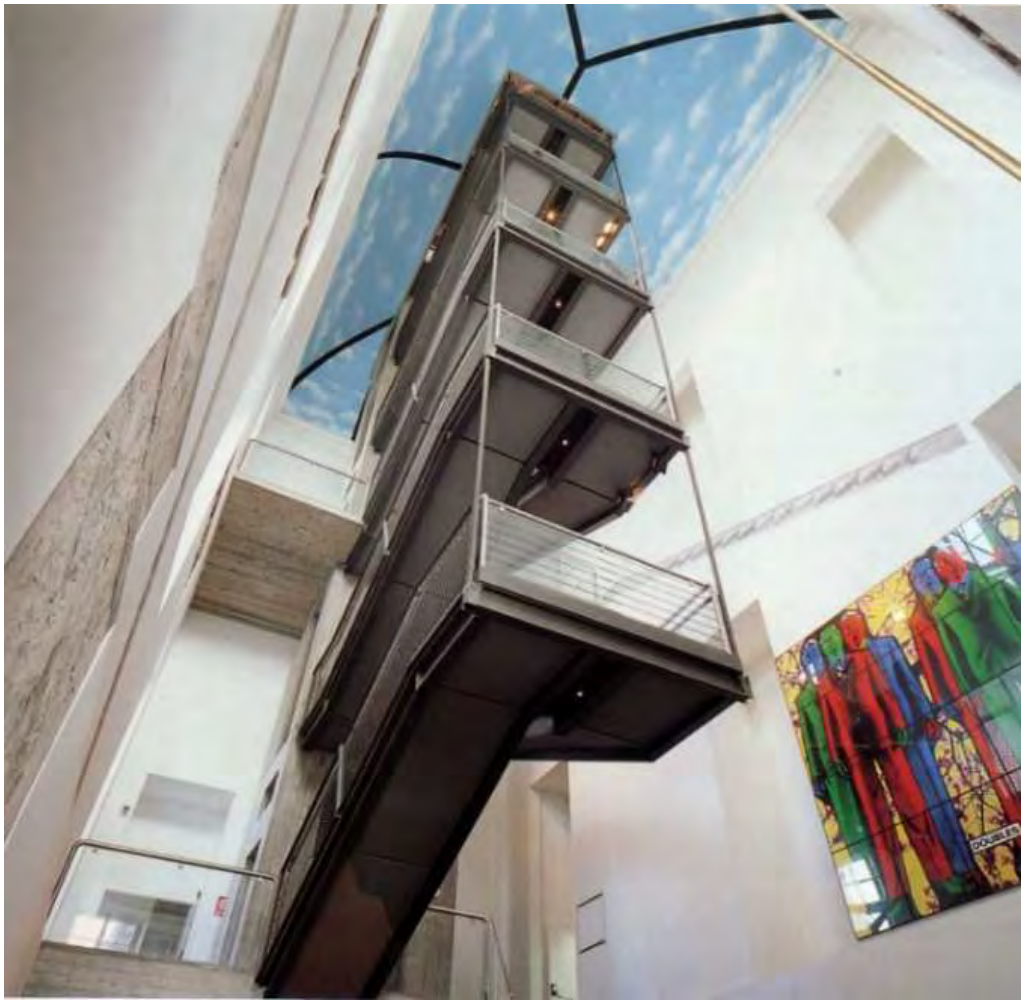


Fig. 9 - New staircase and signs of pre-existing stairs. In the glimpse from the bottom of the staircase, the "fake sky" painted by rivolese painter Antonio Carena (1925-2010) is highlighted. Today the vault is white, with no traces of the pictorial work of the 1980s as seen in the 2023 photograph on the right. (From https://www.castellodirivoli.org/scala, last visit August 2024).

This room appears as a “well” of rectangular plan (7x14 m) with a free height of 26 meters closed at the top by a pavilion vault. The same criterion was also applied on a vault on the top floor where a metal walkway built above the extrados allows a view of the structural layout; above, Andrea Bruno decided to also preserve the structure of the reinforced concrete trusses introduced in the 1940s by the Civil Engineers after the wartime destruction of 1943; in addition to the idea of recreating in reinforced concrete the form of the ancient wooden structure, the 1947 work was kept to witness the emergency intervention made for the roof destroyed in those years by bombs, so as to mark a dramatic moment in the history of the Castle.

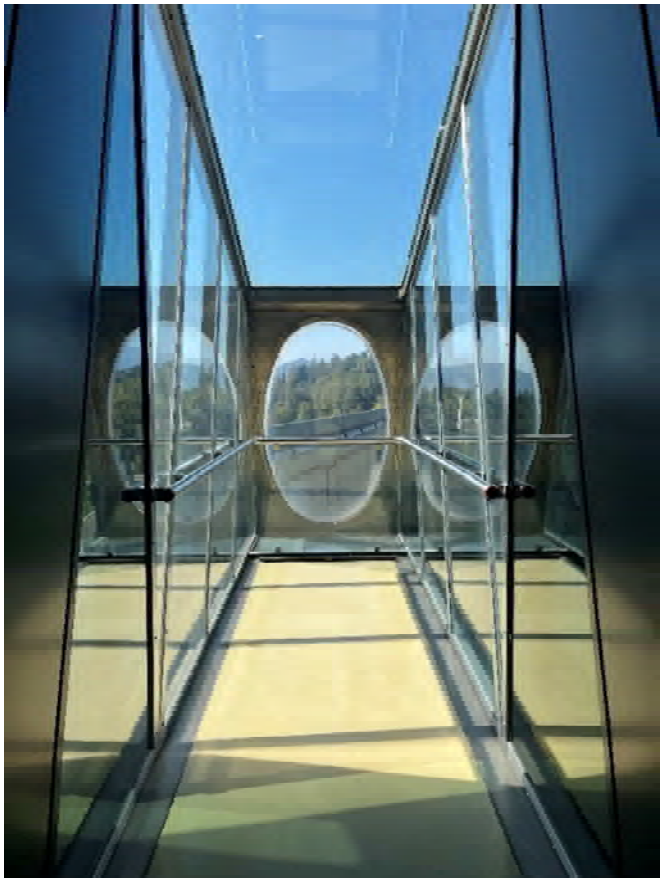


Fig. 10 - View from inside the “Cannocchiale”. (CAL 2023)

Another important insertion is the projecting "Cannocchiale" (Fig. 10) on the top floor from the unfinished facade. Such an iron and glass addition allows for a different perspective of the pre-existence and, thanks to the plan reproduction of Juvarra's never-realized atrium on the white marble, Luserna stone, and porphyry cubes floor, can imagine what the never-realized access should have looked like. It also visually connects the Castle with the “Manica Lunga” in front of it, on which work was carried out in the second half of the 1980s and the 1990s.
On the ground floor, a room with a separate entrance on the unfinished Juvarrian atrium has been dedicated to the theater. Created in the basement part in a room formerly used for storage, it has 140 seats and equipment, which also make it functional for museum-related events. For the design of the theater, a methodology similar to that of the staircase or roofing was used: the dominant principle is that the intervention should be distinguishable from pre-existing elements. In the warmer months, for large performances with large audiences, the possibility of exploiting Juvarra's unfinished atrium as a "backdrop," the perfect backdrop for outdoor performances, was planned.

On December 18, 1984, architect Andrea Bruno's restoration of the Castle was partially inaugurated with a year-long sample exhibition entitled "Ouverture," curated by Dutchman Rudi Fuchs,[7] then director of the Eindhoven Museum (1975-1987) in the Netherlands. Rivoli Castle became the only international contemporary art museum in Italy.

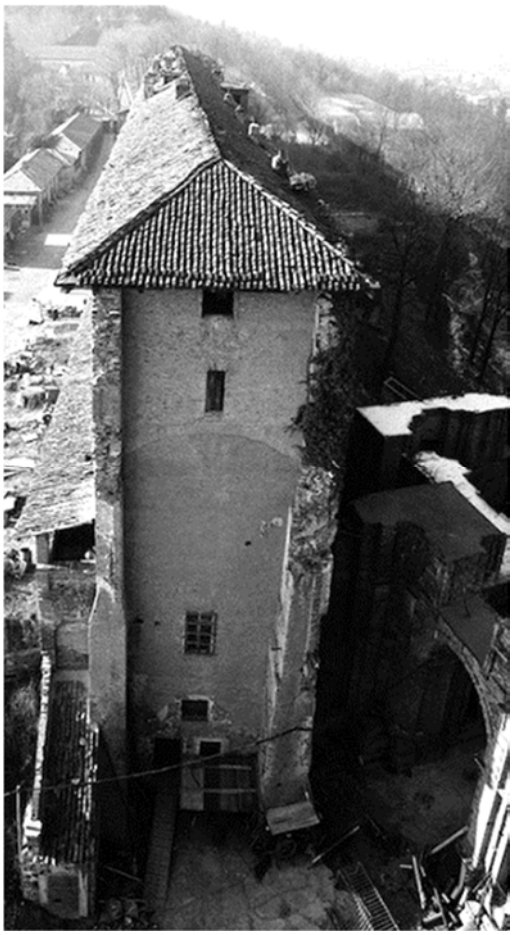
An important aspect of the 1985 intervention on the body of the so-called "Manica Lunga" was the introduction of the external iron and glass staircase bodies with the aim of ensuring transparency of the added volumes and distinguishability from the seventeenth-century structure;[8] it also defines a vertical connecting space between the "Manica Lunga" and the other adjacent body, which now houses the Museum's ticket office, and it is thanks to this connection that there is greater interaction between the different rooms and services present. The connection project included overhead walkways perpendicular to the south front, which were removed with a variant already in 1985, while the connection between the main body and the external perimeter path is maintained only at the courtyard level.

The "Manica Lunga", at 147x 6 meters, had started out as a display gallery for Carlo Emanuele I. The intention of the project was to restore and activate again the museum use of the pre-existence (Figs. 11-12)

The intention that accompanies all the intervention of those years, both on the Castle and on the "Manica", is to block time by keeping in evidence the signs of the destructive pickaxes on the facade of the castle performed by the Juvarrian workers, the cement inserts left exposed in their structural function, the masonry prepared to accommodate finishes that were never made, etc. the restoration intervened with additions designed to fill the gaps in service structures only in order to use the architectural asset through modern, distinguishable, reversible solutions that respect the authenticity of the existing.

Specifically, a new roof was made since it was not possible to preserve or restore the first one; an exposed metal truss structure is inserted along the entire body and in which an artificial lighting system of spotlights is inserted in the center.

In addition to the roof, an important glass and concrete infill was made at the end towards the Castle, in order to also visually connect the two bodies of the factory, keeping the masonry in its unfinished state. Here, at the level of the lower archway, the architect decided to have the year of the intervention "1986" clearly engraved in the concrete.



Figs. 11-12 - On the left the pre-intervention “Manica Lunga” ((https://www.castellodirivoli.org/mostra/andrea-bruno-progettare-lesistente/); on the right “Manica Lunga” in 2023. (CAL 2023)

Many service functions of the museum and educational field have been placed in the rooms of the long sleeve such as the library, reached by the long gallery, or the study rooms.
Also included on the ground floor is a bar service offering food service of the ex novo construction of smaller "sleeve" built parallel to the Long Sleeve and featuring a rooftop garden.

Figs. 13-14 - Ballroom of the “Manica Lunga” and the food service in the “Manica Piccola”. (CAL 2023)

The intervention in Rivoli Castle is one of the most representative examples of the national scene of the 1980s in the field of museum restoration and adaptation. A firm architecture in time, the incompleteness of a complex and sizable construction site also led to specific choices in the area of display routes and plant systems.
The decision to keep the "unfinished" Juvarrian state unchanged represents great respect for the pre-existence and its history; Andrea Bruno decided not to complete the atrium and the "Manica Lunga" according to the ancient drawings, carrying out his intervention not by reintegrating the gap, but by making it a strong point of the restoration project. (Fig. 13-14)
The intervention is proposed as "differentiation of languages in the didactic perspective of commentary on an ancient text in which a new the insert is conceived as a necessary contribution to the understanding of the incomplete and multiform nature of the complex and with a textual complexity of the deciphered and reconstructed architectural work. Left within the scope of the project is the gap to highlight the textual complexity of these architectures of the past to which one must pose with certain criteria".[9]
The Architect in this project worked with a "controlled contrast"[10] in terms of dissonance since the latter should never be overpowering and cause the ancient architecture to be impossible to read.[11] The use of steel roofing to fix the weathering of the masonry, the inclusion of new elements such as the panoramic overhang, exterior connecting stairs, and interior stairs are all juxtapositions that ensure the reading, use, and understanding of the seventeenth- and eighteenth-century architecture of Rivoli.
It could be argued that the Museum of Contemporary Art housed inside the Castle since the 1980s is within a system of a "museum within a museum": the works of the collection are displayed within rooms defined by a strong stratigraphy where the vicissitudes of the Rivoli Fortress can be clearly read. Through the masonry, plasters, even those improperly added as in the south façade, and elements that were never built, the history of architecture of Piemonte can be read. The project established the entrance to the Castle right at Juvarra's unfinished atrium, closely relating the museum itinerary to what should have been the previous access to the Fortress. Access is guaranteed to all visitors from the same place, even to those with reduced mobility, thanks to the introduction of a ramp leading to the interior.
Two plaques have, in addition, been fixed on the doorway: one corresponds to the date of the work on the castle (1734) and the other to that of the restoration and adaptation for museum use that gave new life to the pre-existence (1984).

Fig. 15 - Vault room on the second floor. (CAL 2023)

In the environment that gives access to the museum, around the large concrete staircase and elevator, one can read the signs of past projects and interventions, left exposed making them a connecting element of the "museum system" of architecture. Some of the rooms on the first exhibition floor are plastered in white or various colors, leaving more space for contemporary artwork, while in others, which are better preserved, frescoes frame video projection spaces or panels placed in the center of the room; on the second floor, the rooms feature the authentic frescoes, which in some places have important and obvious reintegrations.

On the top level, in addition to access to the "Cannocchiale" that juts out on the façade, the rooms are defined by a wooden ceiling with exposed trusses, among which emerges an ancient masonry block left exposed that again confirms the centrality of architectural stratigraphy in the project. Resin-covered floors and colored plasterboard walls delimit the exhibition spaces and video rooms; among these rooms, the room emerges in which it is possible to examine the extrados of the masonry vaulting below, left exposed probably for educational purposes and traversable thanks to a metal walkway made consistent with the principles of minimal intervention, distinguishability and reversibility of restoration. (Fig. 15)

At the lighting level, the design calls for the use of natural light from windows for many rooms on the first and second floors during daylight hours. Even along the large concrete staircase, mostly natural light is used, and spotlights of square and circular sections installed in the intrados of the staircase ramps are lit only when needed. (Fig. 16)

Fig. 16 - Staircases and elevator. (CAL 2023)

In the frescos rooms on the second floor, while taking advantage of natural light, they have an artificial lighting system, which is hidden in the stuccoes that perimeter the rooms and from which square spotlights emerge to illuminate the rooms when needed.
In the pre-existence adapted as a museum usually the artificial light cooperates constantly with the natural light, if any, throughout the day; in this case, the rooms of the Castle have an electric lighting system to ensure the use of the pre-existence at all hours, but most of the rooms and the main staircase exploit it exclusively during the dark hours. On the top exhibition floor, on the other hand, the lighting does not come from the outside, but is mostly artificial, with the exception of the corridors and the educational vaulting room, which are illuminated by the "Cannocchiale" and the light filtered through a small window, respectively, which creates a dim atmosphere that allows the visitor to enjoy the masonry extrados and the explanatory videos projected. (Figs. 17-18)

Figs. 17-18 - Rooms on the top floor with artificial and natural lighting. (CAL 2023)

In those years, it was the opinion of many technicians that the Castle was not suitable for hosting contemporary art because the Juvarrian architecture and the collections were considered to be at the antipodes; after the intervention was carried out, it can be said that it is precisely this great detachment between the two periods that allows one to read, understand, and enjoy, without confusion or false interpretation, both works of art, the architectural and the exhibited.
The project of restoring and adapting the pre-existence to new museum use has made the Castle not only one of the most important cultural and educational environments in the field of contemporary art, but has made it possible to safely use and enjoy three hundred and sixty degrees of an architecture left unfinished without distorting it, but treating it with great respect and attention to the principles of recognition, reversibility, minimal intervention and museography.

4.2 Citadelle de Corte Museum

Andrea Bruno's intervention at the Citadelle de Corte in Corsica is an exemplary case of the adaptation of a disused military complex as a museum. (Fig. 19) The transformation involved the former Serrurier barracks, a neoclassical architecture that was an integral part of the fortified system, which was returned to the community with the inauguration of the *Musée de la Corse* in 1997.
Between the ancient stronghold, called "eyrie",[12] and the barracks (Serrurier and Padoue),[13] the ground stretches in descending terraces.
A competition was held for its design. Although the theme of the competition was limited to the restoration and adaptation of the Serrurier barracks, destined to house the Museum of Corsica, the project intentionally extended its scope to include the historical and formal connections defining the three primary nuclei composing the citadel: the eyrie, the green terraces and the barracks area, and their relationship with the town.

Fig. 19 - Panoramic view of the Citadel: the "eyrie", the two barracks and the green terraces. (From M. MASTROPIETRO (edited), *Oltre il restauro*, Milano 1996)

In particular, the Serrurier barrack was built between 1853 and 1887. The army decided to build a military hospital there, which was completed in 1853. In 1856, the historic building was converted into a detention centre for political prisoners and then into barracks; it was then that it took the name Serrurier. It was then occupied by the Foreign Legion from 1952 to 1963. It is here that the museum's permanent collections are presented on two levels.
If the intervention of an architecture for a new use may lead a drastic intervention, we must ask to what degree the value of authenticity and quality of the whole prevails.
The main strength of Andrea Bruno's work is, first and foremost, that he adds nothing to the pre-existence that is not motivated by the structure of the existing itself. Proof of this can be seen in the large arches he has opened up in the main façade of the former Serrurier barracks, which simply highlight the true architectural structure (a series of cross beams).
The project is part of a methodology already established in Bruno's practice: preserving the historical identity of the pre-existence envelope while introducing recognizable contemporary architectural features. The barracks, characterized by an austere architecture, underwent a process of selective opening of the façades through large ribbon windows, capable of ensuring visual permeability towards the landscape without altering the formal structure of the existence.

There is a strong distinction between the old and the new, which is very recurrent in the works of A. Bruno. The lightness and transparency of the new addition to the ancient pre-existence is clearly recognizable and now uses as the entrance to the museum. (Figs. 20-21).
The intervention also included the excavation and equipping of bastion VII, which was transformed into a functional extension of the museum. The total area of approximately 4,645 m² has been divided into exhibition areas (1,700 m² for the permanent collection and 650 m² for temporary exhibitions), reception areas (995 m²) and storage areas (1,300 m²). This layout responds to a museographic model capable of integrating public functions and conservation services, in line with the contemporary needs of a regional museum.

Fig. 20 - "The Corte Museum". The insertion of the new in the ancient architecture. We can recognize the light iron and glass structure inserted within the existing walls. (From https://www.museudiacorsica.corsica/fr/le-musee/, last visit September 2025)

Fig. 21 - The lateral view of the "Citadelle Corte Museum".

The new Museum of Corsica destined to house the permanent collections, is set out inside this nineteenth century barracks using museological solutions closely bound to the destructuring of the façade. Temporary exhibitions, depots and workshops, are accommodated in new volumes fitting into the spaces circumscribed by the outer bastion walls and closely correlating with them.
The project stands out for its ability to establish a dialectical dialogue between old and new: on the one hand, the permanence of the citadel's historical fabric, and on the other, the legibility of modern additions – transparent, reversible and technically advanced – which allow for a new use without erasing the site's military memory. This critical choice is part of Bruno's approach, which is oriented towards "building on what already exists", taking heritage as a matrix for the project rather than a limitation.
In this sense, the adaptation of the Citadelle de Corte into a museum is not only an architectural restoration project, but also an urban and cultural intervention, capable of adapting a place of military power into an art space and a symbol of identity for the Corsican community.

4.3 "Les Brigittines" in Brussels

"The Brigittine Church" is located at a critical point in the urban fabric of Brussels. Enclosed between the railway and the Marolles district, it appears to be overshadowed by the tall building behind it, which negates its monumentality. Hence the idea of reinforcing its existence, of emphasizing its "being there" by doubling its volume. (Fig. 22)

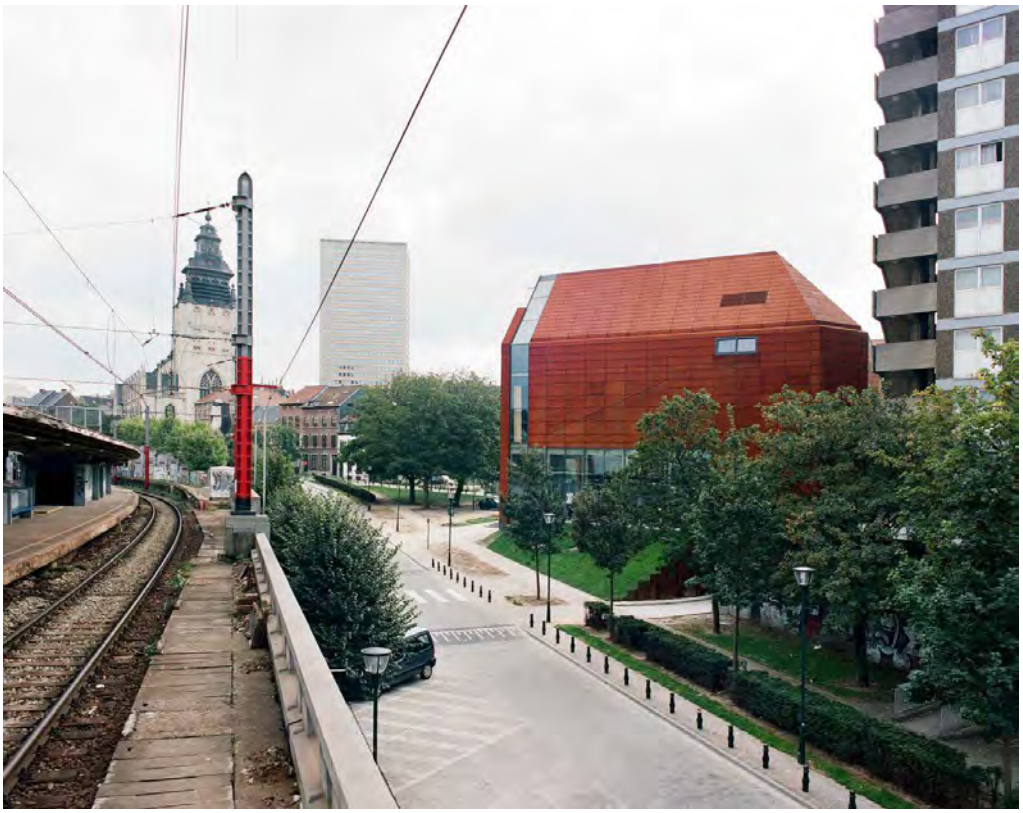


Fig. 22 - The relationship between the site of the intervention and the railway. (From "Viceversa" architecture online magazine)

"The Brigittines chapel"[14] in Brussels, built in 1663 by architect Léon Van Heil[115] is an exemplary case of adapting historic architecture to a new use. After serving a variety of functions (school, prison, warehouse, market, ballroom), the façade was classified as a monumental architecture in 1936, while the entire complex was listed in 1953.

In 1999, the city of Brussels designated it as a centre for the performing arts, which required functional adaptation and expansion of the spaces to accommodate various activities, including temporary exhibitions.

To meet these needs, an international competition was launched in the early 2000s, which was won by Andrea Bruno in collaboration with the Belgian firm SumProject.[16] Work began in 2005 and was completed with the inauguration of the extension in 2007.

The project is based on a "double volume" strategy: the historic church is flanked by a new architectural structure. This "contemporary twin" houses the foyer, ticket office, bar, offices, technical spaces, rehearsal rooms and a secondary auditorium, freeing the chapel from ancillary functions and restoring it to its role as the main auditorium. (Figs. 23-24)

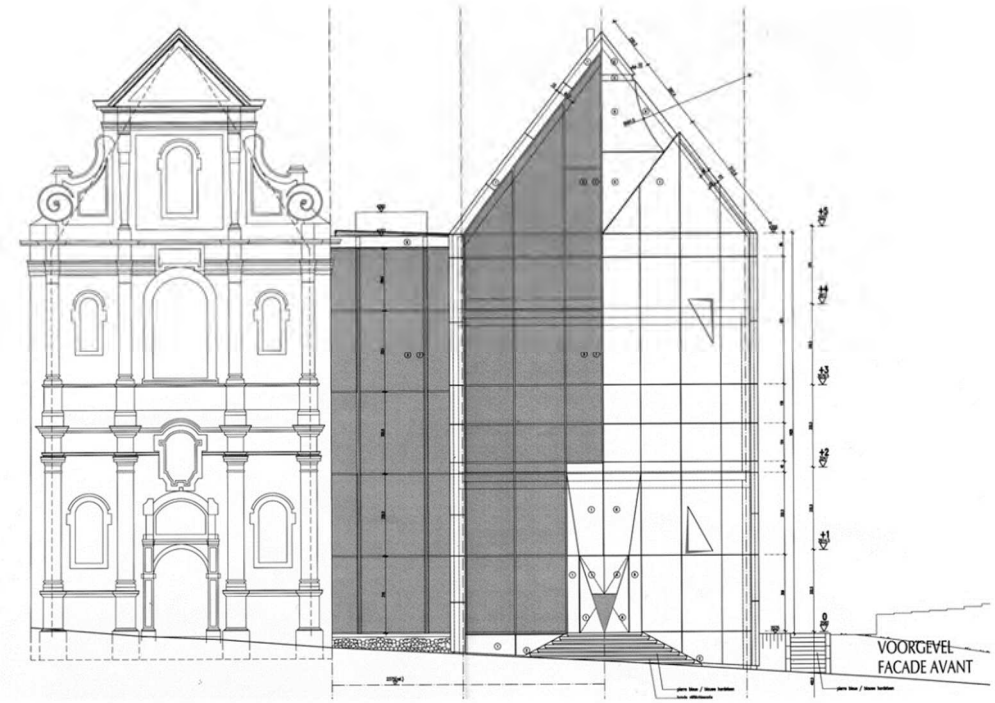


Fig. 23 - Andrea Bruno's drawing: project of the "double volume" and the glass connection element (courtesy of architect A. Bruno).

Fig. 24 - Brigittines, Bruxelles. The Church and the new structure by Andrea Bruno. (CB 2009)

It presents itself as a simplified image of the old church, recalling its fundamental construction elements reinterpreted in a contemporary key.
The new façade, in its transparent part, offers a glimpse of the main structure of the architecture section, while one half is covered by a Corten steel cladding that defines and protects the technical areas inside.
The relationship between old and new is mediated by a glass connecting element (Fig. 25) which, through staircases and lifts, performs both distributive and symbolic functions, making the juxtaposition of different temporalities explicit.
The choice of materials – Corten steel, glass surfaces, stainless steel – establishes a chromatic and material dialogue with the brickwork and stone frames of the chapel, according to a logic of critical consonance rather than mimicry.

Fig. 25 - The glass element that links the church to the new architecture. (CB 2009)

Between the Baroque church and its double, inside the third element, there are staircase (Fig. 26) and a lift distribute the various functions vertically over seven levels. The architecture of the staircase echoes the structure of the newly built vertical connection system installed by A. Bruno himself in Rivoli Castle in the 1980s. It could be said that it is one of the main elements of the architect's work.

Fig. 27 - The new staircase inside the glass connection element. (CB 2009)

A performance hall for one hundred people, rehearsal rooms, a restaurant, office spaces, technical and service rooms thus complete and make functional the large empty space of the nave of the Baroque church.
The project demonstrates how it is possible to reconcile preservation and innovation through a clear distinction between the historical and contemporary parts, without sacrificing perceptual continuity and functional integration. Furthermore, the transformation of "the Brigittines" has had a significant impact on the urban context, contributing to the cultural and social revitalization of the neighborhood. In conclusion, the case of "the Brigittines" represents a paradigm of the architect's methodology: respect for historical authenticity, explicit inclusion of the modern and attention to the cultural function of architecture for the city.

Notes

1. Among the most significant projects carried out in the Asian country are: the surveys and conservation projects of the Buddhas of the Bamiyan Valley (1960-64, 2011-16) and the Minaret of Jam (1961-64, 1974-78, 1999-2002), the restoration of the citadel of Herat (1976-80) and the restoration and museum installation of the Mausoleum of Abdur Razzaq in Ghazni (1960-66). For more information about Andrea Bruno's works in Afghanistan see: A. BRUNO, *Programmi per la valorizzazione ed il restauro dei monumenti in Afghanistan,* in *Il monumento per l'uomo,* Atti del II Congresso Internazionale del Restauro tenutosi a Venezia 25-31 maggio 1964, Padova 1971; A. BRUNO*, The citadel and the minarets of Herat, Afghanistan,* Torino 1976.

2. For further information about Andrea Bruno's works see: M. MASTROPIETRO (edited by), *Oltre il restauro. Architetture tra conservazione e riuso. Progetti e realizzazioni di Andrea Bruno (1960-1995), Restoration and beyond. Architecture from conservation to conversion. Projects and works by Andrea Bruno (1960-1995)*, Introduction by A. BRUNO, essay by R. LEMAIRE, L. TESSIER, S. POLANO, Milano 1996. A. BRUNO, *Costruire nel costruito*, in "Centro Internazionale di Sperimentazioni Artistiche M. L. Jeanneret, Boissano", 1979, pp. 32-38.

3. According to documents dated April 1964 signed by Piemonte's Superintendent of Monuments, Prof. Arch. Umberto Chierici, about half a billion liras were needed to allow the Castle to be used, although its vast size made it difficult to use anyway.

4. Filippo Juvarra (1678-1736) was an Italian priest, architect and set designer, one of the leading exponents of the Baroque architecture, who worked for many years in Torino as architect to the Savoia family. He began his career as an engraver and theatre set designer. He studied in Roma, where he came into contact with Carlo Fontana and the papal artistic milieu, distinguishing himself for his graphic and design skills. Much of his career was spent in Torino, where he was called by Vittorio Amedeo II of Savoy. In Piemonte, he designed some of his most famous works, including the Basilica di Superga (1717-1731),a monument symbolising the city; the Palazzina di caccia di Stupinigi (dal 1729), a residence of Savoia, and numerous interventions at the Palazzo Reale and other dynastic residences, including the Rivoli Castle, which remained unfinished. In his later years, he was also active in Spain, called to Madrid by Filippo V, where he designed (though not entirely completed) the Palacio Real. For some information see: S. BOSCARINO, *Juvarra Architetto*, Roma, 1973. A. BRUNO, *Il modello di Juvarra per il Castello di Rivoli,* in *Studi Juvarriani. Atti del Convegno dell'Accademia delle Scienze, Torino, 1979,* Roma 1985, pp. 239-250.

5. Reference is made to Italy's first energy legislation: law 373/76 (G.U. June 7, 1976, No. 148: "Norms for the containment of energy consumption for thermal uses in buildings"), now repealed, and its implementing regulation, Presidential Decree 1052/77, prescribed first and foremost thermal insulation of buildings and standards for the design of thermal systems.

6. Juvarra had thought of a grand staircase, which was present in the plans but never built. In 1793, Carlo Randoni (1755-1831) provisionally designed a staircase in a single room, the same one that houses the current connections; with the arrival of soldiers, the second floor was accessed by a system of iron and wooden walkways and stairs.

7. Rudolf Hermann (Rudi) Fuchs (1942) is a Dutch art historian and contemporary art museum director. From 1984 to 1990 he was director of the Rivoli Castle Museum of Contemporary Art.

8. The footprint volume is dictated by legal requirements. Reference is probably made to the Ministry of Public Works Circular of June 19, 1968, No. 4809 in Section 2.2.4 on "stairs" later taken up in 1971 in the Law of March 30, No. 118 conversion of Decree-Law No. 5 of January 30, 1971 "new regulations for the mutilated and disabled civilians."

9. See G. CARBONARA, *Architettura d'oggi e restauro. Un confronto antico-nuovo,* UTET, Roma 2011, p. 78.

10. See G. CARBONARA, *Modi d'accostamento alle preesistenze storiche,* in *Architettura d'oggi e restauro. Un confronto antico-nuovo,* UTET Scienze Tecniche, Torino 2011, pp. 103-109.

11. Consider, for example, Carlo Scarpa's famous design for Castelvecchio in Verona. In intervening by eliminating a span at the junction between the two bodies, Scarpa makes his work a project of contemporary architecture, and it is this today that attracts professionals and tourists to the castle and not the ancient architecture of the Scaliger residence of San Martino in Aquaro.

12. The ancient stronghold, known as "eyrie" was built by Vincentello d'Istria (1380-1434) at the highest point on the Citadelle.

13. The Padoue Barracks were built starting in 1769. It is a modular architecture consisting of four modules with independent entrances leading to dormitories spread over three floors, with pavilions for officers on the sides. It could accommodate around six hundred men. The basement housed two large cisterns, storage rooms for food and materials (flour, wine, wood, salted meat) and workshops (forge, carpentry) to support military life. In recent times, the barrack has been adapted into a cultural centre housing the FRAC (Fonds Régional d'Art Contemporain), associations, exhibition spaces and tourist offices, as part of the "Citadella XXI" project. The Serrurier Barracks, on the other hand, were built around 1848 as a military hospital, although over time they served a variety of purposes, including as barracks and a prison. In 1993, major restoration work began under the supervision of the architect Andrea Bruno, with the aim of giving it a new lease of life as a museum space. Since 1997, it has housed the Museum of Corsica, which collects and promotes the island's historical and cultural heritage.

14. "The Brigittines Church" is an example of Baroque architecture. The façade, richly decorated with brick and stone, features a central portal surmounted by a large window and an attic with ornamental motifs. The bell tower, included in the authentic design, was destroyed during the bombing of Brussels in 1695. Inside, it has a single nave. After the suppression of the order in 1784, the church underwent numerous changes of use: it was used as a school, prison, covered market and ballroom. In 1920, the city of Brussels acquired the monument.

15. Léon Van Heil (1605 –1664), was a Flemish painter and architect who specialized in miniatures of flowers and insects. He is best remembered for his drawings of the Brigitte Chapel and the tower of St. Nicholas Church, both in Brussels.

16. SumProject is a team of architects, urban planners and engineers whose multidisciplinary nature was highlighted in 1995 with the integration of "Mens en Ruimte", a team of experts in the fields of energy, the environment, mobility, agriculture and horticulture, sociology, economics, geography and planning.

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Chapter 5

Museums in Paris

Among the factors that brought about changes in European museums in the post war years, were reconstruction and economic recovery. But especially since the late 1960s, the growing phenomenon of mass tourism has had a significant impact on political decisions.
Meanwhile in Italy, with careful cultural action, in the post war period had managed to anticipate other countries.
The irony of history was that it was a conservative politician of Gaullist inspiration who revived museums in France. When he became president in 1969, Georges Pompidou announced his idea for a cultural centre to be built in a rundown area of Paris.

Fig. 1 - Centre National d'Art et de Culture George Pompidou (Beaubourg). The insertion of new in the historical centre. (CAL 2025)

In July 1970, a competition was announced for the architectural design, which was won by an Anglo-Italian group led by Renzo Piano and Richard Rogers. The idea was to create an interdisciplinary cultural centre.
One of the fundamental requirements was the facility of access, so that the public could enter from every side, with the temptation to go everywhere.
Flexibility and adaptability were the central elements. In presenting the project, Rogers returned to the concept of movement and openness to advocate for a clear definition of culture.[1]
But going into detail we know that the success of the Pompidou shows some cracks with respect to architectural functionality, particularly with regard to the display of work of art.

Fig. 2 - The new Pompidou from the Place George Pompidou. (CAL 2025)

The Pompidou's architecture required high maintenance costs. In fact, today we can say that over the years, it has cost more to maintain than to build. In just a few years, the structure has shown signs of deterioration.
"Restoration work" becomes a constant construction site.[2]
It should be remembered that only eight years after the opening was Gae Aulenti entrusted with the task of designing the actual exhibition hall, to be inserted in open spaces. But the question was if their innovations were not in contradiction with the spirit of the Beaubourg.
To this end, the French Administration starting in the early 1980s, under Mitterrand, turned its attention to the Louvre and other museums project.
The example of the Centre Pompidou has been followed in many cities and once again in Paris, some exemplary cases can be found with other interventions such as the Picasso Museum (renovated and refurbished between 1979 and 1985 by the architect Roland Simounet) and Gare d'Orsay (in Musee d'Orsay), both located in the Marais, in the third arrondissement, a district renowned for its vibrant cultural life.

5.1 Cluny Museum

Fig. 3 - Paris, Hotel de Cluny courtyard. (CB 1983)

The Cluny Museum, known as the Musée National du Moyen Age, is one of the main museums dedicated to medieval heritage. Located in the heart of the Latin Quarter, the museum comprises three distinct historical phases: the Gallo-Roman baths, the Hotel de Cluny and a 19th century addition.

Premise

In the 1838 Alexandre Du Sommerard the founder of the museum[3] reaffirmed a sort of priority of the historical object over the text. A collection of such objects will not be passive but methodological.

Du Sommerard solved the problem of space for his collection when in 1832 he became the owner of the late Gothic residence of the Abbots of Cluny, adjacent to the Palais des Thermes.[4]

From 1843 the Cluny Museum was protected by the French state, and included not only the first collection, but also the collection started during the Revolution by Lenoir and housed in the former convent of the Petits Augustins on the Rive Gauche.

Description

Lenoir present to the public the Reserved objects within a chronological framework, and the diary of Lord John Campbell who visited France describes it as follows: “we went to visit the Austins in which the tombs and monuments that escaped the fury of the Revolutionaries are deposited (they are arranged in different cloisters and apartments), each containing the specimens of statuary and sculpture during the century beginning with the earliest periods of the art, and receiving light through windows of coloured glass as nearly of the same antiquity as possible. Some very beautiful and curious specimen are among them.[5]

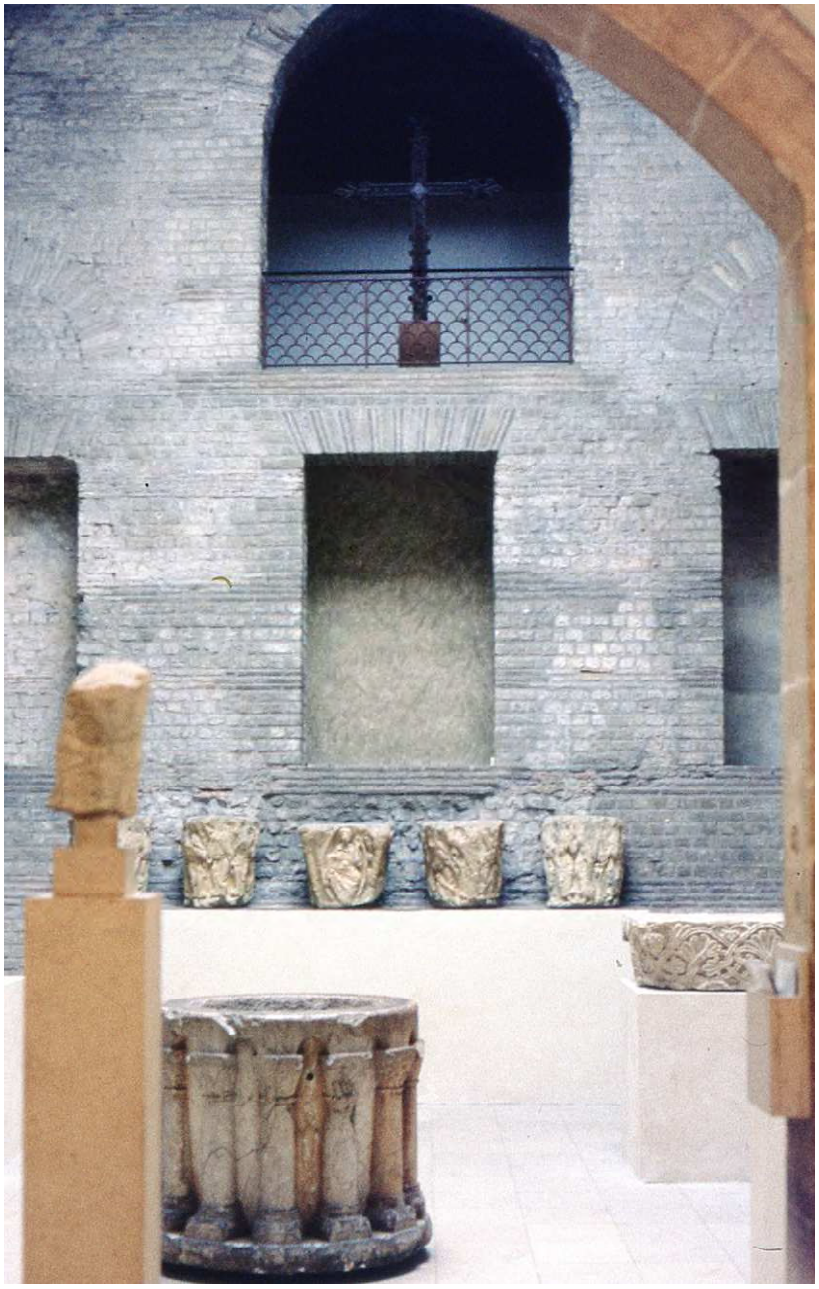

Fig. 4 - Paris, Musée de Cluny. Therme Gallo-Roman, exposition. (CB 1983)

Lord John’s testimony gives an organization of the first museum. There was an impressive “Salle d’introduction” with authentic early 18th century paintings, in which a full historical range of sculptures objects was displayed, from antiquity to the 17th century.

Lenoir evidently had no scruples about mixing the authentic fragment with the contemporary, archaizing bust.[6]
Regarding first exhibitions, Guiffrey demonstrate that Lenoir had no concept of historical authenticity.

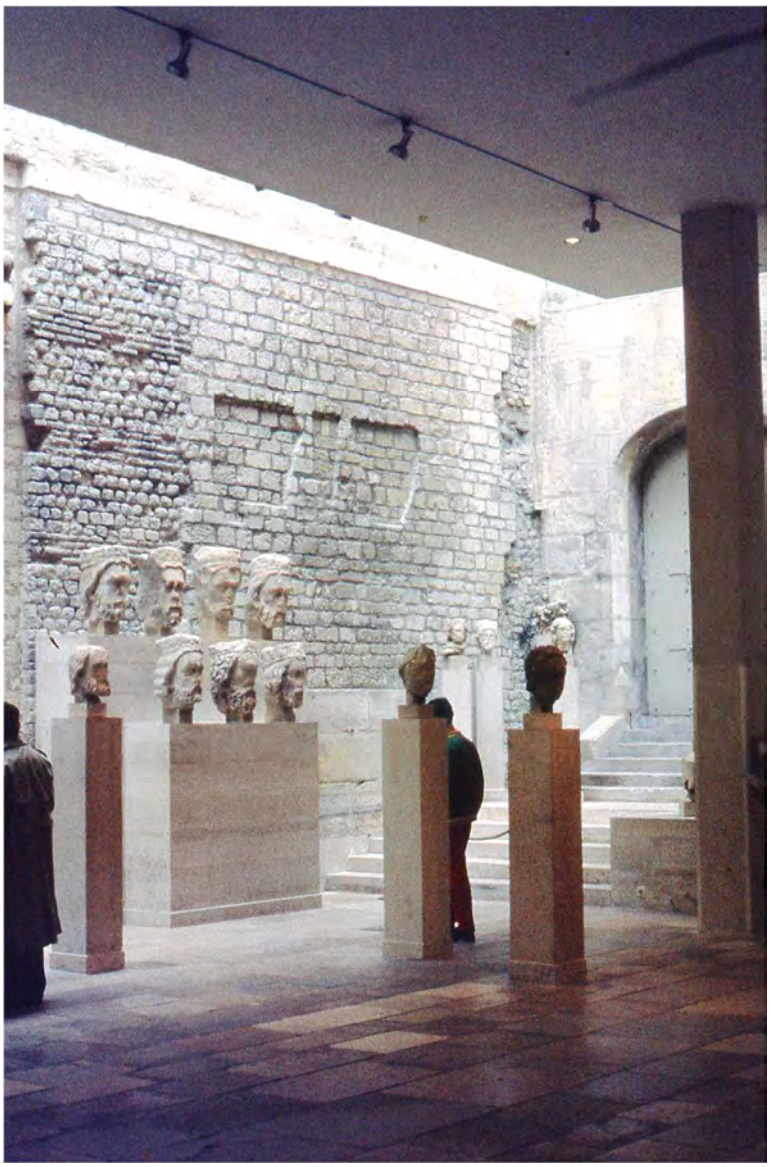

Fig. 5 - Paris, Hotel de Cluny. Gallery if the kings. (CB 1988)

In the 1839 some fragments of the portals of Notre Dame were rediscovered in a coal deposit by Albert Lenoir (son of Alexander Lenoir), but we haven't trace still to be found of the Kings.
Paul Leon describes the Historical importance of the museum in 1951: "Pour la première fois l'art gothique apparaissait au public dans toute sa diversité. D'étroites croisées, de sombres vitraux éclairaient d'una lumière pâle ces salles aux lourds piliers, aux voûtes parsemées d'étoiles… La popularité du Musée des Augustins a été considerable. Non seulement la foule s'y portait avec une curiosité mêlée de vénération, mais peintres et dessinateurs y venaient en delle effluence que l'on protéger les monuments du Jardin par des barriers".[7]
In 1977 during maintenance work on the courtyard of the Hotel Moreau, and therefore by fortunately, the kinks were rediscovering carefully buried, with religious care.

After some years, Alain Erlande Brandenburg, between ’70-‘80s, conservator of Cluny Museum calls Gae Aulenti and Italo Rota. In the new arrangement of the group of statues from Notre Dame de Paris in the former courtyard, now covered of the Hotel de Cluny.

The early 1980s present problems, some of which are highlighted in the illustrations. The first, for example, is the capitals presented as if they were bases at too low a height. A second is the basement full of important capitals, as if it were a 19th century warehouse.

For these reasons, the Hotel de Cluny complex has undergone a series of “renovations” in recent years. The first was completed in the early 2000s, and further specific works were carried out in 2015:

- 2018: inauguration of the new entrance pavilion and services to the public;
- 2019: launch of a restoration program of the pictorial collections from the sixteenth to the nineteenth century;
- 2022: complete reopening of the museum with the new permanent museum itinerary;
- 2025: restyling of the public garden (4000 m^2), returned to the city after nine months of work.

Fig. 6 - Cluny Museum. Improper solution for ancient capitals. (CB 1983)

Consideration

In short, the museum of French monuments created in the Petits Augustins convent focuses on French Architecture from the Middle Ages to Classicism and is based on the transfer and presentation of parts of various monuments with all the difficulties of the museum exhibition.

In Cluny the difficulty was to reconcile the dialogue of the architectural context with the respect and needs of the new museum.

After its renovation, the entrance of the Cluny Museum features a striking contemporary structure made of copper, designed to harmonize with the historic surroundings while signalling modern accessibility. Despite housing the magnificent Lady and Unicorn tapestries, the museum remains relatively unknown within the Parisian cultural landscape.

5.2 Picasso Museum

The Picasso Museum is housed in the Marais. Since 1984, the museum has been a vital element in the neighbourhood's redevelopment. (Urban Regeneration) At the same time, it has contributed to the preservation of the Historic Royal Quarter. The Marais was in such a state of decay that after the war there were plans to begin a series of demolition in homage to Le Corbusier's theories.[8]

Fig. 7 - Paris, Hotel Salé.

Fig. 8 - Picasso Museum. Handrail used as a show-cases for small designs. (CB 1988)

It seems important to point out that the Picasso Museum is a monographic museum, like others in Paris, such as the Rodin, Maillol and Delacroix.
Picasso himself was very careful to preserve his works, and thanks to this, today the museum offers the most complete collection of the artist's works, allowing visitors to explore his entire creative journey.
It is an interesting idea for exposing some drawings and sketches by Picasso inserted in the new handrail. It is projected as a showcase. In the hall of the museum white is the main colour as a neo plastic atmosphere. In this entrance and in some rooms, we could notice the absence of the exposition route and some confusion and discomfort for visitors.
The Picasso Museum is inserted in the Hotel Salé (17th century, architecture by Jean Boullier[9] between 1656 and 1659). However, we must acknowledge that André Malraux, who in 1968 established a law allowing the bequest of works of art as payment of inheritance rights, donated approximately 500 works to the museum, including paintings, sculptures, engravings, and drawings. There are also some works from his personal collections, including Dalí, Cezanne, Gauguin, Matisse, Renoir, Modigliani and Miró, as well as drawings by De Chirico and Giacometti.

Fig. 9 - Temporary exhibition of Picasso's works. (CB 1988)

The white wall behind the works helps the comprehension of the Picasso's paintings, but, at the same time, the configuration is too much strong and we can't read anymore the architecture. Furthermore, there were no security systems in place for the works on display.
The adaptation of the pre-existing architecture is due to the architect Roland Simounet[10] and the sumptuous setting offers a unique perspective on the works. Some of the furnishings are reminiscent of Diego Giacometti, and even the lighting installations attempt to create a dialogue between the "Hotel particuler" and the exhibited works.

Fig. 10 - Exhibition room with Giacometti lamp. (CB 1988)

Inaugurated in 1984, it has become a Picasso study centre. It has hosted numerous exhibitions, including the memorable 1988 exposition "Les Demoiselles d'Avignon" curated by Helen Seckel.

Fig. 11 - Exhibition room during the exposition "Les Demoiselles d'Avignon". (CB 1988)

Inside, the insertion of Picasso's masterpieces is in a neo-plastic (Theo van Doesburg)[11] atmosphere, but disorder prevails in the use of the exhibition spaces. On the fortieth anniversary, museum president Cecile Debray will allow the area to be transformed into an open-air museum in the garden. The project for Paris 2030 is eagerly awaited.

5.3 Musée d'Orsay

Much has been written about the Musée d'Orsay since its openings. Jean Senger described the entire design, the constructive site and the entire administrative process.[12]

Fig. 12 - Musée d'Orsay. (CB 1983)

Another issue of "Le Debat", edited by Pierre Nora,[13] a few weeks after the inauguration, reported the point of view of those in charge and different reactions of the various personalities.[14]

It is not possible to retrace the events that led to the creation of the new museum, however it seems appropriate to remember that specialists realized that the Jean de Paume Museum was no longer capable of hosting the works of the second half of the nineteenth and the early twentieth century. At the same time, Paris suffered with the destruction of Les Halles[15] abandoned for several decades.

Indeed, several projects were under way, including that of a new hotel.

There had been numerous protests, particularly from André Chastel[16] in *Le Monde.*

Michel Laclotte recalls that one day, while passing by with Pierre Rosenberg on *Pont du Carrousel* and watching the Gare d'Orsay, had a flash of inspiration, so they mobilized the political forces and President Valery Giscard d'Estaing.

Fig. 13 - Le Gare d'Orsay in its old function. (Private Collection CB)

Fig. 14 - Le Gare d'Orsay. New aspect, probably is too much white. In Paris we must remember André Malraux and Paris Blanche. (CB 1988)

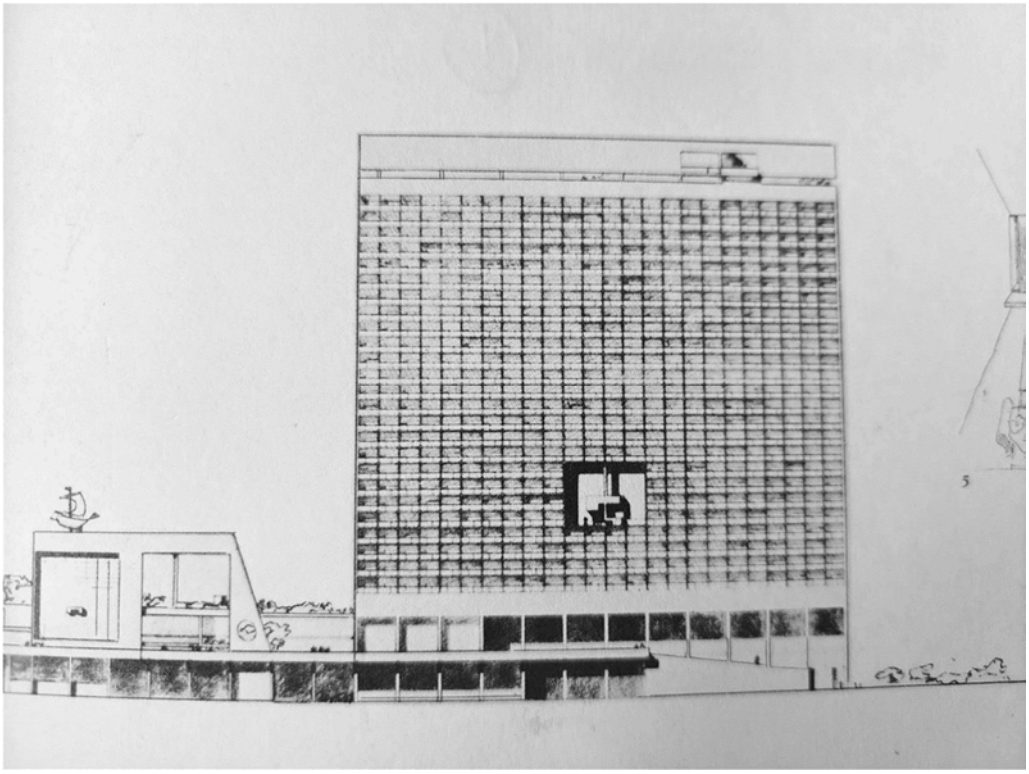

Fig. 15 - Le Corbusier, competition for the new Hotel d'Orsay 1961 (Le Corbusier Foundation). 'Orsay, a privileged location. A gigantic station (of which nothing could be seen) should be turned into a belvedere where, from all the windows and on all levels, the spectacle will be created... Orsay could be the starting point for the future volume of Paris' (Le Corbusier). (From "Quaderni di Casabella" n 535, May 1987, p. 13)

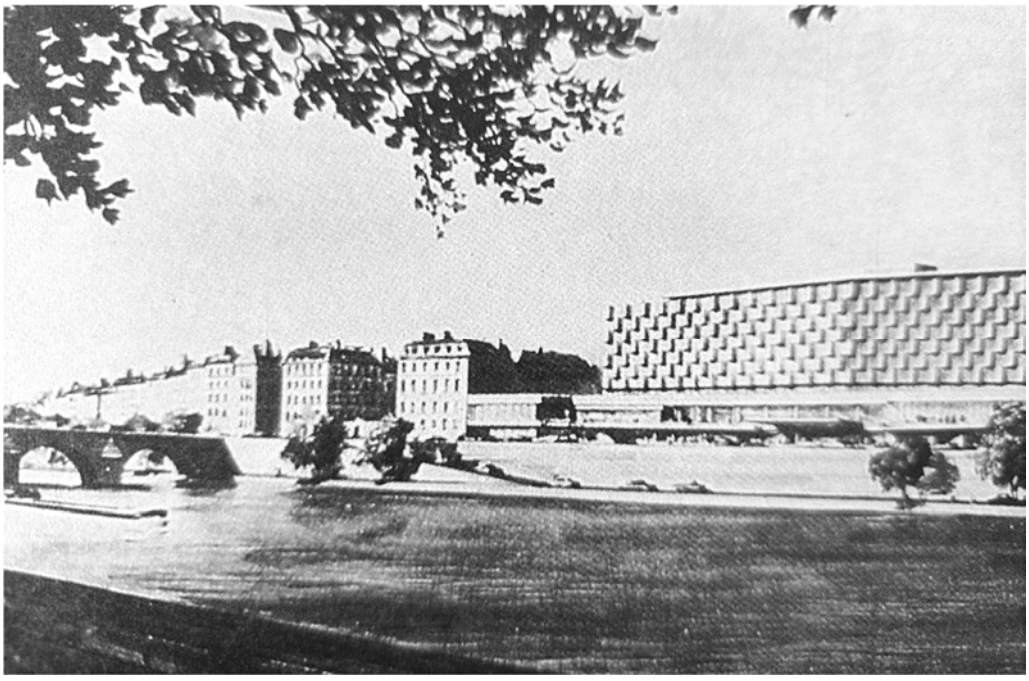

Fig. 16 - Jean Faugeron. Competition for the new Hotel d'Orsay, 1961. (From "Quaderni di Casabella" n 535, maggio 1987, p. 13)

Fig. 17 - Interior view of the station (Private collection CB)

Fig. 13 - Interior overview, 5 August 1900. (From "Quaderni di Casabella" n 535, May 1987, p. 11)

The President himself made the idea of his own and the operation began in 1977. Laclotte summarizes in his book *Histoires de musées, Souvenir d'un conservateur,* Paris 2003, some phases of the project and its realization.
In fact, he describes a trip to the United States, to see in some projects not only the architectural aspects, but also the functional ones that were missing from French Museums, which were a bit backwards at the time.

Fig. 19 - The new organization of the central gallery. (CB 1988)

Fig. 20 - The two "towers" at the end of the central gallery. (CB 1989)

The establishment of the collections

A detailed report is described in the prementioned volume; however, it seems appropriate to point out that the team of curators made numerous trips to Brussels, Vienna and London, also to purchase from the major centres of Art Nouveau, Jugendstil or Sezession elements that were not present in the national collections.[17]

It is recalled that Horta had been martyred by the changes with the destruction of the Maison du Peuple and the Hotel Aubecq.

In fact, it was possible to purchase a number of pieces of furniture and wood pendings (Boiseries) from this hotel.

Architectural problems

The competition was organized taking into account the constraints imposed by the existing structure. A program was created based on contrasts between one sequence and the next. The path should lead to abrupt changes from one room to the next.

Of the six projects presented, two received the highest consideration: that of Yves Boiret,[18] chief architect of the Monuments Historiques and that of the ACT group.

The first respected the volume of the interior spaces and moved the construction work towards Rue de Lille but did not offer sufficient space for the collections.

While the second composed of these architects, Renaud Bardon, Pierre Colboc and Jean Paul Philippon proposed creating a large central corridor in the nave with balconies and lateral rooms on two levels. The architectural effect was strong, but the collections had space.

These were the basis choices that led to the subsequent Gae Aulenti design, competition. Gae Aulenti following the architect's basic choice, designed a strong architecture, a little too monumental, but which, according to the Conservators, suited the sculptures presented.

Fig. 21 - The strong solution for presenting the sculptures in the central gallery. (CB 1989)

Fig. 22 - New insertions in the central gallery. (CB 1989)

It was immediately clear that many elements of the installations were unsuccessful, such as the artificial lighting in the painting rooms, and also the space for temporary exhibitions. For this reason, we wish to analyse some aspects in detail.

The main temporary exhibitions at the Musée d'Orsay are typically displayed on the ground floor, in the galleries leading up to the Courbet room, while smaller or thematic exhibitions are often shown upstairs. The museum has also recently renovated its restaurant space, complementing the well-known café behind the iconic clock.

Fig. 23 - The problem of lighting in painting rooms with the insertion of a "velario". To date, the seats in front of the Courbets have been removed and, in their place, the entrance to the temporary exhibition rooms. (CB 1989)

Fig. 24 - The problem of the natural lighting without solution and difficulty of seeing the masterpiece. (CB 1989)

Fig. 25 - Creation of partitours and anonymous presentation of paintings. (CB 1989)

Fig. 26 - The problem of technical installations, in "competition" with the paintings. (CB 1989)

Fig. 27 - New structures and installations recognizable dividing walls and partitions to filter the light. (CB 1989)

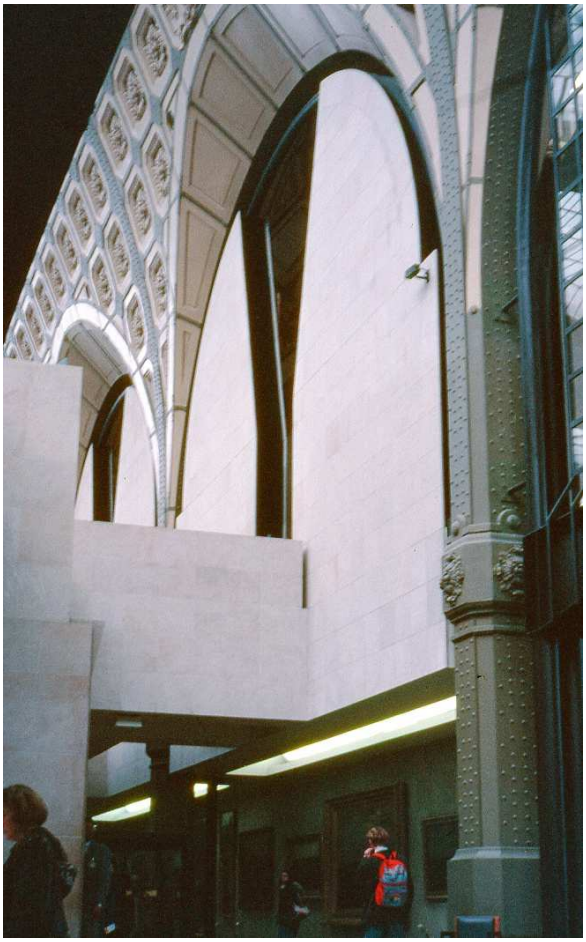

Fig. 28 - Creative probably has been excessive in the dialogue between old and new leading the decoration to the pristine state. (CB 1989)

The new dividing walls are recognizable, and the systems are concentrated in some vertical elements. The grey Jura stone is proposed as cladding the beginning of the central nave which is characterized by the iron walkway that constitutes the entrance level bridges connecting the descending pat. The impression one gets is that the insertion is challenging, the pre-existing structure has not been respected.

In the so called “central nave”, the various rooms are carved out of stepped sides, reflecting the influence of neoclassical and romanticism.

The so-called winter garden has disappeared, and at the end, the two towers perhaps excessive, were added.

The internal route is characterized by the size of these partitions, which were once considered “Theban gates”.[19]

Fig. 29 - The size of the new insertions, as the gates without thinking in the importance of the place. (CB 1989)

The heaviness of the installation is evident. In the galleries, despite the creation of partitions and an attempt to shield the light, the paintings are presented anonymously. A sad and anomalous sequence, despite of the sophisticated elaboration, consider the curtains inserted to allow the works to be viewed.
In the dialogue between old and new, the latter prevails the Methodology of many Masters of Italian museography is no longer visible.
Creativity has been excessive, devoid of any Historic-Critical spirit.
The interior design also highlights a chromatic restoration of the so called "original colours" of the stuccoes and decorations.

Consideration

In short, it seems that with the intervention at the Gare d'Orsay, as already written in 1989, for ICOMOS "today we are witnessing an intervention on pre-existing, "beautiful", "raffinati" and "colti", with an enrichment of the new, but not of restoration…

Monuments are the occasion for planning and therefore often for a misunderstood artistry, not aimed at their conservation and therefore reduced to the essential, but at their re-proposal which ends up humiliating them, due to their disproportion and why not, due to the violence exerted upon them. Therefore, reiterate that there can be no architecture, and therefore architectural restoration, without achieving compatible functionality.[20]

In recent years public opinion and many specialists have highlighted many problems and in fact different interventions are planned.

Between 2025 and 2027 the Musée d'Orsay will undergo a different new solution, intended to "redefine" the use of architectural spaces and the museum experience.

From a functional point of view, the projects to enhance reception capacity. Added to this is the creation of a new exit on the Seine side.

On the exhibition level, particular attention we hope will dedicated to temporary exhibition.

At the same time the "permanent path" will be the subject of a necessary "re-arrangement" for reinterpret the collections with historical clarity.

5.4 Grand Louvre

The new cultural policy in France that began in 1981 corresponds to the so-called golden age of museums.
On the international level, these so-called museums boom has been equally striking in Germany, with new museums being built in Cologne, Stuttgart and Frankfurt. In Great Britain, new ones are also being built in Glasgow, while Spain has been "building" museums since the 1980s.

Fig. 30 - Cour Napoleon. The garden in front of the facade before excavations began. (CB 1978)

One of the motivations for the Louvre project stemmed from the need to manage the strong tourist demand. Thus, in September 1981, the President of the Republic assigned the spaces previously occupied by the Ministry of Finance, the Richelieu Wing.

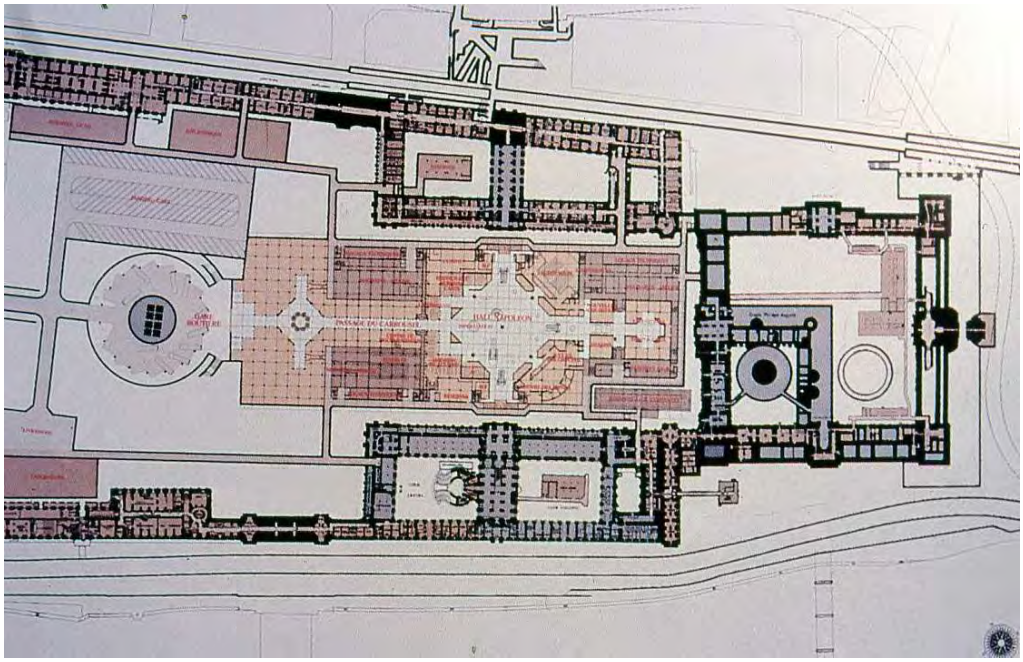

Fig. 31 - Plan of Grand Louvre (Private collection CB)

I still remember the words of André Chastel later published on several occasions, when he wrote about the "humiliating disorder" of the worst-kept museum, among all the great museums.

Fig. 32 - Excavations for the "Grand Louvre". (CB 1984)

Francois Mitterand adopted and made the project his own, following all the phases and works. At the end of his mandate, he did not hide the fact that the Louvre had already given greater satisfaction.
Here it is not possible to trace the long process for the choice of the project, however it its worth remembering that a small circle of names was reached: Norman Forster, Pedro Ramirez Vasquez, James Stirling, Richard Meier and Ieoh Ming Pei.

Fig. 33 - The Pyramid in the Cour Carreé. (CB 1989)

Fig. 34 - The Pyramid in the Cour Carreé. (CB 1989)

His project was inspired by Parisian urban planning and the general prospective towards La Défense. But he knew well that the two hundredth anniversary of the French Revolution had to be deviated with a clear symbol.[21]

In symbiosis with the conservators, some compromises were decided: the sculptures due to their weight, had to be displayed on the ground floor, the art objects on the first floor and the paintings on the last floor to also take advantage of the zenithal lighting.

The museographic needs dictated certain chosen, even if some variations were made during the implementation phase.

Most people approved the Pyramid as the new entrance. Although some, including myself, tried to point out speaking to Professor André Chastel, that the historic garden, which has been established for some time, would be erased. This was without considering how the relationship with the existing historic architecture would change.

One of the project's strong points was to open the museum to the city. Instead of crashing into the great wall of the Ministry of Finance, it would be possible to enter the Cour Napoleon through the museum thanks to the Passage Richelieu, freed from its gates.

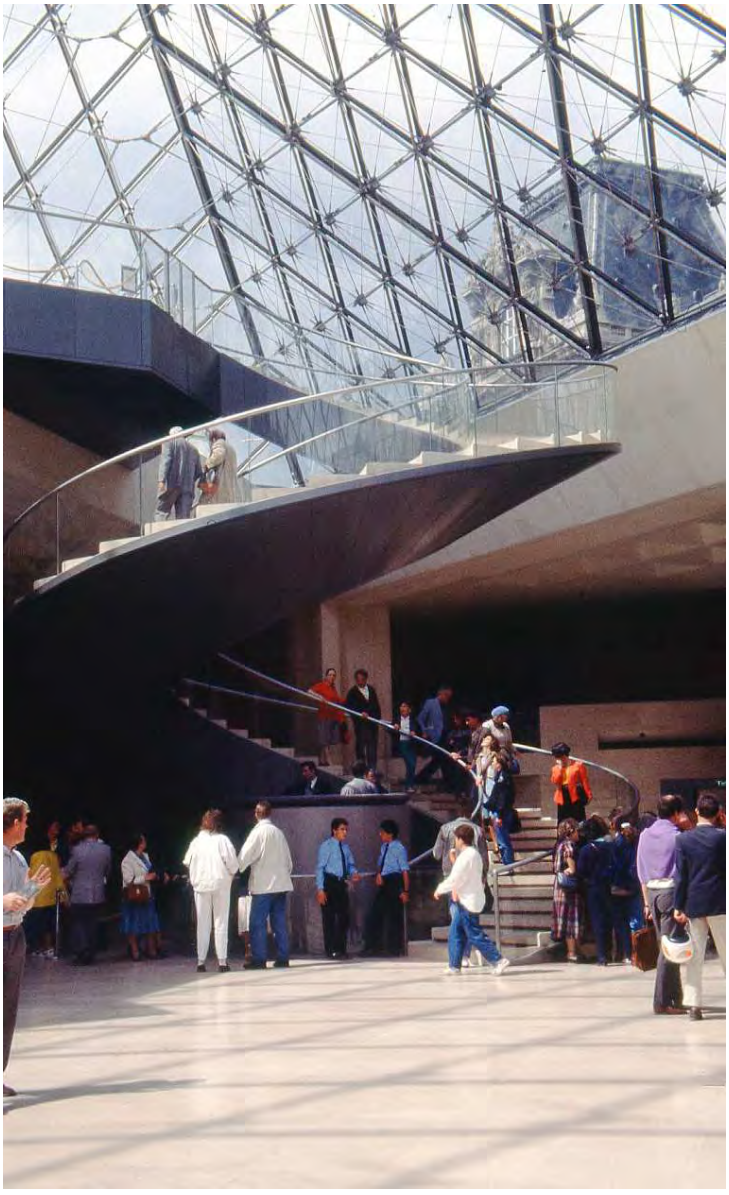

Fig. 35 -The important new helicoidal stairs, the elevator for people with mobility difficulties and the transparent ceiling that allows to see the façade. (CB 1989)

However, the entrance cut the ground floor in two parts and at that point it was decided to connect the two courtyards through the underground passage.
The Louvre had to acquire its identity, therefore recover the entire palace.
But before the final opening we must also remember the intervention of the mayor at the time, Jacques Chirac, who defended the Pyramid and approved it.

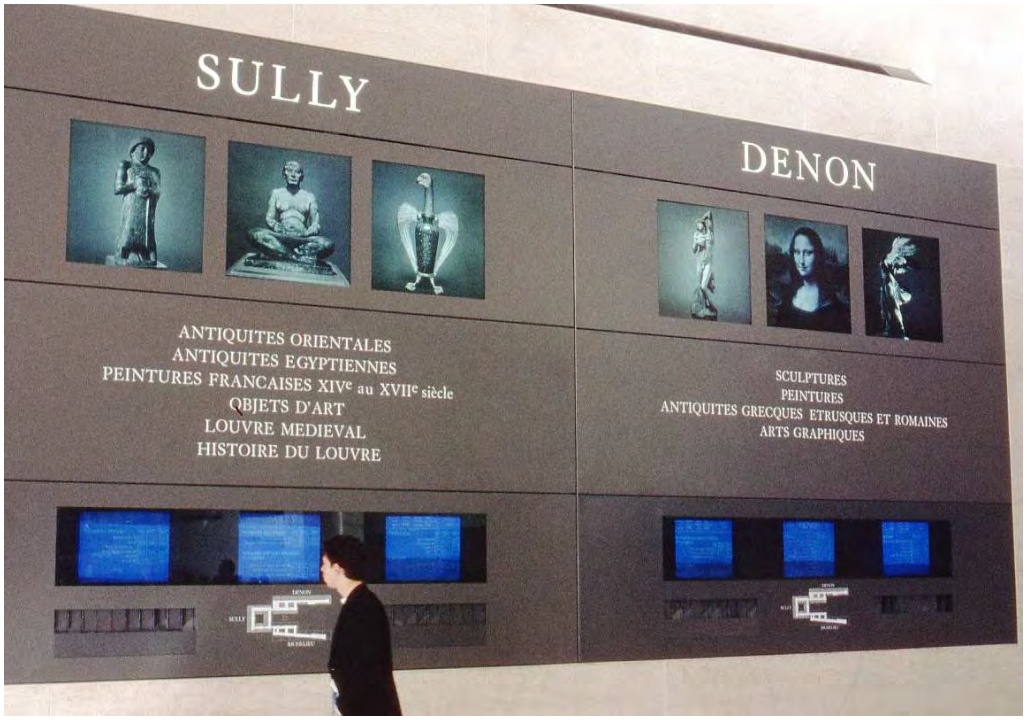

Fig. 36 - New information panels, at the entrance, under the Pyramid. (CB 1989)

Fig. 37 - Commercial space underground. (CB 1989)

In 1987 preparations for the inauguration of the Pyramid were made, it would serve as a new entrance and the new spaces below. It must be said that the first complains were about the maintenance of the glass surfaces.
In fact, we remember the groups of mountaineers responsible for cleaning them. Once past the entrance, via the wide staircase, the spacious new foyer is discovered. And again, the unexpected discovery of Le Vau's wall, the auditorium spaces, the service galleries, the storage rooms.
In this first inauguration (4 March 1988) Mitterrand, inaugurates the Pyramid, but the commercial spaces and the entire museum information system took on great prominence.
It was worth remembering that Pei had initially thought of placing the *Nike of Samotracia* above a central pillar in the centre of Pyramid, but the project was abandoned because it was and is a symbol at the top of the Daru stairs.

Fig. 38 - The "Nike of Samotracia" at the top of the stairs. (CB 1995)

Fig. 39 - The "Venus of Milo". (CB 1995)

Fig. 40 - Exhibition rooms with paintings full of people, expecially in front of “Monnalisa”. (CB 1995)

During the first years, the bookshop, boutique, cafes, and various reception services were finally opened. With all these initiatives, the Louvre became a leader in services and accessibility.

However, further openings would have to wait several more years, with the construction work of 1992-’93.

It is still worth remembering in the Louvre’s proceedings that in the early 90s the excavations directed by Gael de Guichen continued with discoveries on the ancient defences of the city and on the foundations of the Tuileries of the various archaeological sites but in the end, it was not possible to organize a historical exhibition. On the pre-existing structures of the Cour Carrèe the Cour Napoleon and the Carrousel.

Fig. 41 - Imperial apartments, rooms completely furnished and important lamps. (CB 1995)

Fig. 42 - Showcases in an improper place, between the columns. (CB 2008)

Fig. 43 - Not well-designed showcases. (CB 2008)

The Grand Louvre operation concluded in 1994 with the reorganization of the collections.
A brick and stone wall structure from the Napoleon III period was brought to light.
In the early 1990s, the Grand Louvre in addition to representing a cultural image opened up to luxury or rather also became a commercial showcase. A "external service for the State"[22] while issues relating to museography seemed to take a back seat.

Fig. 44 - The Grand Louvre, Cour Marly with the new glass coverage and new museum exhibition. (CB 1996)

Fig. 45 - Cour Marly. The ancient brick and stone wall was brought to light. (CB 1996)

Fig. 46 - New constructions joining the old ones. (CB 1996)

In many sections and, in particular, in front of absolute masterpieces, in the nineties, there remained an excess of visitors with the traditional security problems, while for the exhibitions some problems were identified. More specifically, in the Richelieu wing it is interesting to note the new glass covering. This solution allows for more space for exhibition, but it changes the concept of the courtyards.

This will be a recurring theme in many museums in Europe and around the world.

Fig. 47 - New location for "Persian" warriors and friezes. (CB 1996)

Fig. 48 - Showcases with sculptures of different materials and proportions. The display system is too big and the light has reflection problems. (CB 1995)

Fig. 49 - Cour Napoleon. A view of the pyramids and fountains in the courtyard from the inside. (CB 1994)

Consideration

The Musée du Louvre in Paris, with an annual average of over 8 million visitors, is one of the most visited museums in the world.

In 2025 the program called Nouvelle Renaissance was launched which is configured as a strategic plan for "renewal" and expansion.

New entrances, an access will be "built" through the eastern façade of the Louvre, the so-called *Colonnade Perrault* with the aim of decongesting the current entrance under the Pyramid; and also, a new Gallery dedicated to the Gioconda for the exclusive exhibition.

In addition to the interior works, the program includes a reconfiguration of the museum's outdoor spaces (Jardin de Carrousel, connection with the Tuileries and Seine).

Notes

1. N. SILVER, *The making of Beaubourg,* the Mit Press, Cambridge Mass London, 1994. And V. NEWHOUSE, *Towards a new museum*, New York 1998.

2. C. BELLANCA, *Riflessioni su alcuni aspetti attuali nel Restauro*, in ICOMOS, Comitato Italiano, Monumenti una risorsa per il future, Roma, 24-25 maggio 1989, pp. 5-21.

3. A. DU SOMMERARD, *Les Artes au Moyen Age*, Paris 1838, 1846.

4. *Notice sur l'Hotel de Cluny et sur le Palais des Thermes avec des notes sur la culture des Arts*, Paris, 1834.

5. From Diary Lord John Campbell, in Archive Chateau Inveraray.

6. See *Nouvelles Archives de l'Art francaise,* Deuxxiene serie, vol. II, Paris 1880-81, p. 378.

7. P. LÉON, *La vie des monuments Francais, Destruction-Restauration*, Paris 1951, pp. 69-70

8. It is no coincidence that in 1965, when the first headquarters of ICOMOS International was chosen in Paris, the headquarters was located at the Marais in Rue du Temple Hotel St.Aignan. About Le Corbusier's theories see: LE CORBUSIER, *Vers une Architecture,* Paris 1958; LE CORBUSIER, P. JEANNERET, *Oeuvre complète, 1910-1929,* Zurich 1948; LE CORBUSIER*, La Carta di Atena. L'urbanistica dei tre insediamenti umani,* Milano 1967; R. DE FUSCO, *Storia dell'Architettura Contemporanea,* Roma-Bari 1974.
See also: J.L. COHEN, *Le Corbusier: An Atlas of Modernism*, New York 2007. N. BERG, *The Urban Nightmare Of Le Corbusier*, *Planetizen News*, 2008.

9. Jean Boullier di Bourges, known also as Boullier de Bourges, was a French architect active in Paris in the second half of the 17th century, recognized as architecte juré and expert du Roi. His main work is the Hôtel Salé (1656-1659), now home to the Musée Picasso. His work is part of the French classical tradition, with clear influences from François Mansart and Louis Le Vau, showing a tendency to reinterpret established models rather than radically innovate.

10. Roland Simounet (1927-1996) was a French architect. Trained in the post-war years, his architecture always prioritised the relationship with the urban and social context, maintaining a strong link with modernism while introducing a personal attention to materials and light. Among his most significant works are the Picasso Museum in Paris (1985), housed in the former Hôtel Salé, where he orchestrated a refined dialogue between historical architecture and contemporary museum spaces, and the Museum of Villeneuve-d'Ascq (1983), characterised by simple volumes, fluid spaces and a balance between interior and exterior. Simounet was also involved in social housing projects, where his research aimed to create dignified and harmonious living environments. His work, often discreet but rigorous, reflects a humanistic vision of architecture, in which constructive clarity and attention to everyday life become tools for improving the quality of the living space. R. SIMOUNET, *Roland Simounet: D'une Architecture Juste*, Le Moniteur, 1997; R. KLEIN*, Roland Simounet à l'oeuvre: architecture 1951-1996*, Lille 2000.

11. Theo van Doesburg (1883-1931). Van Doesburg proposed an expansion of Neoplastic principles through Elementarism: the introduction of the diagonal as a dynamic and destabilizing factor within the composition. This choice marked a rupture with Mondrian, but at the same time opened new possibilities for the application of Neoplasticism in architecture, design, and the applied arts. Van Doesburg's work was not limited to artistic production but also had a strong theoretical and project-oriented character. He sought to transfer the abstract principles of Neoplastic art into every sphere of daily life, there by contributing to the formation of a modern aesthetic that profoundly influenced the Bauhaus, architectural Rationalism, and twentieth-century design. See also for architecture character, the case-studio in Meudon Val Fleury and adaptation Aubette in Strasbourg. B. ZEVI, *Poetica dell'Architettura neoplastica,* Torino 1974.

See also: A. DOIG, *Theo van Doesburg: Painting Into Architecture, Theory Into Practice*, Cambridge 1986. E. VAN STRAATEN, *Theo van Doesburg. L'opera architettonica*, Milano 1997. M. BLOKHUIS (edited by), *Theo van Doesburg: Painter, Poet, Architect*, Utrecht 2000.

12. J. SENGER, *De la gare au Musée*, Milano-Paris 1986.

13. Pierre Nora (1931-2025). He was a French historian and member of the Académie française. Elected to the Académie française on 7 June 2001, he became known for his work on French identity and historical memory. His name has been associated with the Nouvelle histoire.

14. Le Debat, n. 44, mar-mag. 1987.

15. M. ROGER FRANCHET, *Rapport sur le Halles centrales de Paris*, Paris 1948. J. P. BABELON, M. FLEURY, J. DE SACY, *Richesses d'art du quartier des Halles, maison par maison,* Paris 1967. A. CHASTEL*, La fin des Halles ou le miracle inutile*, in "Le Monde", 11, dic. 1970. J. HERBERT, *Sauver les Halles, Coeur de Paris. Un dossier d'urbanisme contemporain,* Paris 1971. M. PELLERIN, A. LAUDE, *L'assassinat de Baltard,* photos by J.C. Gautrand, Formule 13, Paris 1972. B. LEMOINE, *Les Halles de Paris,* Paris 1980*. Ed. It. Le Halles di Paris. La storia di un luogo, le peripezie della ricostruzione, la successione dei progetti, l'architettura del monumento,* Milano 1984.

16. A. CHASTEL, *Architecture et Patrimoine, choix de chroniques du journal "Le Monde",* Paris 1994.

17. Cfr. M. LACLOTTE, *Historie de Musée, Souvenirs d'un conservateur*, Paris 2003, pp. 219-220.

18. Yves Boiret trained at the École Nationale Supérieure des Beaux-Arts, in the Pontremoli-Leconte studio. After graduating in 1955, he worked in partnership with his father and colleague Georges Boiret. In 1963, he passed the competitive examination to become Chief Architect of Historic Monuments, working successively in eleven French departments and serving as Inspector General in Paris and the Ile-de-France region until 1992. A member of the Higher Commission for Historic Monuments and the Commission for Sites and Surroundings, he was also an expert architect at the Paris Court of Appeal and taught architecture and urban planning at the École Nationale Supérieure des Beaux-Arts in Paris and the Centre d'Études Supérieures d'Histoire et de Conservation des Monuments Anciens at the Palais de Chaillot. He is a lecturer at the Catholic University of Louvain, at the 'Restauro' in Roma and at the Ecole Nationale du Patrimoine. He has been entrusted with missions by UNESCO and the Council of Europe.
Since 1974, he has been a member of the Académie d'Architecture. In 1991, he received the Grand Prix National du Patrimoine.

19. C. BELLANCA, *Riflessioni su alcuni aspetti attuali del restauro,* in *Monumenti una risorsa per il futuro,* edited by Rosa Anna Genovese, atti del Convegno Nazionale ICOMOS tenutosi a Roma nel 24-25 maggio 1989, Roma, 1989, pp. 5-21.

20. Ibidem, 1989

21. The symbol of the Pyramid is a constant idea in the celebrations of the anniversary of the French Revolution. Since the first centenary, it had been considered to include a majestic reference at the center of the Cour Napoléon. However, this was not achieved due to the political crisis of that time. For this purpose, there is a broad and detailed historical and iconographic reference.

22. M. LACLOTTE, *Histoire de Musées, Souvenir d'un conservateur,* Paris 2003. p. 272

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Chapter 6

Museums in Madrid

Susana Mora Alonso-Muñoyerro

For this contribution about Museums in Madrid, it seems interesting to insert some examples for intervention on preexistence and museographical adaptation: Museo del Prado, Reina Sofia, Thysen Bornemisza, and CaixaForum.
All these examples entered in the new cultural and political life of the last forty years.

6.1 Prado Museum

Historical Construction

With King Carlos III in Spain, grew the idea of creating an Academy of Sciences. On 1785, Carlos III decided that the projects for a Cabinet of Natural History and a Chemistry Laboratory must be done and built, with the ideas of Djose Monino y Redondo, Conde de Floridablanca and D. Jose Perez Caballero.
The money to build these buildings will arrive with the rents of the properties that Jesuits have in Spain and Indias (America). So the idea was thought by Conde de Floridablanca and Jose Perez Caballero. Began to grow with the architect Juan de Villanueva.[1]

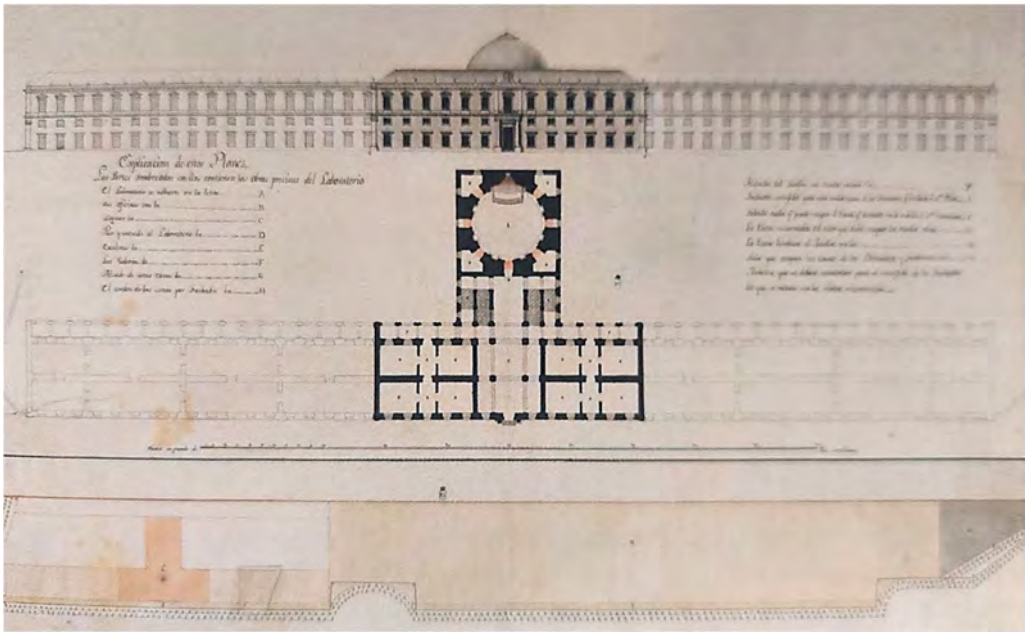


Fig. 1 - Antonio Bereta (1785), project "laboratorio Quimico", beside the Real Jardin Botanico in Madrid.

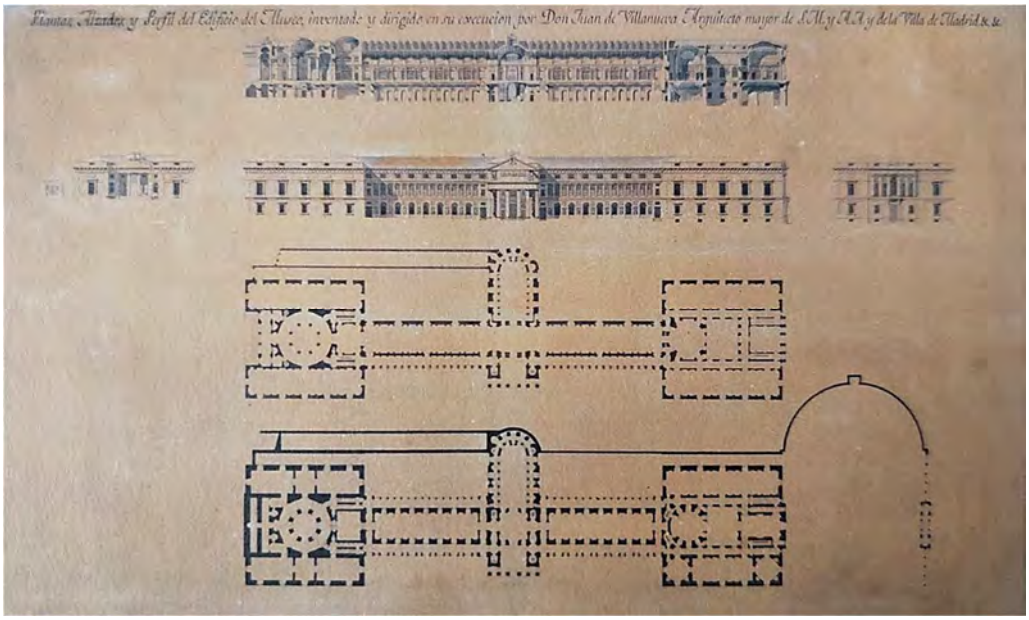


Fig. 2 - Juan de Villanueva. Plans, sections and façades of the Museum (1796).

In 30 may 1785, Villanueva signed the Project for "Gavinete o Galeria de Historia Natural, Academia de Ciencias y pórticos cubiertos para el paseo publico", which was designed by Isidro Gonzalez Velazquez.[2] The Project is clear in its architectural definition, about its uses, and orientation. In one of the versions of the map Plano Geometrico de Madrid 1785 of Tomas Lopez there is the plan of Prado and surroundings.[3]

After the project from1785 and the new one from1788 there is another one from 1796, eleven years after the beginning of the Works.

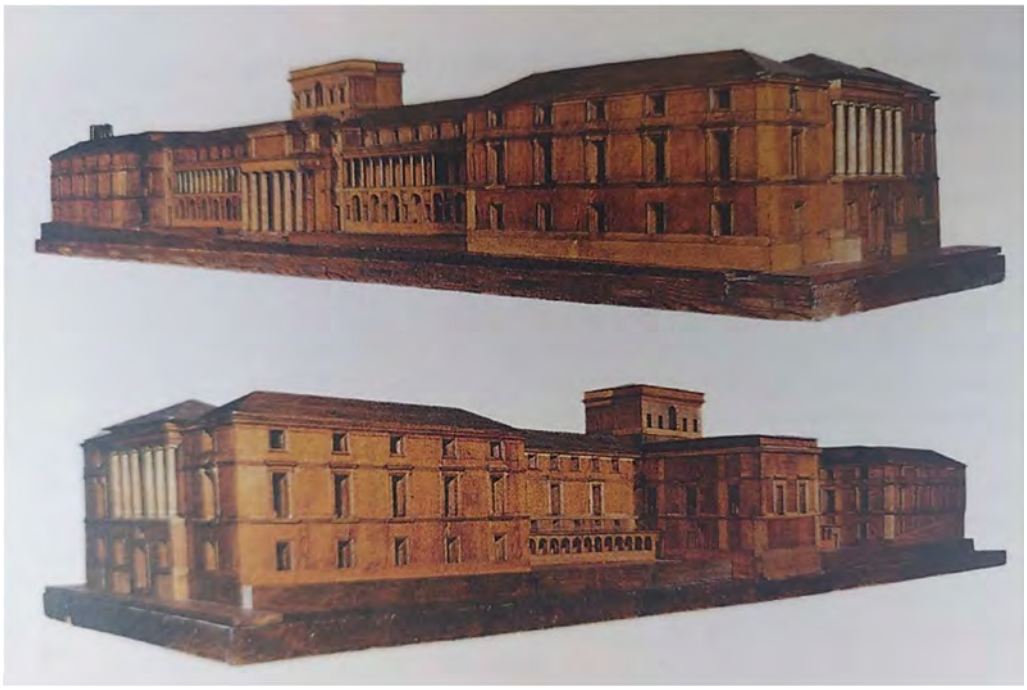


Fig. 3 - Model in wood of the third project of Villanueva (1787).

The topography of the place, has being an important condition for the decisions taken by Villanueva, when he decided to take advantage of the different heights of the ground. Villanueva excavated a horizontal plan, base of the building. In the Museum the best way to give solution to join the two levels of the ground was the curved ramp on the north facade. This is the solution to make the gallery of the museum as a walk along, parallel to the Paseo del Prado.

Figs. 4-5 - The curvet ramp on the north façade (1826).

After 23 years of construction, the museum was unfinished, and was occupied by the French troops. On 5 august 1813, the municipality was informed how the museum was, Antonio Lopez Aguado[4] began to consolidate the museum. And on 1° October 1815 it was created the Real Museo de Ciencias Naturales, and so the Real Consejo says to King Fernando VII that if he wants to create a museum of Paintings and Sculptures, it will be useful to use the building in the paseo del Prado. And then, probably was important the influence of Queen Isabel de Braganza, in the decision of taken there many pictures of the Royal Palaces. Was opened as museum on 19 November 1819, with 1531 pictures, and it was also necessary to have place for the sculptures, as two different levels with two different entrances. This solution is quite similar to the solution of the Altes Museum in Berlin designed by Karl Friedrich Schinkel.[5]

The big gallery and the "rotonda" have being finished in December 1826. Martin Lopez Aguado, son of Antonio, made some changes and designed a new gallery, modifying a beat the plans of Villanueva. Custodio Moreno make maintenance, but Narciso Pascual y Colomer[6] made another change. In 1847 was finished the apse and it was the permission to live isolated the museum.

And then, Anibal Alvarez Bouquel (1857-59), Jose Segundo de Lema (1859-1868) and Alejandro Sureda (1874-1884) worked there.

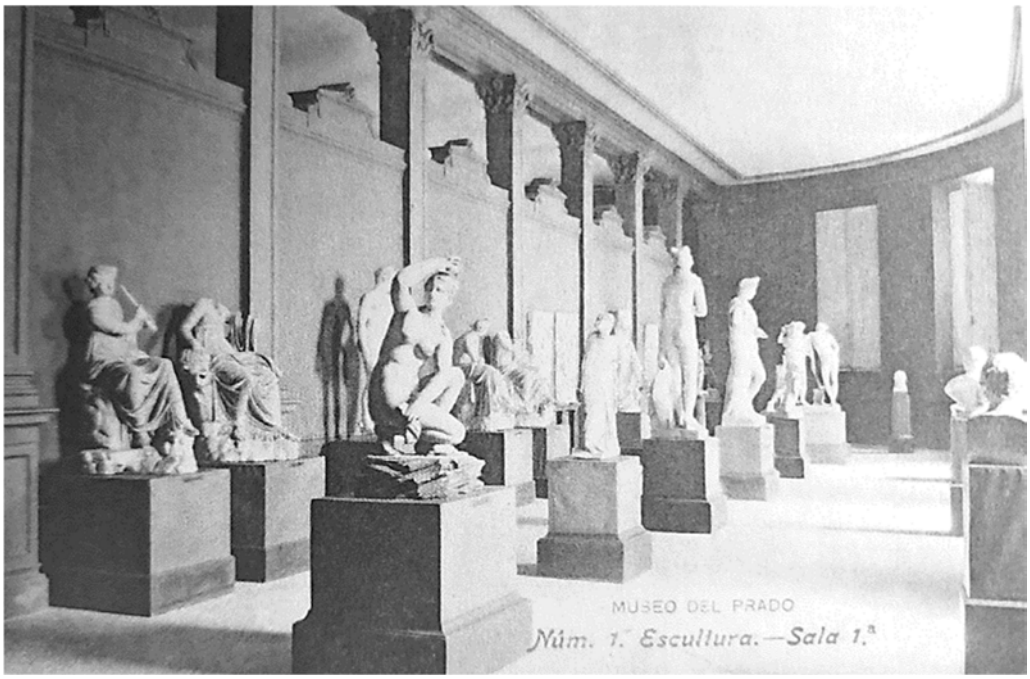


Fig. 6 - Sculpture exhibition area on the ground floor of the apse. Designed by F. Jareño.

Fig. 7 - Large gallery of Prado after changes doing bigger the skylights of the vault, done by Pasqual y Colomer.

In 1868 the director of Prado Federico de Madrazo proposed to the Municipality the suppression of the ground of the ramp of access to the Museo de Pintura. And then Francisco Jareño[7] worked as architect of the Ministerio de Fomento with the staircase project, done in October 1879 and two pavilions. The interventions of Jareño have disappeared.

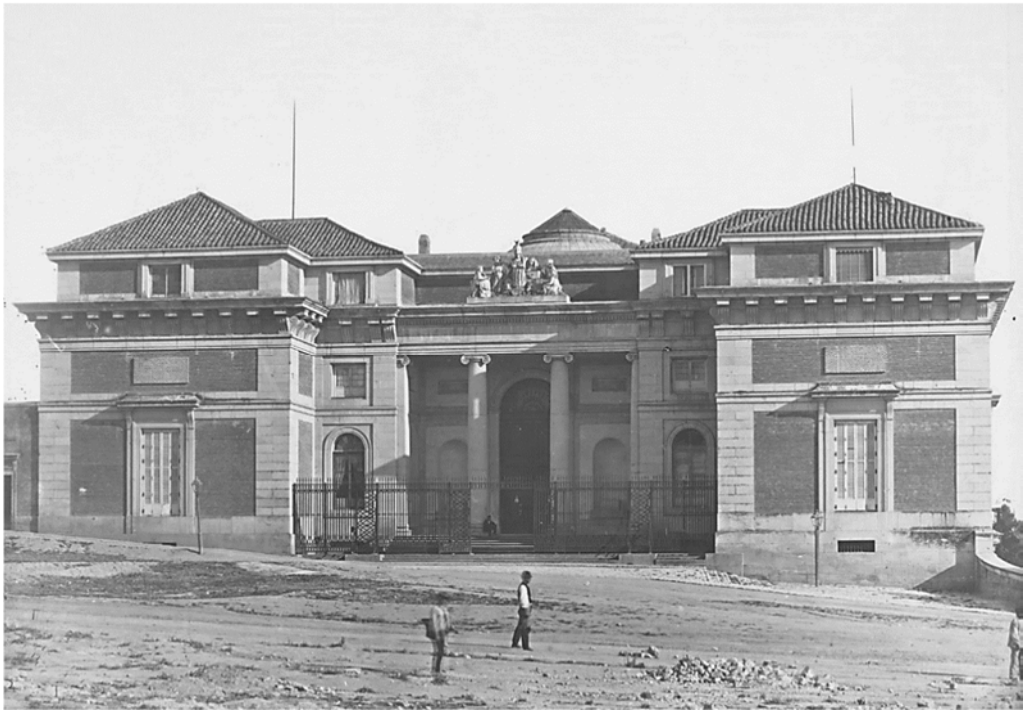


Fig. 8 - North façade before the suppression of the ramps.

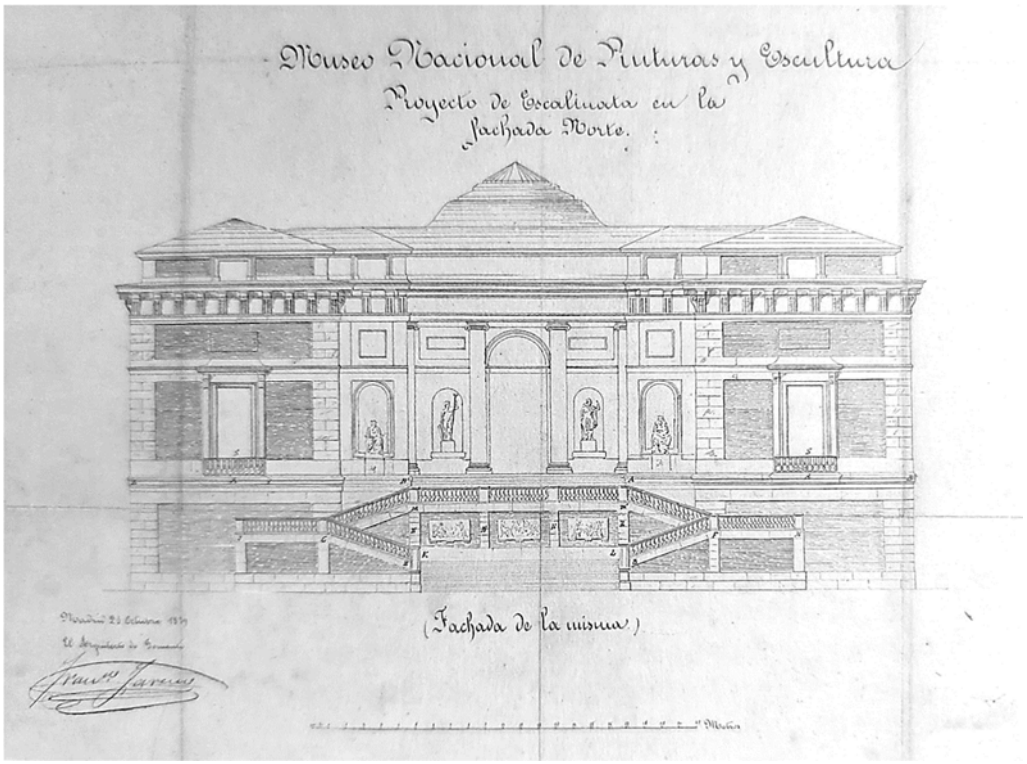


Fig. 9 - Project for the stairs of the North façade (1879, F. Jareño).

Fernando Arbós[8] will be the architect who increased the space of the museum, with new elements dedicated to expositions. He also makes another practical works and in 1895, he projects the extension of the two pavilions built by Jareño in 1891. In December 1896 he received the approval for the change of the wood structures of the roof, into iron.

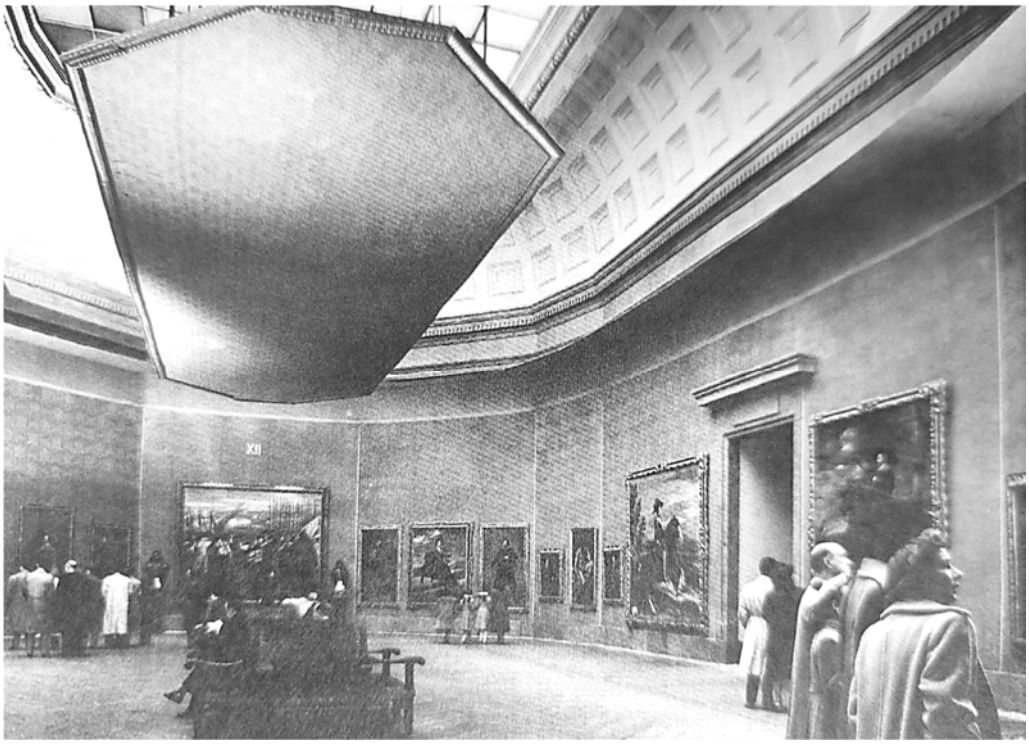


Fig. 10 - The solution of Fernando Arbos for the skylight in Velazquez room.

Fig. 11 - The entrance to the Velazquez room.

In 1913 Arbos explained the necessity of the extension of the museum, especially after the Trinidad National Museum was closed. Arbós changed solutions of Villanueva project, and opened the way to new changes.

Some years after, since 1923, Pedro Muguruza Otaño[9] is nominated conservator of the museum. Projected a new vault in reinforced concrete in the central gallery. The imagine is the same, but is completely rebuilt in 1925.

Figs. 12-13 - Two different views of the large Gallery of Prado after the intervention of Muguruza.

Fig. 14 - The north façade with the stairs of Muguruza.

And so many other projects as the external and internal stairs. He also projected and built an important stair inside the museum which gave facilities to the visitors.

During the fifties, the architects Chueca and Lorente[10] projected some different solutions for extensions. In 1981-84 designed a new Salon de Actos in the apse.

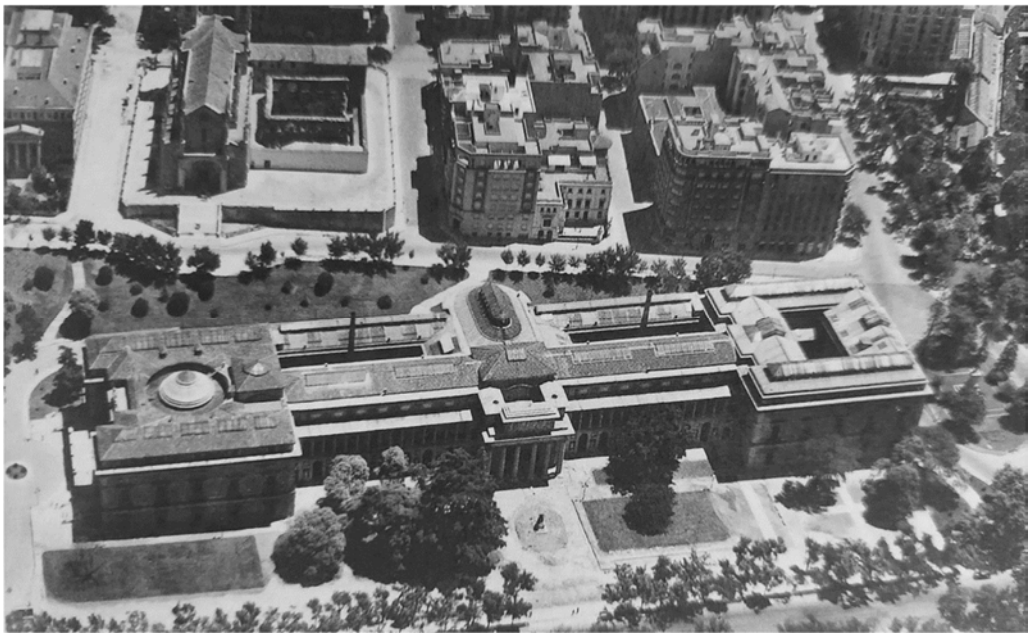


Fig. 15 - A sky view.

Fig. 16 - Prado Museum today. (CB 2024)

There are many different solutions. And in 1995 Dionisio Hernandez Gil and Rafael Olalquiaga[11] designed a general project for the roofs.
This was a practical work to give security to the inside of the museum, because the water enters. A quiet and good solution.

Figs. 17-18 - Solution for the roof, Hernandez Gil and Olalquiaga (1995).

Last interventions (1995-2007)

As we have seen the last interventions are one more in the long history of Prado Museum.

On April in 1997 the Patronato del Museo approves the Museographic Plan located in Villanueva building and Cason del Buen Retiro and then the cloister of Jeronimos monastery. The architect Rafael Moneo[12] after some competitions designed the proposal. The accidental topography around Prado Museum, and the condition of maintaining different the architectures, oblige to connect those two buildings, down the street Ruiz de Alarcon.

Fig. 19 - Connections between museum and Jeronimos Church. (CB 2024)

Fig. 20 - The new entrance to Prado museum. (CB 2024)

Moneo proposed a contemporary solution, and a basement as a “lonja” of the church to which is possible enter for a great stair from the Ruiz de Alarcon Street level, for the connection of the low plan of the museum and the basements of the architecture which contains the Jeronimos cloisters.

Fig. 21 - Exterior of the cloister. (CB 2024)

This new volume, with irregular plan may be a space for reception and equipment which covered the slopes and gardens between Prado level and Ruiz de Alarcon Street. May be the principal piece between the historic building of the museum and the cloister, gives a solution to the topography and remember the originary topography of Villanueva.
The principal idea was to separate the Museum from other uses and to give importance to the entrance. This was done after the demolition of the preexistent Salon de Actos (from Garcia de Paredes),[13] which occupied the principal “Salon de Actos”.

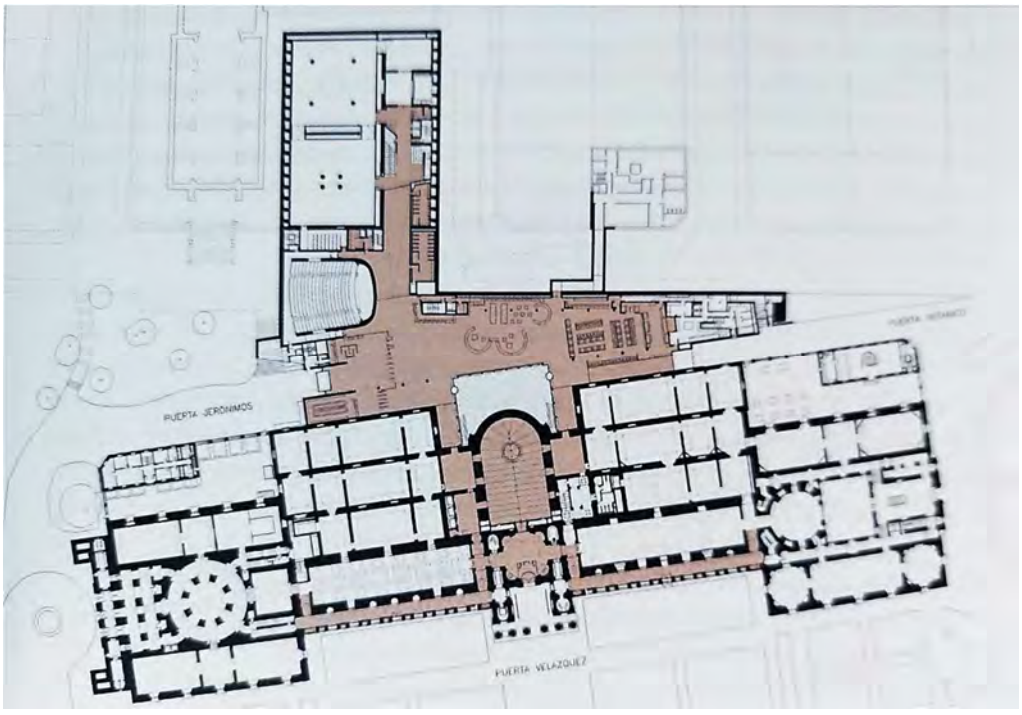


Fig. 22 - Plan of the ampliation of Prado with the new entrance.

On 20 July 2001 the project for the ampliation of Prado Museum was approved. For Moneo the most important decision was to unite the longitudinal structure of the Villanueva building with the transversal axe from Velazquez door to the cloister.

Fig. 23 - The north façade. (CB 2024)

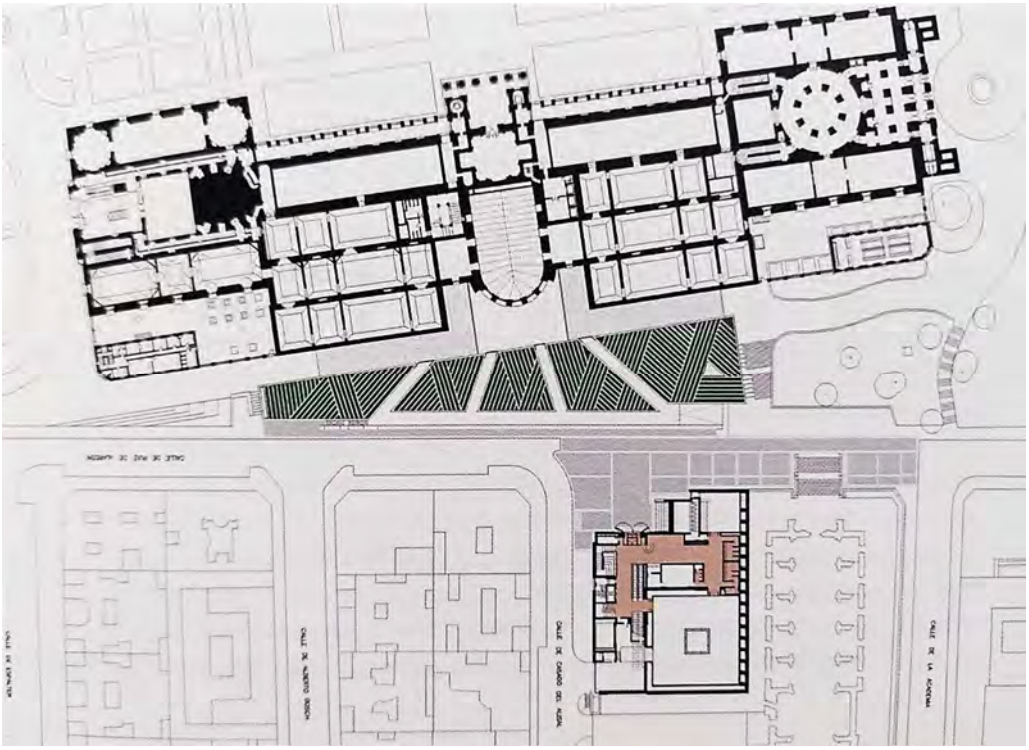


Fig. 24 - Plan to join of the building with the old monastery.

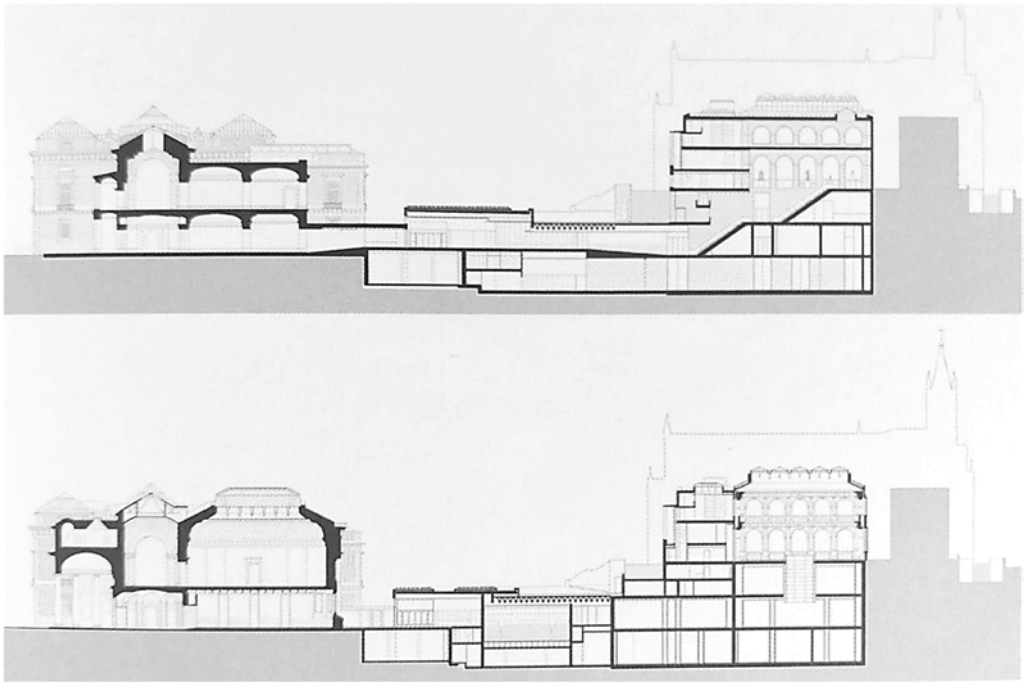


Fig. 25 - Cross section by R. Moneo.

Mechanic stairs communicate immediately museum and cloister.

Figs. 26-27 - Stairs which join museum and cloister. (CB 2024)

Cloister that was dismantled and reestablished after its restoration.
Because it has being treated as an "sculpture", brought to a laboratory and the returning to its place, close to the Jeronimos church. The first impression of it is very "scenographic", and when you observe it, you find that the columns doesn't arrive to the ground, there is a line of shadow below them. On the centre you can see the hole which gives light to the new space created for new exhibitions.

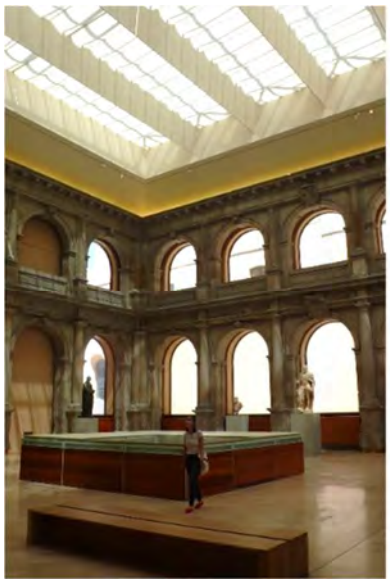


Fig. 28 - In the centre, the window of the new exhibition room. (CB 2024)

Fig. 29 - The cloister. (CB 2024)

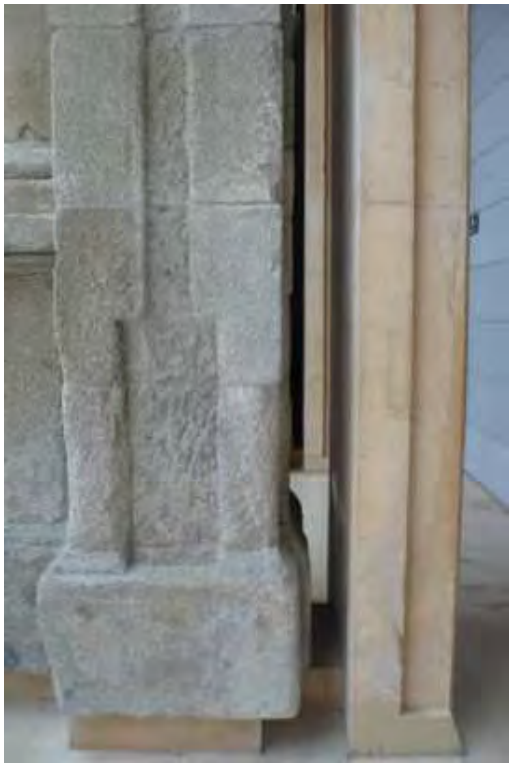


Fig. 30 - Detail of the cloister. (CB 2024)

Fig. 31 - Exhibition room done the cloister. (https://divisare.com/projects/147549-rafael-moneo-thomas-mayer-the-prado-extension)

The new entrance to the museum is a huge space which leads you to the different parts, or levels with different stairs, and also to common or necessary rooms, as bookshop, dinner shop, or auditorium.

Fig. 32 - The entrance. (CB 2024)

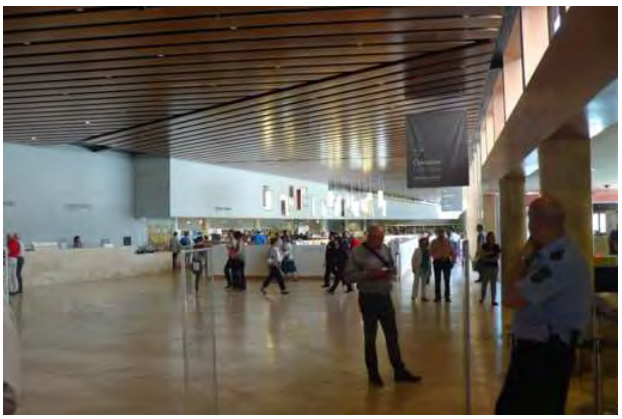


Fig. 33 - Ticket office. (CB 2024)

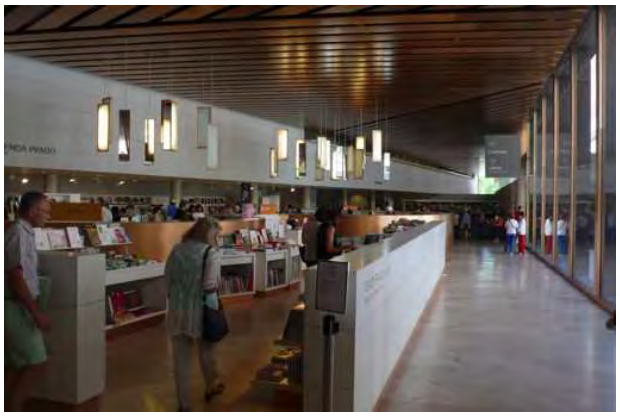


Fig. 34 - Bookshop. (CB 2024)

Fig. 35 - Coffee bar. (CB 2024)

Outside is a platform terrace treated as a garden.

Fig. 36 - Interior of the apse. (CB 2024)

Fig. 37 - Exterior of the apse. (CB 2024)

Fig. 38 - Exterior of the new construction (CB 2024)

6.2 Thyssen-Bornemisza Museum

Fig. 39 - Jan Van Kessel (attribute) 1680. View of Carrera de S. Jeronimo, Paso del Prado, Coleccion Carmen Thyssen.

The town of Madrid grew a lot during the Felipe II Kingdom, towards Alcalà de Henares. There was a San Jeronimo monastery which have changed place to Prado, where a small room for the King was built, and the houses of Duque de Lerma gave an idea of the importance that this part of the city have acquired (plano de Mancelli 1618).[14]

Some years after the Prado was made wider with three lines of trees and fountains taken from the Duke gardens, as Consejo de Castilla wanted. And the room of King, has being transformed in an important palace. In this part of the city had begun to live many Italians with origin in Genova.

The houses belonging to the Frigiliana family,[15] with facade to the Carrera de San Jeronimo and to Prado, were sold to Atri duchess in 1742 returning from Napoli.[16] And wanted to transform the old house into an Italian luxury palace with the help of the architect Virgilio Ravaglio (Planos del Palacio de Atri. Bellinzona, Suiza. Archivio di Stato del Cantone Tizino. Fondo Ravaglio). In the corner of Carrera de San Jeronimo with Sordo street was the Italian hospital of San Pedro.

On 18 October 1771, Alessandro Pico Duke of Mirandola, husband of Teresa Spinola, sold the palace in Carrera de San Jeronimo to Juan Pablo de Aragon Azlor, Duque de Villahermosa. (Then, the Royal family live in the new Palace, built after the fire that destroyed the old Alcazar).

Carlos III organized the Salon del Prado with Jose de Hermosilla and Ventura Rodriguez and the Neptuno and Cibeles fountains.

Probably in some of these plants is possible to recognize some reminds of Palacio de Atri.

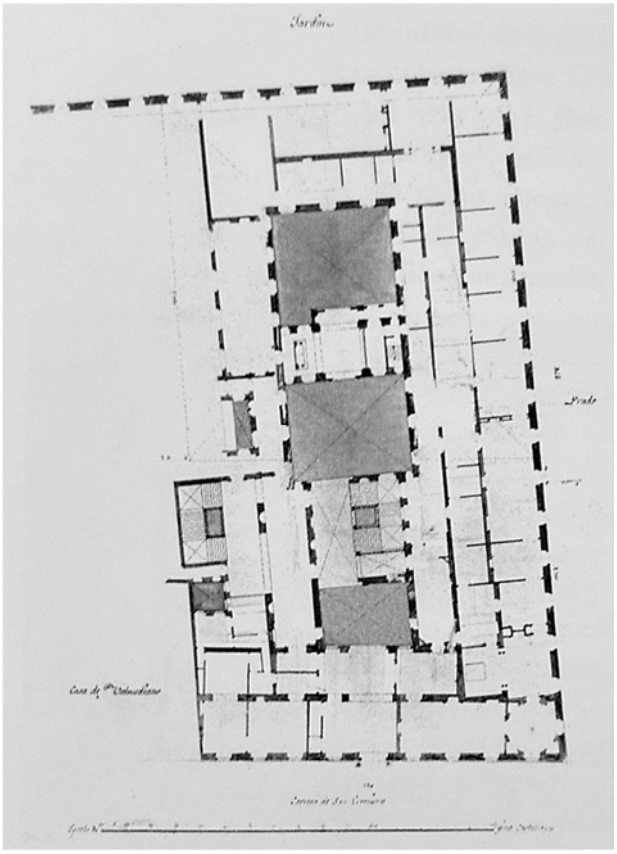


Fig. 40 - Silvestre Perez, 1800. Ground floor Palacio de Villahermosa.

Fig. 41 - Antonio Lopez Aguado. Ground floor and principal floor of Palacio de Villahermosa, 1805.

After family events, birth and deaths, the family Villahermosa[17] lived in the old palace which Antonio Lopez Aguado transformed. And so the principal floor is the first floor, instead of the ground floor as it was in the Atri palace. After 1796, a second floor was created, not always in correspondence with the internal organization.

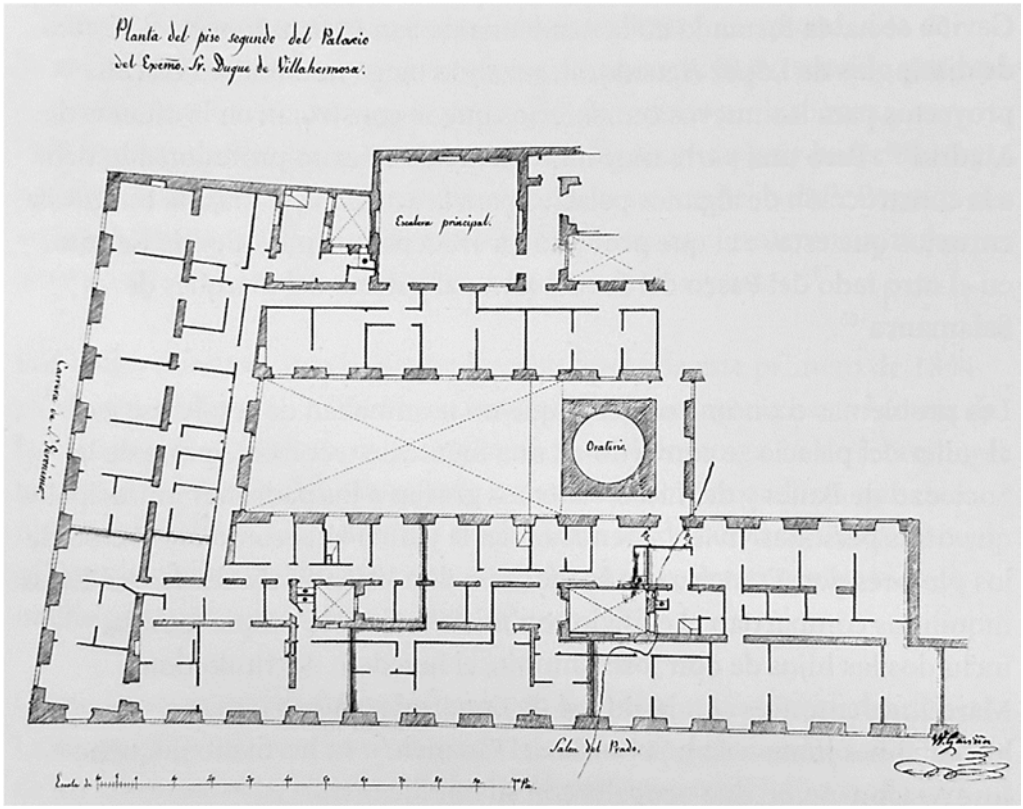


Fig. 42 - Wenceslao Gavina, second floor of Palacio Villahermosa.

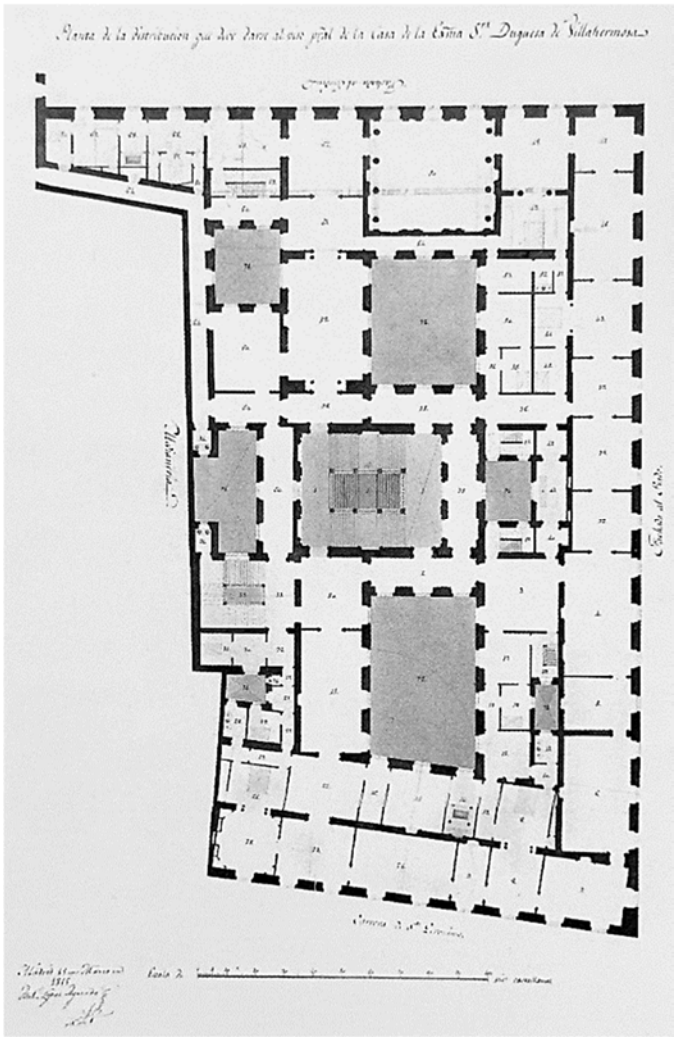


Fig. 43 - Antonio Lopez Aguado, principal floor of Palacio Villahermosa, 15 March 1805.

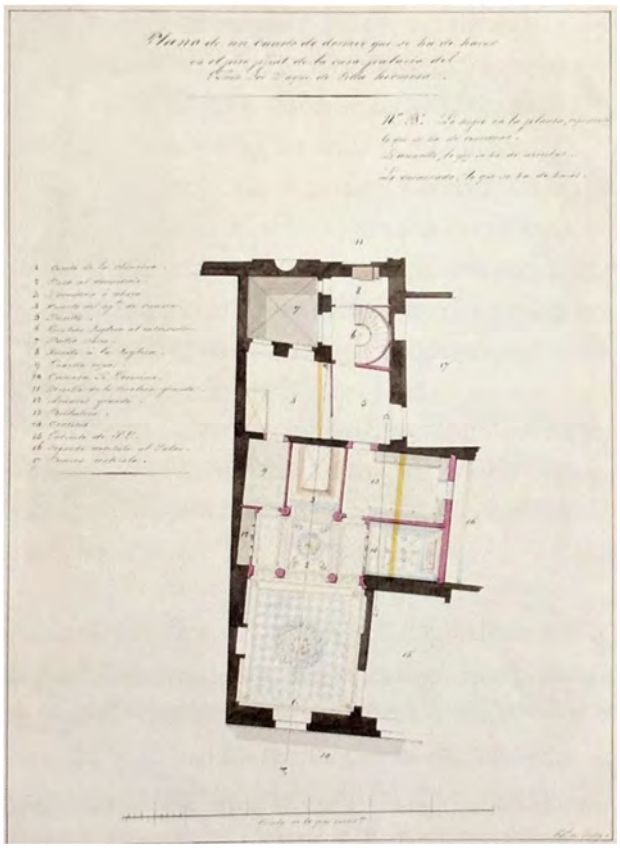


Fig. 44 - “Cuarto de dormir” in principal floor. Anonimous.Particular collection.

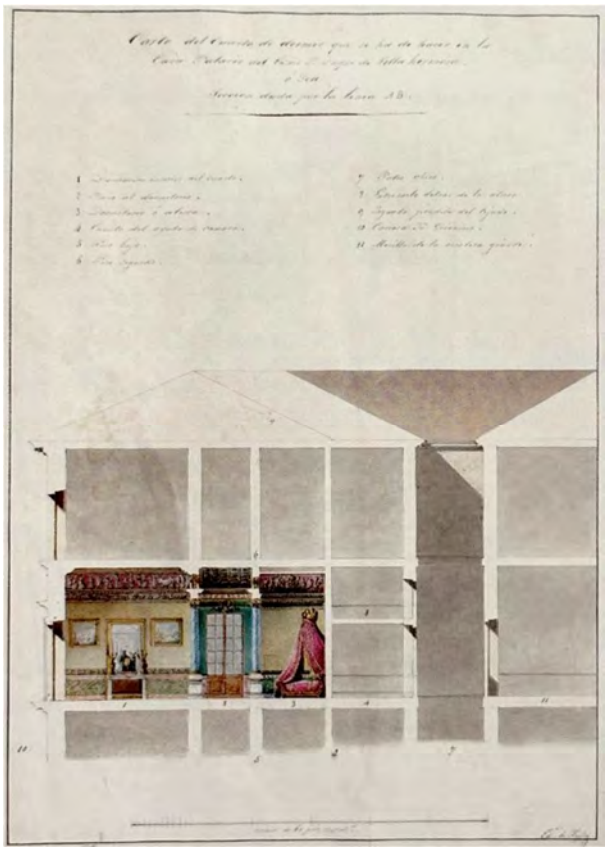


Fig. 45 - Façade to the garden, Antonio Lopez Aguado

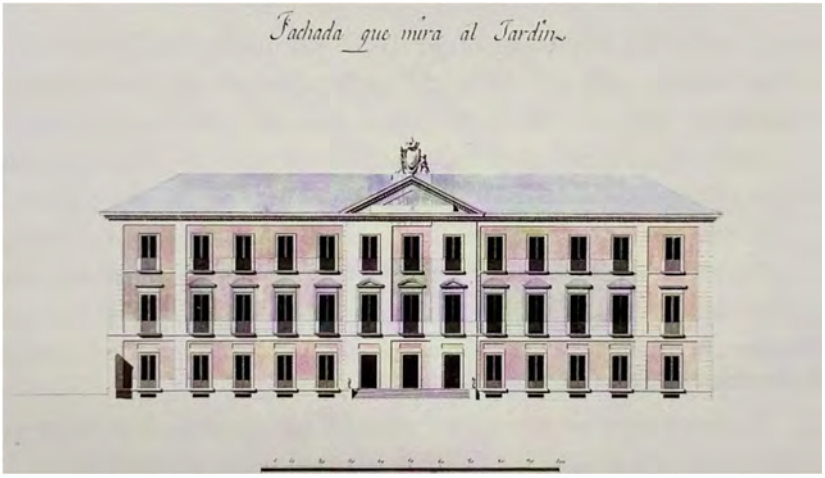


Fig. 46 - Façade o the Prado, Antonio Lopez Aguado.

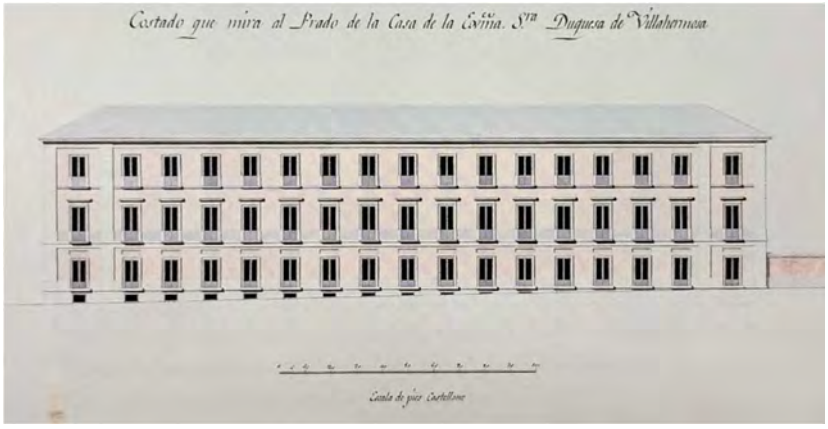
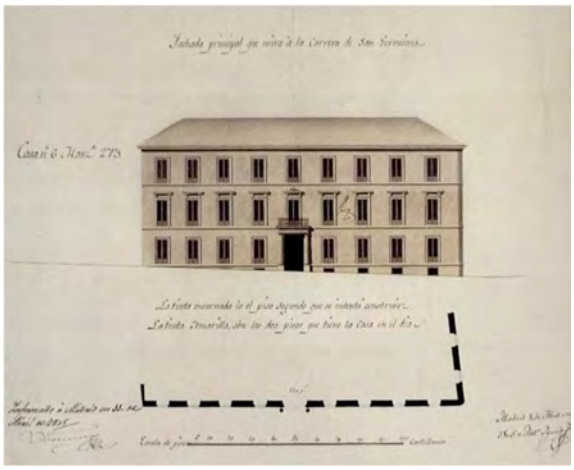


Fig. 47 - Two different projects. Façade to the Carrera de San Jeronimo. Antonio Lopezo Aguado.



Figs. 48-49 - Two different projects. Façade to the Carrera de San Jeronimo. Antonio Lopez Aguado.

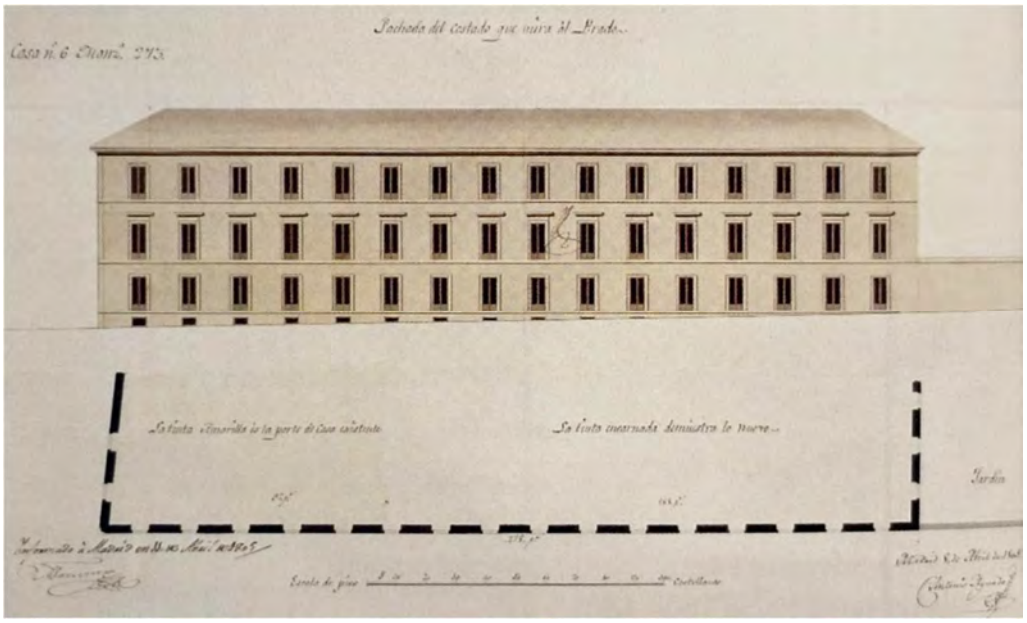


Fig. 50 - Façade to the Prado, Antonio Lopez Aguado, 1805.

Fig. 51 - C. Clifford 1853, a view of Carrera de San Jeronimos, Biblioteca National Madrid.

In March 1808 took place “el motin de Aranjuez”, the French troops have done damages in the palace, where the duchess returned in 1810. It was a very important place for the society. This part of the city changed a lot, with so many new constructions as Hotel Ritz and Hotel Palace, and the owners of the palace changed.[18]

In 1920 Jose Ramon Melida[19] guided a visit to the palace, given a very short description. But this was done and published in BLANCO y NEGRO 1966 (8 January pp. 97-105). An important part of the palace was used as office of Banco Comercial Trasatlantico, with Project of Luis Garcia Palencia, done in 1956.

Fig. 52 - Entrance to the Palace Villahermosa. (From “Blanco y Negro”, 8 January 1966)

Figs. 53-54 - Lounge. (From “Blanco y Negro”, 8 January 1966)

The Villahermosa palace was sold and bought by Banca Lopez Quesada,[20] and uncharged to the architect Fernando Moreno Barberá[21] the project for the central office, conserving the facades to Carrera de San Jeronimo, Paseo del Prado and garden. On 28 June 1973, it was presented in the Colegio Oficial de Arquitectos de Madrid the Project for the demolition of the old palace of Vistahermosa, projected by the architect Fernando Moreno Barberá.

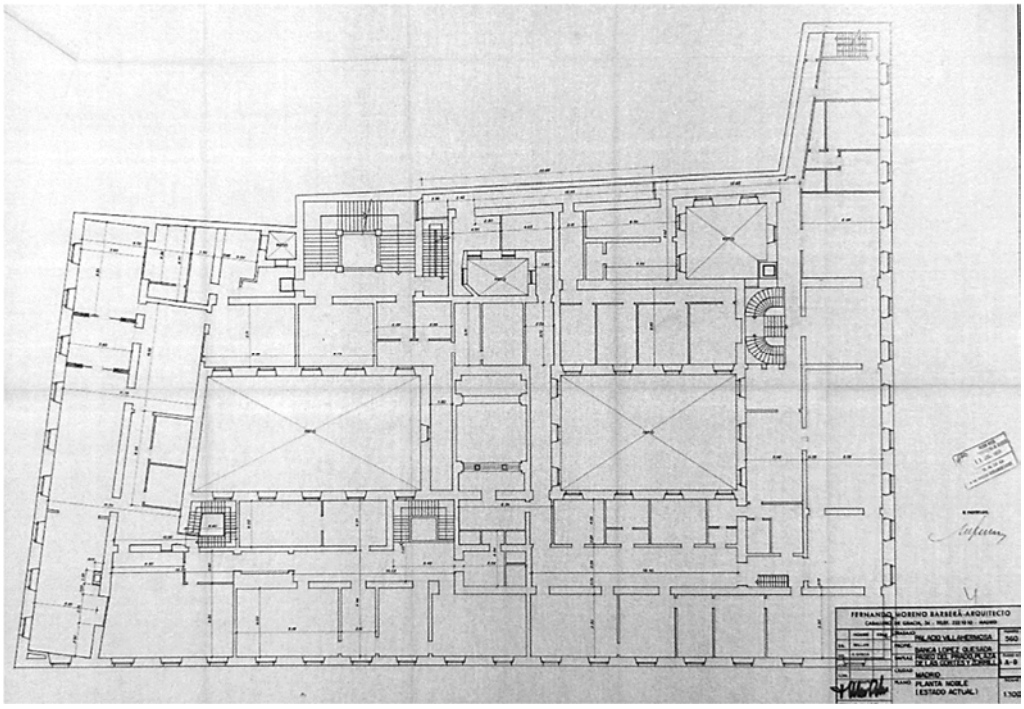


Fig. 55 - The palace before the demolition designed by Fernando Moreno Barberá, Palacio de Villahermosa (1973).

Fig. 56 - Demolition during the works (Ph. J. M. Barbeito), Palacio de Villahermosa (1974).

Fig. 57 - Photo of the demolition, (Ph. J. M. Barbeito) (1974)

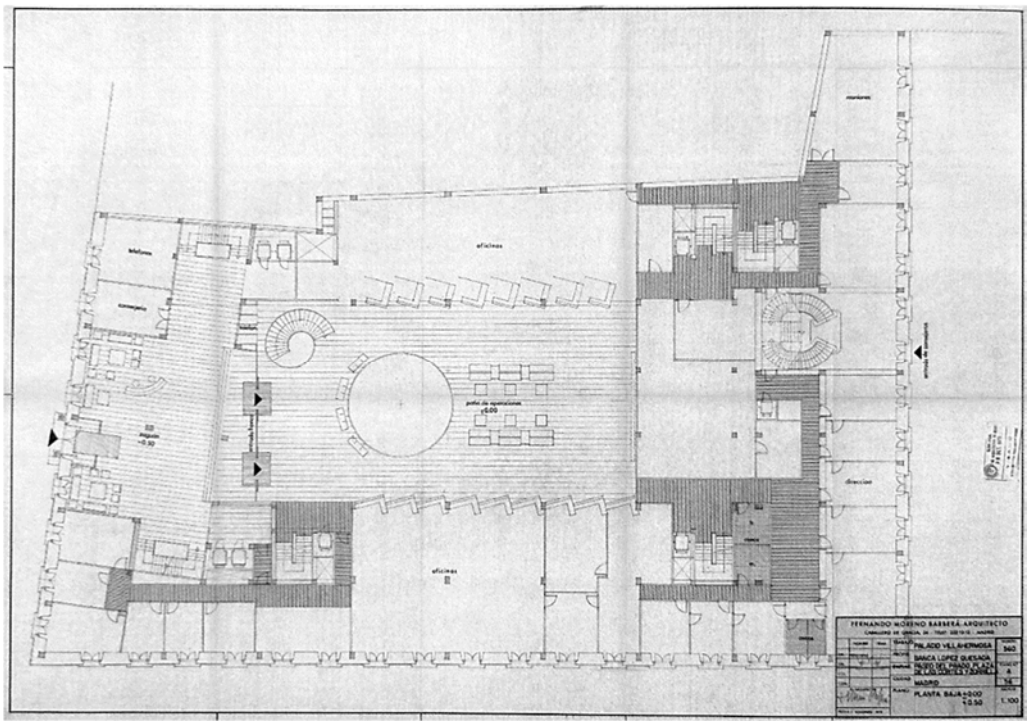


Fig. 58 - Project of demolition. Fernando Moreno Barberá (1973). (From *De Palacio Villahermosa a Museo Thyssen – Bornemisza. Historia de un edificio*, J. M. Barbeito, R. Moneo, edit. Museo Thyssen-Bornemisza, 2017)

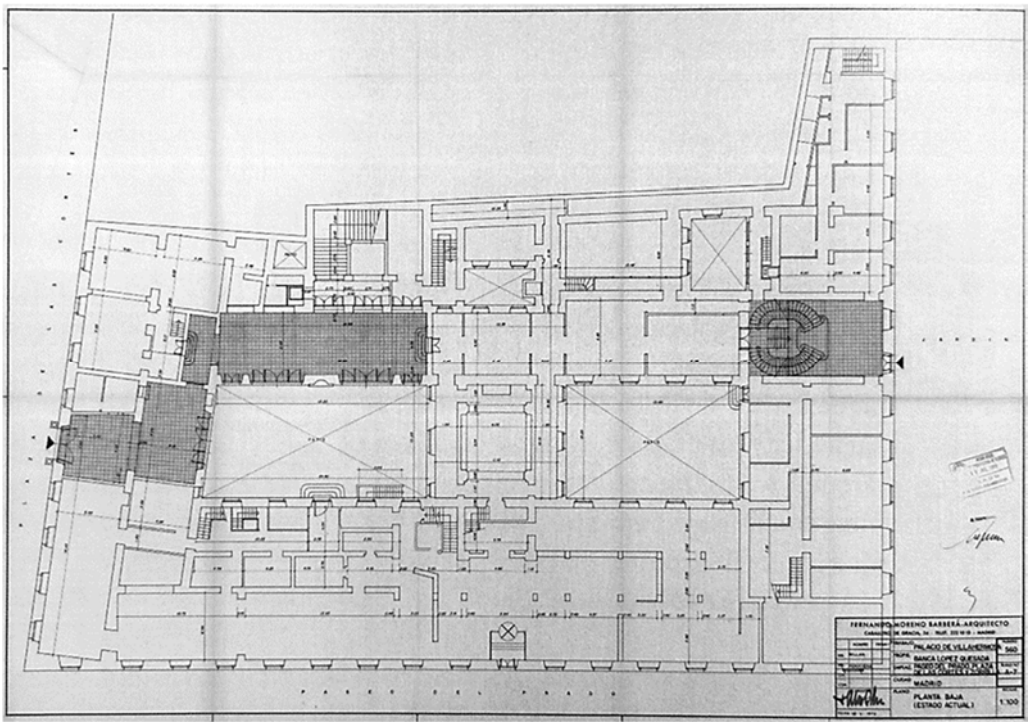


Fig. 59 - Project of demolition. Fernando Moreno Barberá. (From *De Palacio Villahermosa a Museo Thyssen – Bornemisza. Historia de un edificio*, J. M. Barbeito, R. Moneo, edit. Museo Thyssen-Bornemisza, 2017)

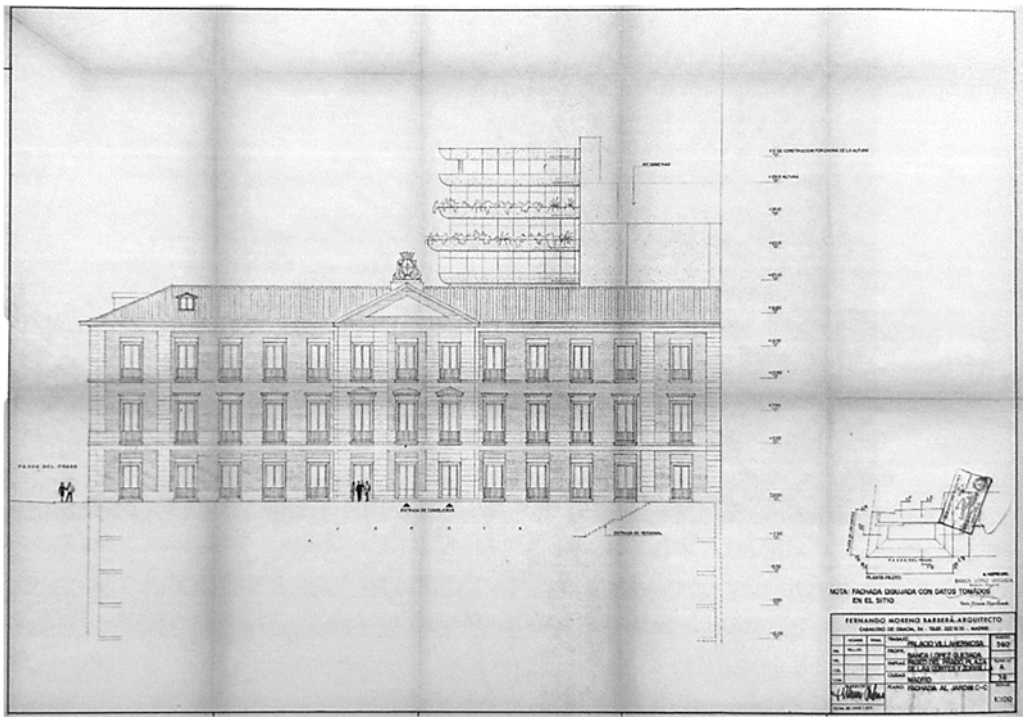


Fig. 60 - Project of demolition. Fernando Moreno Barberá. (From *De Palacio Villahermosa a Museo Thyssen – Bornemisza. Historia de un edificio*, J. M. Barbeito, R. Moneo, edit. Museo Thyssen-Bornemisza, 2017)

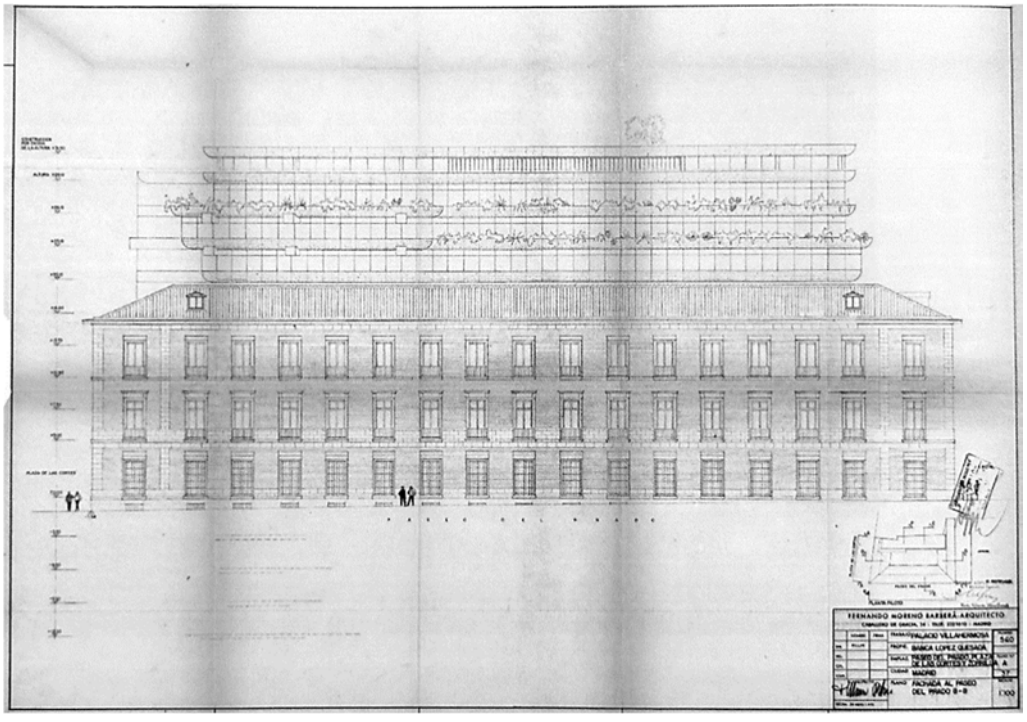


Fig. 61 - Project of demolition. Fernando Moreno Barberá. (From *De Palacio Villahermosa a Museo Thyssen – Bornemisza. Historia de un edificio,* J. M. Barbeito, R. Moneo, edit. Museo Thyssen-Bornemisza, 2017)

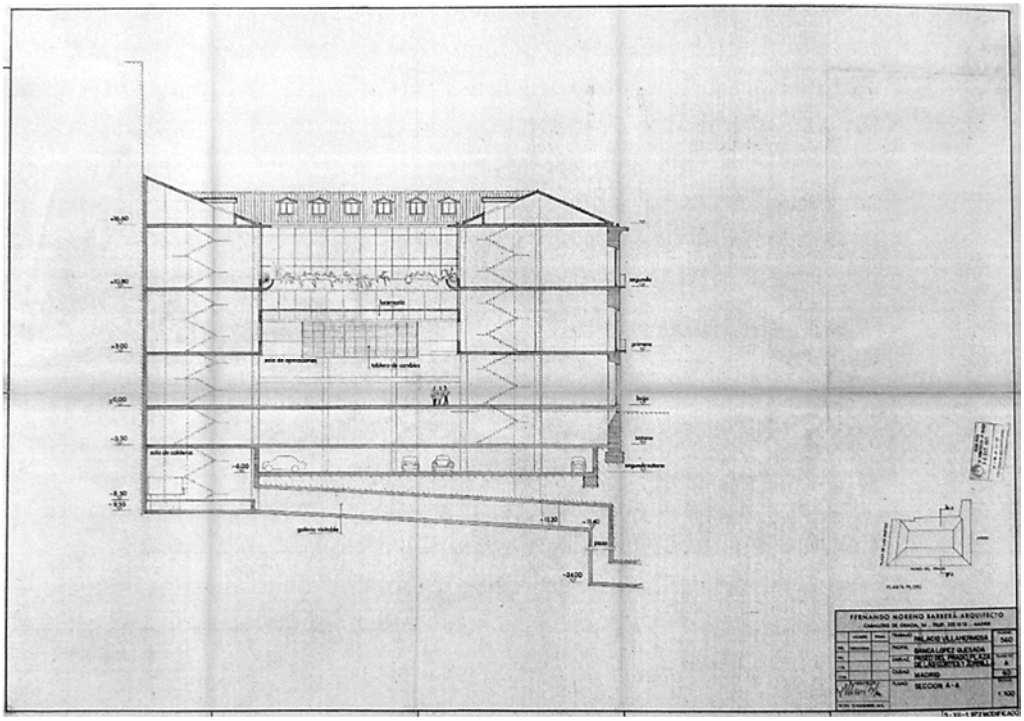


Fig. 62 - Project of demolition. Fernando Moreno Barberá. (From *De Palacio Villahermosa a Museo Thyssen – Bornemisza. Historia de un edificio*, J. M. Barbeito, R. Moneo, edit. Museo Thyssen-Bornemisza, 2017)

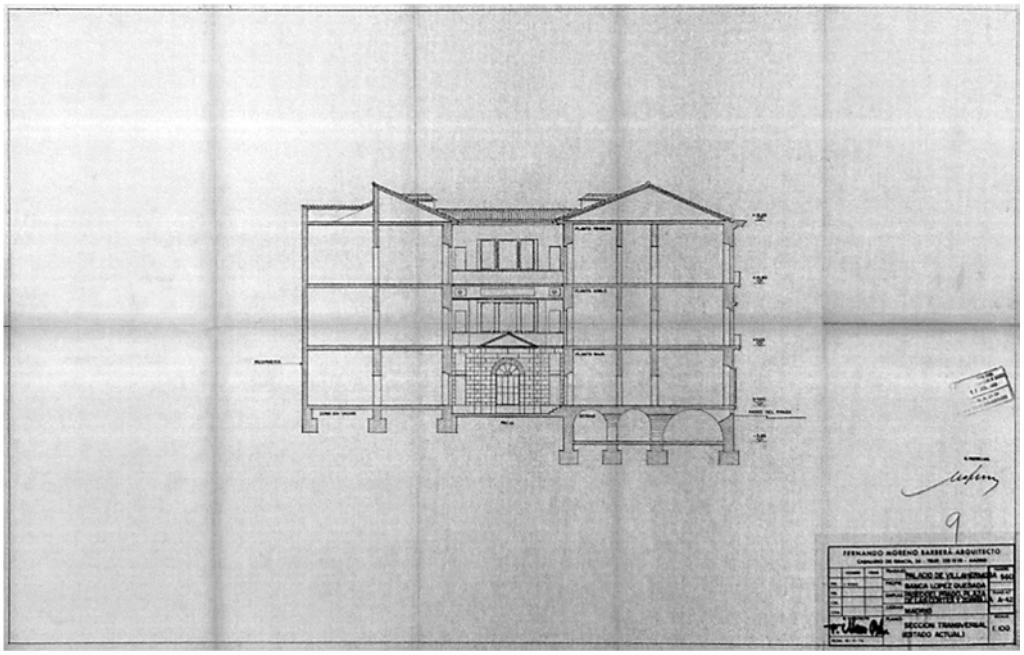


Fig. 63 - Project of demolition. Fernando Moreno Barberá. (From *De Palacio Villahermosa a Museo Thyssen – Bornemisza. Historia de un edificio*, J. M. Barbeito, R. Moneo, edit. Museo Thyssen-Bornemisza, 2017)

The project for Banca Lopez Quesada (First trasformation) (July 1972)

In the Project, the architect recognized some aesthetic values, but anything about the oratory, the stairs. And does not pay attention to the garden and the trees. Fernando Moreno Barberá, signed and presented a Project in the Gerencia Municipal de Urbanismo from Madrid, on July 1972.[21]

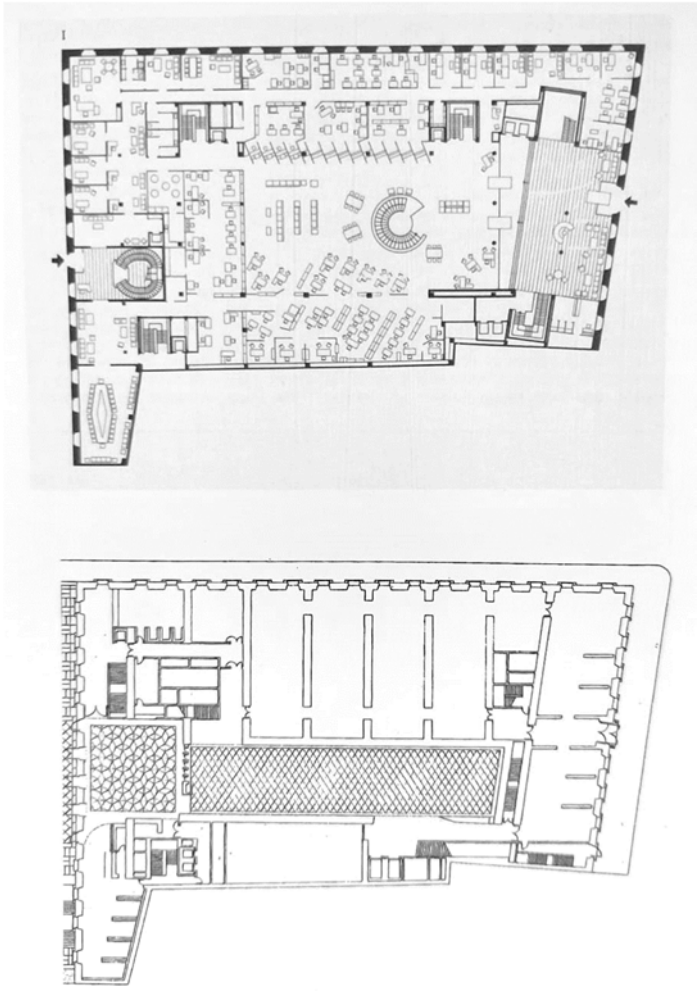


Fig. 64 - Banca Lopez Quesada. Architect Fernando Moreno Barberá, 1972.

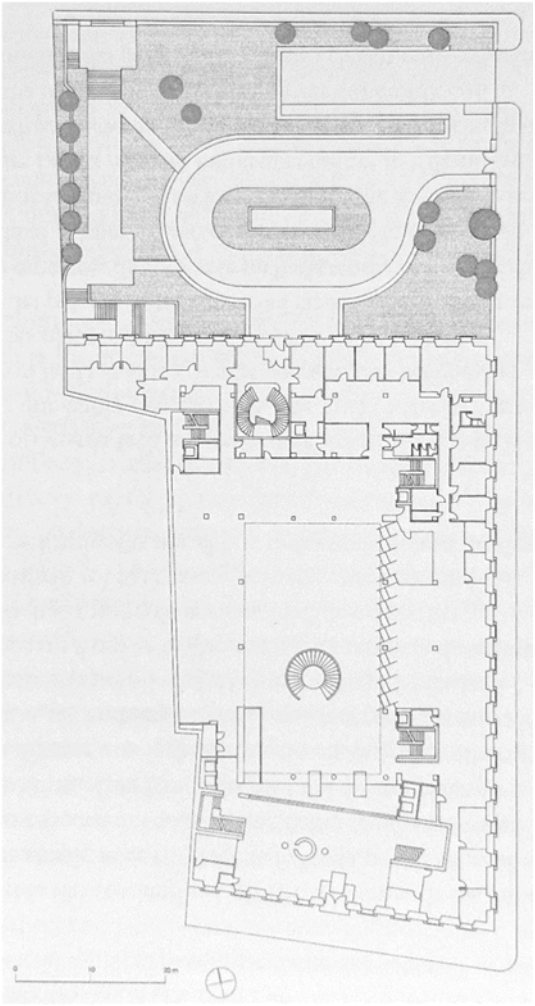


Fig. 65 - Banca Lopez Quesada designed by R. Moneo.

Florentino Perez Embid, Comisario General del Servicio de Patrimonio Artístico, de la Direccion General de Bellas Artes, approved it. But asked to avoid the dormer windows, and to leave the pendance of the roof.

The new Project conserved the two bays (aisles, spans) in the perimeter of the courtyard. The clients Will enter from Carrera de San Jeronimo, and members of Direction, from the garden. He demolished nearly everything, and covered the rests of the oratory to do the great Sala de Operaciones of the Banca

Some problems were those from the nearby new buildings with the party or dividing walls, which were higher. And he decided to build a new building, modern and useful. He tried different solutions and decided to employ concrete and glass. But it was not approved and a new Project was done with that for the demolition. The bays were demolished by parts, and the foundations were reinforced. As water appeared, the architect decided to create a retaining wall, of 18 meters and so a new basement was done.

The project for Thyssen (08/10/1992)

Moneo wrote that probably was right to do the "inversion" of an architectural project.

Rafael Moneo said that for the Project for the collection of Carmen Thyssen-Bornemisza he worked with the history of the palace and its historic and constructive knowledge. Knowing about the history and the interventions in the old palace, the architect proposes a last version of architecture for the palace. Where is it?

He designed a new structure with perpendicular walls to the old ones in parallel to Paseo del Prado. The most important element to conserve was the facade to Carrera de San Jeronimo, and the Windows as an accident in the wall.

For some years the palace was consider as a possibility for the ampliation of Prado Museum. The Patio de Operaciones, as Sala de Exposiciones. But the Banca Lopez Quesada doesn´t respect the old palace, only the perimeter walls, and so to give the palace the necessary conditions needed a great modification.

The architect decided to return to the wall structure, and the condition of the creation of the new facade to the garden was one of the topics. It must be to reconstruct the "last palace". The facade was a new axe to facilitate the move of the visitors. It has been important to respect the regularity of the spaces.

And finally, the last ampliation has incorporated two houses around.

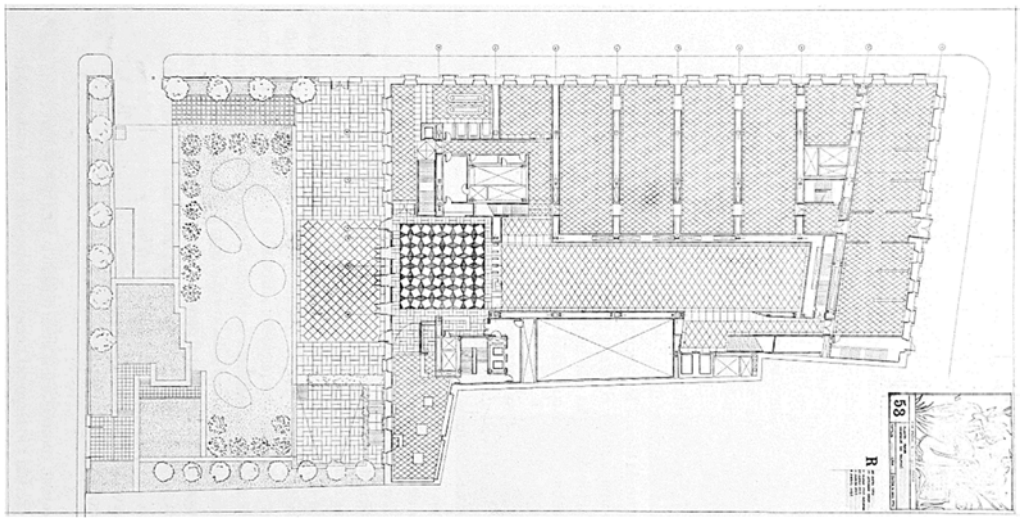


Fig. 66 - Ground floor, project by R. Moneo.

Fig. 67 - R. Moneo. Exhibition rooms on the first floor. (CB 2024)

Fig. 68 - R. Moneo. Thyssen. Ground floor. (CB 2024)

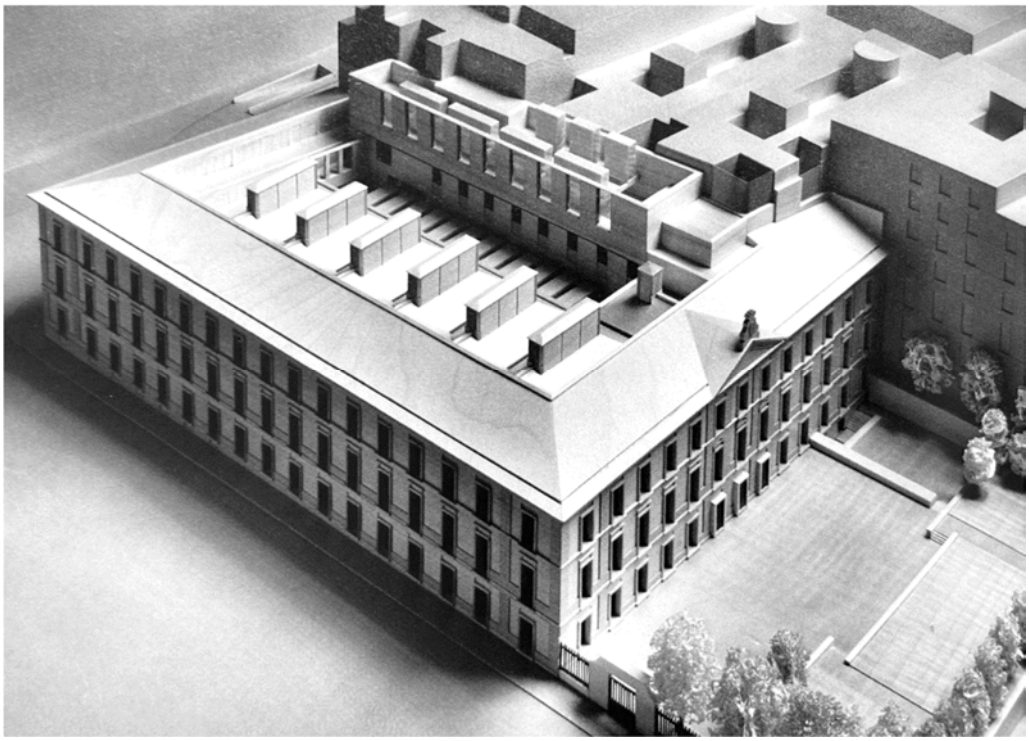


Fig. 69 - R. Moneo. Model. (From *De Palacio Villahermosa a Museo Thyssen – Bornemisza. Historia de un edificio*, J. M. Barbeito, R. Moneo, edit. Museo Thyssen-Bornemisza, 2017)

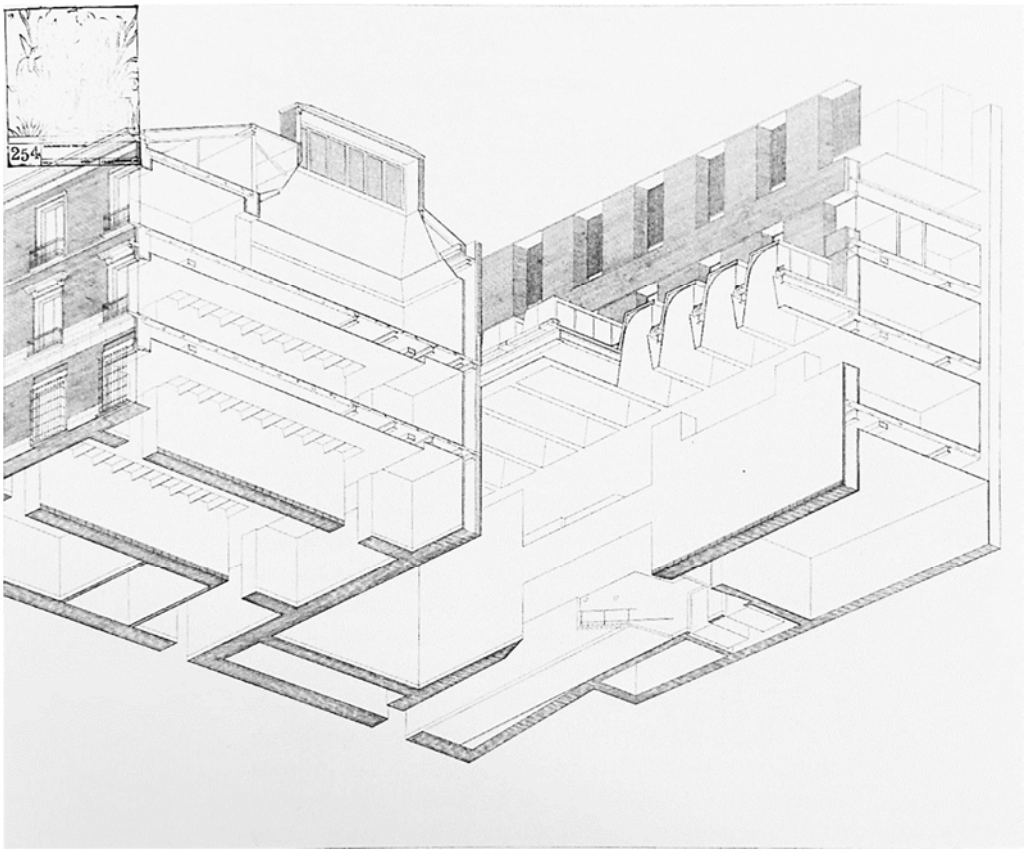


Fig. 70 - Assonometry section by R. Moneo. (From *De Palacio Villahermosa a Museo Thyssen – Bornemisza. Historia de un edificio*, J. M. Barbeito, R. Moneo, edit. Museo Thyssen-Bornemisza, 2017)

Anything remained. The history and architecture of all these palaces have disappeared. Only the facades remained.

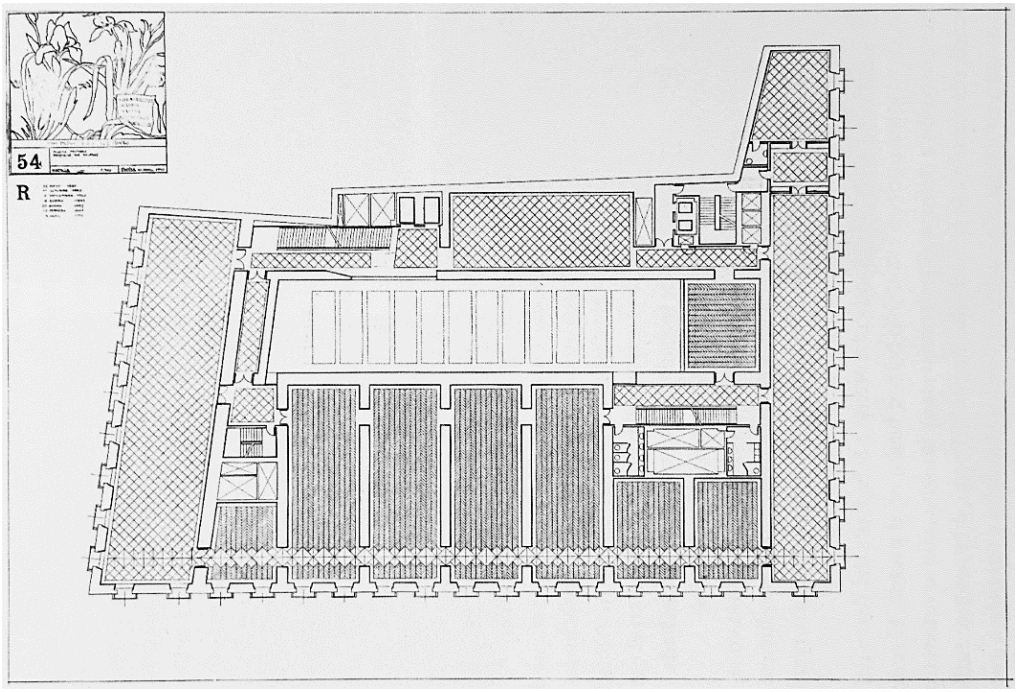


Fig. 71- First floor. (From *De Palacio Villahermosa a Museo Thyssen – Bornemisza. Historia de un edificio*, J. M. Barbeito, R. Moneo, edit. Museo Thyssen-Bornemisza, 2017)

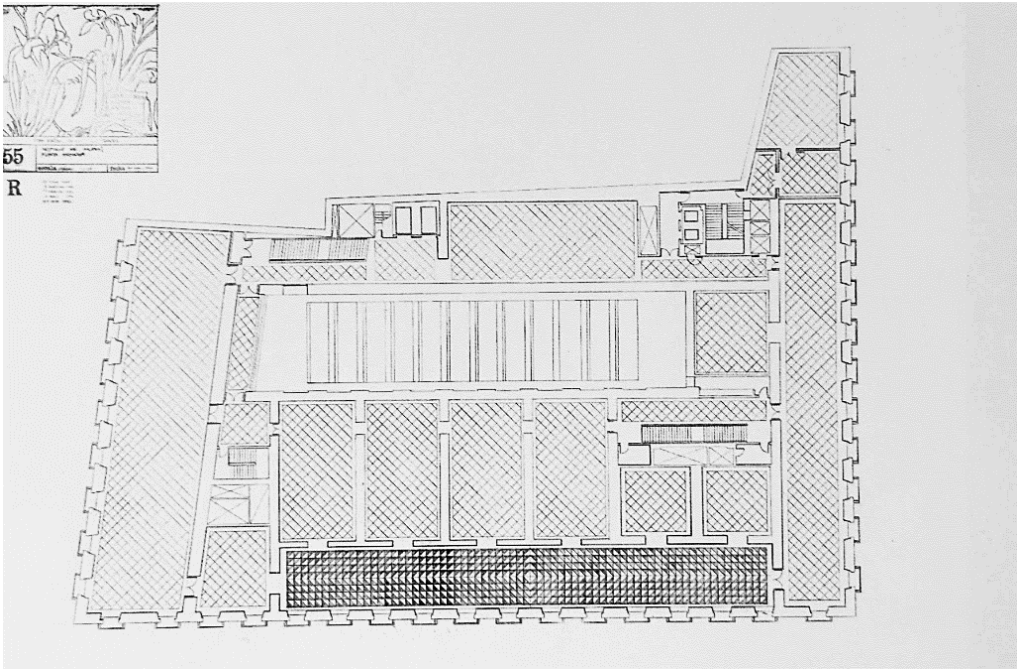


Fig. 72 - Reformed plant. (From *De Palacio Villahermosa a Museo Thyssen – Bornemisza. Historia de un edificio,* J. M. Barbeito, R. Moneo, edit. Museo Thyssen-Bornemisza, 2017)

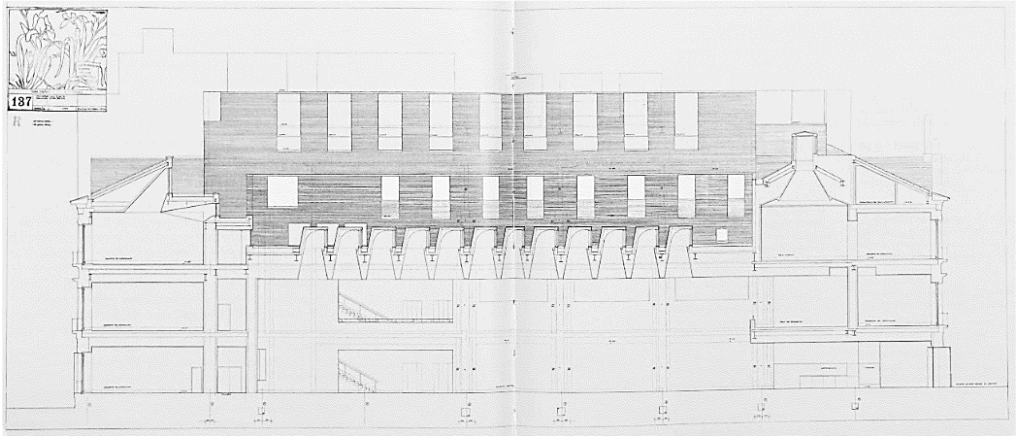


Fig. 73 - Trasversal section. (From *De Palacio Villahermosa a Museo Thyssen – Bornemisza. Historia de un edificio*, J. M. Barbeito, R. Moneo, edit. Museo Thyssen-Bornemisza, 2017)

Fig. 74 - A new from the garden. (CB 2023)

Fig. 75 - Terrace. (CB 2025)

Fig. 76 - Exhibition room. (CB 2024)

Fig. 77 - Exhibition room. (CB 2024)

Fig. 78 - Garden and terraces. (CB 2025)

Fig. 29 - Garden and terraces. (CB 2025)

6.3 Caixaforum

Caixaforum Madrid rises in a privilege location opposite to the Royal Botanic Garden of Madrid, in the Paseo del Prado, where there are other museums, as Prado, Thyssen or Reina Sofia. Before this area was occupied by a power plant and a gas station, testimony of an industrial past, but clearly out of place. That's why with the demolition of the gas station, a small place was created.[22]

Fig. 80 - Power plant before the works. (From *Caixaforum Madrid*, edit. Enrique Sanz con arquitectura edit. S.L.)

Fig. 81 - Interior of the power plant. (From *Caixaforum Madrid*, edit. Enrique Sanz con arquitectura edit. S.L.)

Problems as the narrowness of the surrounding streets, the location of the main entrance and the architectural identity were the most important things to resolve for an institution dedicated to contemporary art.
And so, was projected as a public magnet to attract locals, those who love art and those who visit the city. The authors of the Project were Jacques Herzog and Pierre de Meuron, done from 2001 to 2003, and Works finished in 2008.[23]
They decided to do a surgical operation, eliminating the parts of the building that they thought Will not be necessary. And so, the plinth disappeared, and an open space appeared as a meeting place, and protecting the visitors. The new image and volume of Caixaforum joins with the volumes and colors offered by the roofs in the neighboring buildings.
The brick facades that seems floats over the space, grown with the steel structure and iron casting panels. The exhibition areas are quiet, in contraposition of the main hall.
The main stair is a surprise, as the bottom foyer and the Auditorium. Services, lifts, other stairs are in the centre of the architecture.

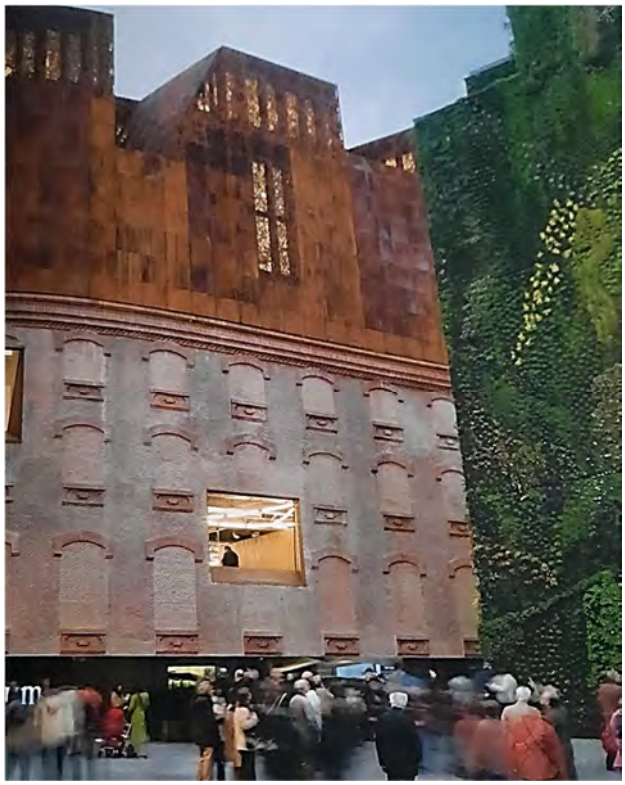


Fig. 82 - Outside of Caixaforum al Paseo del Prado (Ph. Duccio Malagamba)

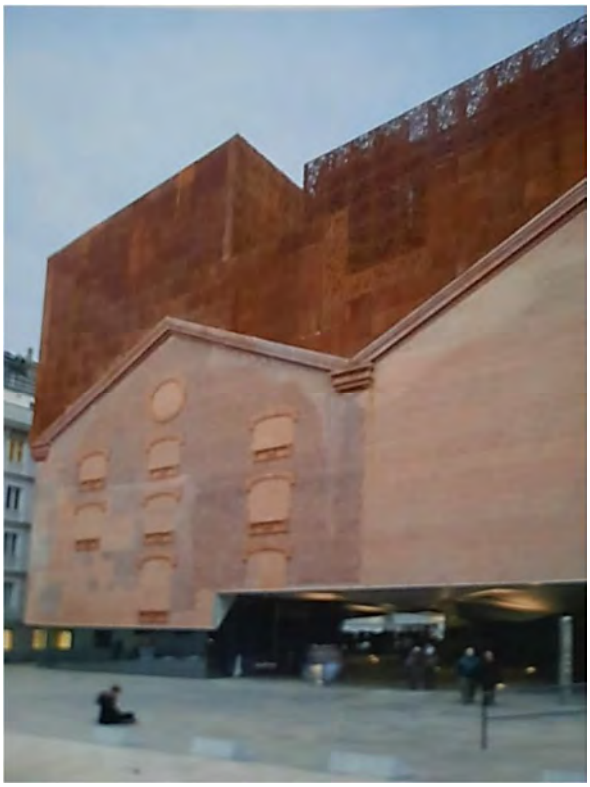


Fig. 83 - Nowadays the ground floor the space after gas station disappeared (Ph. Duccio Malagamba)

Fig. 84 - Outside by Paseo del Prado. (CB 2025)

Fig. 86 - Stairs from the street. (CB 2025)

Fig. 87 - Principal stairs. (CB 2025)

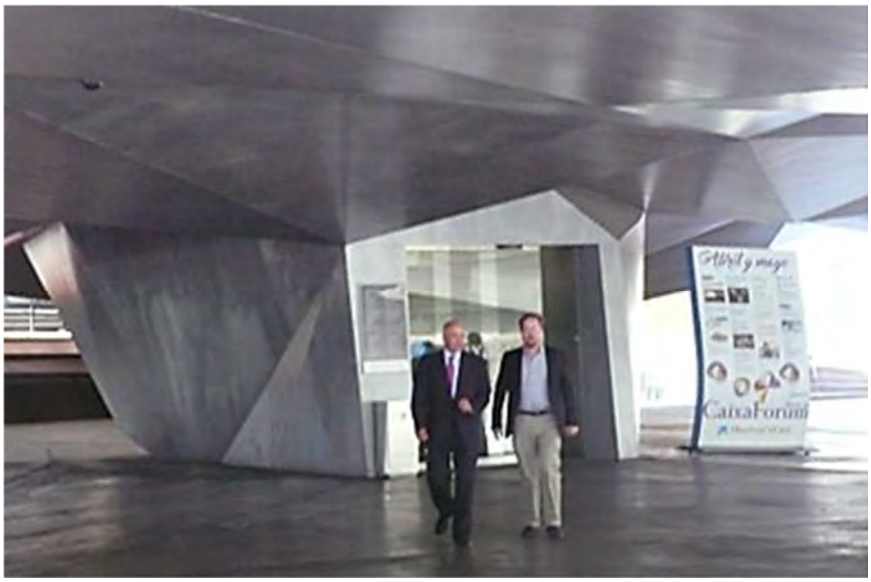


Fig. 38 - The platform under the building. (CB 2024)

Fig. 84 - The old "serreria". (CB 2025)

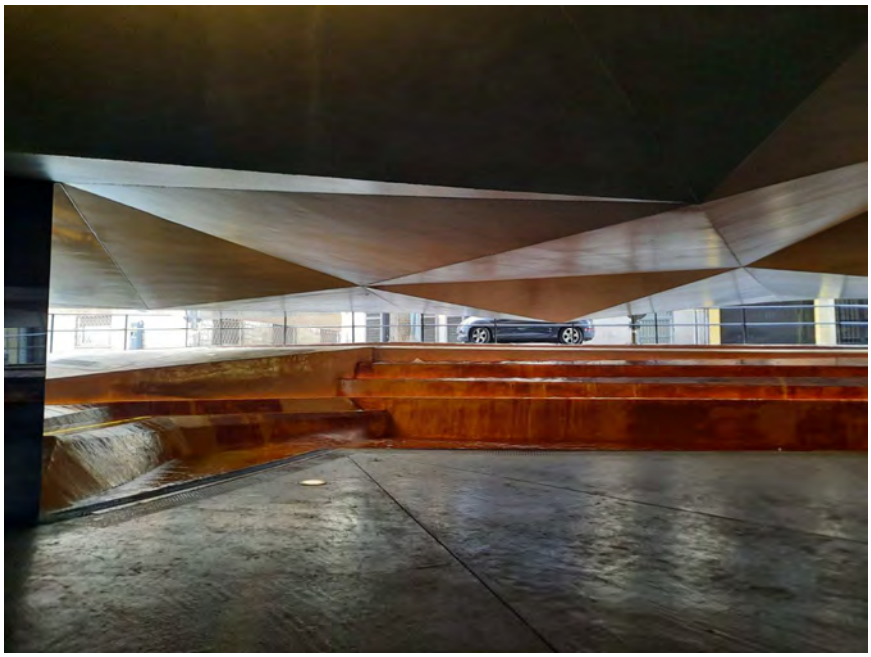


Fig. 90 - The space under the platform connected with Alameda street and old serreria. (CB 2025)

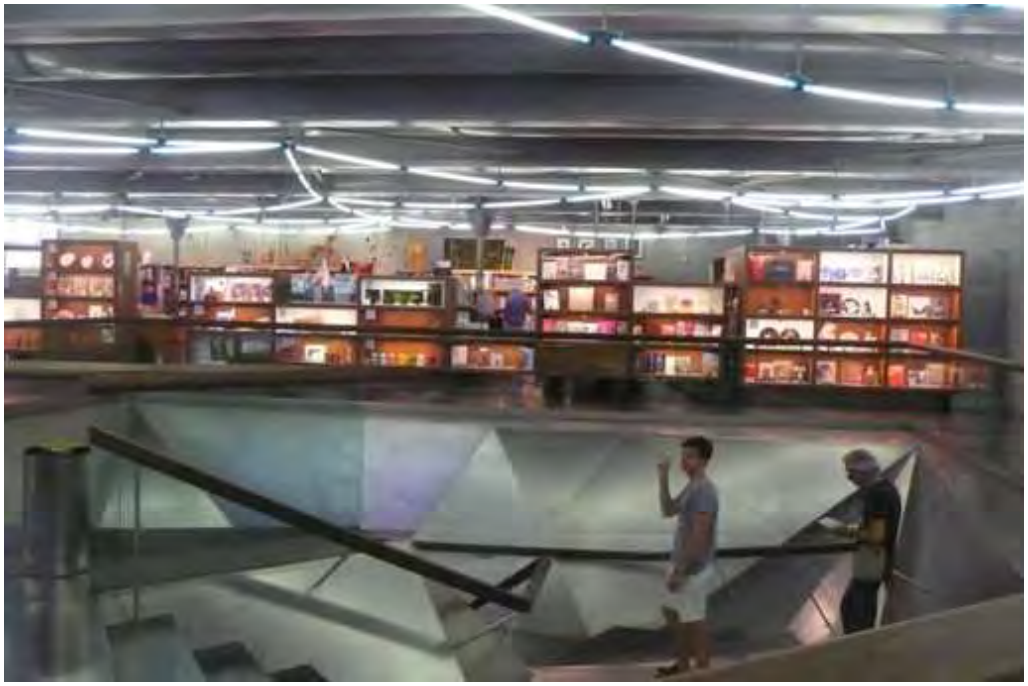


Fig. 91 - First floor with bookshop. (CB 2025)

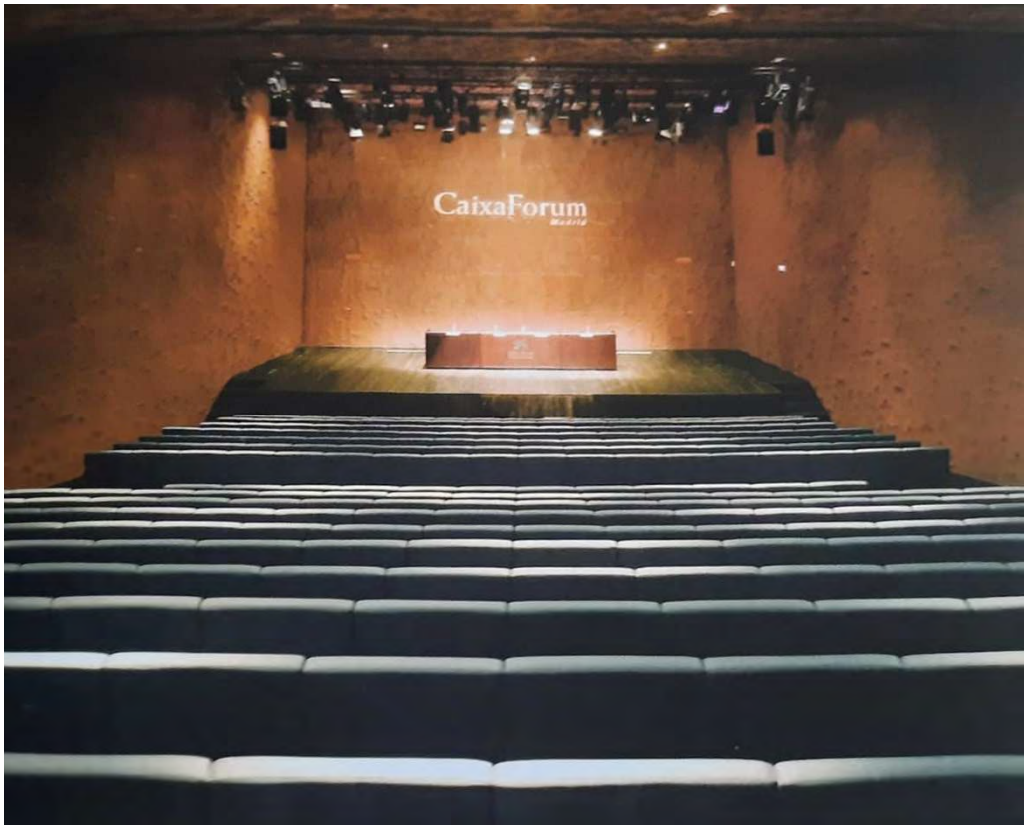


Fig. 92 - Auditorium (From *Caixaforum Madrid*, edit Enrique Sanz con arquitectura edit. S.L.)

The Museum is a spectacle of architecture. It is in the opposite position of construction laws. It seems to say: we can do the most difficulty. And so the most important thing, so they have designed some exhibition rooms, an auditorium, but the most important thing is the spectacle. And also have boing important for the regeneration of the quarter.

6.4 Reina Sofia

The Museo Nacional Centro de Arte Reina Sofia was opened in 1990, creating a modern and contemporary museum at international level. It occupied the old San Carlos Hospital, created in the XVI century by the King Felipe II, who centralized in this place all the other hospitals dispersed in the city. During the XVIII century Carlos III decided a new foundation, as those which were became not enough.

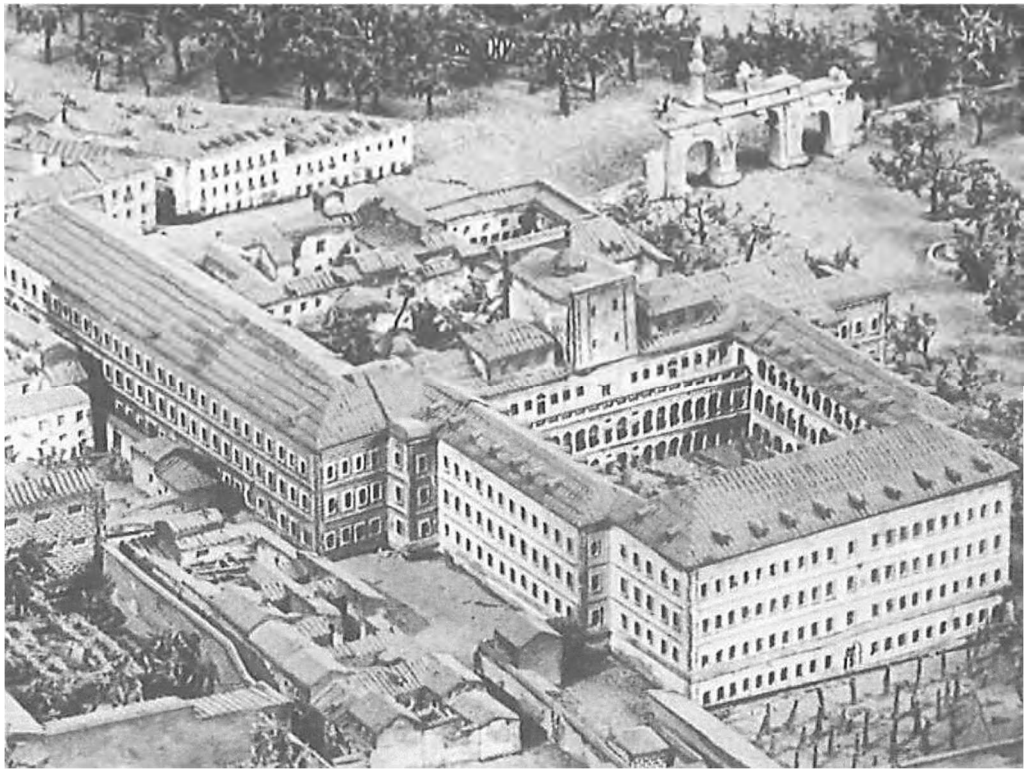


Fig. 93 - Drawing by Leon Gil de Palacio of the former General Hospital of Madrid. (From oa.upm.es)

Fig. 94 - The principal cloister. (CB 1992)

The building was projected and built by Jose de Hermosilla and Jose Sabatini. In 1788 was occupied, as a hospital, but only a third part of what was designed by Sabatini.[24]
It suffered a lot of changes, modifications, expansion till 1965, when the hospital is closed. It functions passed to the Ciudad Sanitaria Provincial, a. nd the building will be demolished. But in 1977 a Real Decreto declared it Monumento Historico Artistico.
In 1980 the architect Antonio Fernandez Alba,[25] began the restoration of the old hospital for using it as temporary expositions, which opened in 1986, on the first and second floor.
Other changes were done at the end of 1988 with the architects Jose Luis Iñiguez de Onzoño and Antonio Vazquez de Castro.[26] It was necessary to give vertical communications and so three lift towers were built with glass and steel by Ian Ritchie.

Fig. 95 - The new lifts (SM 1988)

Fig. 96 - Lifts. (SM 1988)

The museum was created by Real Decreto 535/88, 27 may 1988, with the support of the Museo Español de Arte Contemporaneo. On 10 September 1992, the Kings inaugurated the Museum.

Fig. 97- View to the principal courtyard. (CB 1992)

Ampliation Nouvel

The museum grew and so it was necessary to expand with a new building. It was done by the architect Jean Nouvel,[27] inaugurated in September 2005, with the idea of conservation of historic centre. Nouvel created a new plaza and a new modern façade where there was an institute.

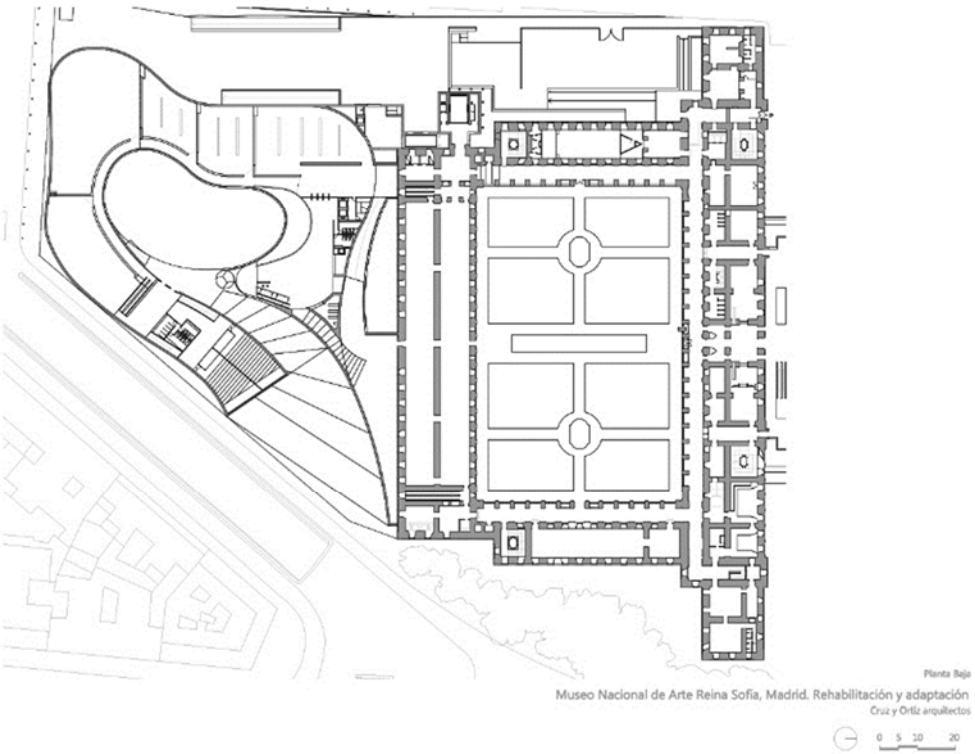


Fig. 98 - General plan of the ampliation by Jean Nouvel. (From www.reinasofia.es)

This part known as Triangulo del Arte was declared Human Heritage on 25 July 2021.

Figs. 99-100 - The join between the old Reina Sofia and the ampliation, outside (From www.reinasofia.es)

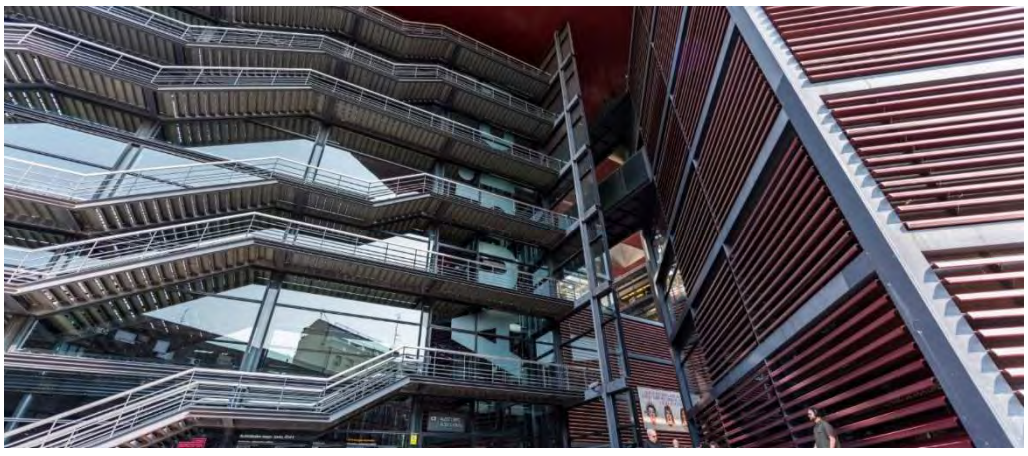


Fig. 101 - The interior. (From www.reinasofia.es)

Fig. 102 - The join between the old Reina Sofia and the ampliation, outside (www.reinasofia.es)

Notes

1. Juan de Villanueva y de Montes (Madrid, 15 September 1739 - Madrid, 22 August 1811) Spanish architect, symbol of the neoclassicism in Spain. Architect of Casa de los Infantes in el Escorial, Casa de Infantes in Real Sitio de Aranjuez, Casita del Principe in El Pardo, Sede de la Academia de la Historia, Observatorio Astronomico de Madrid.

2. Isidro Gonzalez Velazquez (Madrid, 15 May 1765 - Madrid 9 December 1840) Spanish architect, from a family of artists, his father was a painter. Academico de San Fernando, his master was Juan de Villanueva. He designed el Puente del Rey, the Project of Plaza de Oriente, Colegio de Medicina, Palacio del Senado, Fachada Oeste del Teatro Real, Garden in Parque del Retiro.

3. Plano Geometrico de Madrid. Tomas Lopez, geografo de S.M. 1785.

4. Antonio Lopez Aguado (Sanguesa, 1764 - 1831) Neoclassical Spanish architect. Maestro Mayor de ls Villa de Madrid. Arquitecto Mayor de Palacio. He designed Puerta de Toledo. Teatro Real.

5. G. F. Schinkel (Neuruppin, 13 March 1781 - Berlin, 9 October 1841). Very important German neoclassic architect and painter. Member of Prusian Accademy of Arts, Academia de San Lucas. Projected Konzerthaus of Berlin, Charlottenhof Palace, Altes Museum.

6. Narciso Pascual y Colomer (Valencia, 1808 - Madrid, 15 June 1870). An important Spanish architect during the Isabel II kingdom. Arquitecto Mayor de Palacio. He was director of the Escuela de Arquitectura de Madrid. Projected Palacio de Vista Alegre, Palacio del Marques de Salamanca and the Congreso de los Diputados.

7. Francisco Jareño y Alarcon (Albacete, 24 February 1818 - Madrid, 8 October 1892) was a very important Spanish architect. Member of the Royal Academic of San Fernando. Projected the Museo y Biblioteca Nacional de Madrid. Antigua Casa de la Moneda. He was architect of the Ministerio de Fomento.

8. Fernando Arbos y Tremanti (Roma, 22 October 1844 - Madrid, 18 December 1916). Author of projects as the church of San Manuel y San Benito in Madrid, Panteon de Hombres Ilustres, “La Casa Encendida”. Son of Manuel Arbos. Represents the medievalist group.

9. Pedro Muguruza Otaño (Madrid, 25 March 1893 - 3 February 1952) Spanish architect, consejero nacional y procurador en Cortes. He worked in Sagunto, Monasterio de Santa Maria del Paular, Carcel de Corte, Palacio de Hielo, Palacio de la Prensa, Edificio Coliseum.

10. Fernando Chueca Goitia (Madrid, 29 May 1911 - 30 October 2004). Spanish architect, member of the Academia de San Fernando. Projected the Cathedral Santa Maria de la Almudena in Madrid. He projected many restorations of monuments. He wrote many books and was full professor in Escuela de Arquitectura de Madrid.

11. Dionisio Hernandez Gi/l Rafael Olalquiaga(Caceres, 1934 – Madrid, 21 December 1921) Very important Spanish architect who have worked in conservation of monuments. He wants the Roma Prize. Medalla de Oro al Merito en las Bellas Artes. Director general de Bellas Artes and first Director of Instituto de Restauracion y Conservacion del Patrimonio Cultural de España. Rafael Olalquiaga Soriano (Bilbao, 27 November 1939 - Madrid, 6 march 1925). Important Spanish architect who worked in urban planning, new architecture, design. He worked for nearly forty years with Ramon Vazquez Molezun.

12. Rafael Moneo Valles (9 May 1937). Very famous Spanish architect. The first one with the Pritzker Prize since 1996. He designed Edificio Bankinter, Museo de Merida, Catedral de Nuestra Señora de los Angeles.

13. Jose Maria Garcia de Paredes Barreda (Sevilla, 1924 - Madrid, 6 February 1990). Spanish architect specialized in music auditorium.

14. Duque de Lerma. Francisco de Sandoval y Rojas, Primer Duque (1553, Tordesillas - 1625, Valladolid). Valido de Felipe III, Caballerizo Mayor, Virrey de Portugal.

15. Frigiliana. Familia Manrique de Lara, owner of the town of Frigiliana and its lands in 1508, founding the County of Frigiliana in 1630. The De la Torre family acquired the sugar mill and the honey factory.

16. Atri. The title of Duques de Atri it is not between the principals of Italy and Spain. May be a secondary title in Italy, where there is a place called Atri.

17. Ducado de Villahermosa. Nobiliary title in Spain, created in 1476 by Juan II de Aragon. Actually, the Duke is Alvaro Urzaiz y Azlor de Aragon, and the palace is in Pedrola, Zaragoza.

18. Renaissance construction with reminds of a castle of the XIII century.

19. Jose Ramon Melida y Alinari (Madrid, 26 October 1856 - 30 December 1933) Spanish archaeologist and writer. He gave importance to the archaeologist in Spain, and specially in Merida.

20. Banca Lopez Quesada. Bought the Villahermosa palace in 1971, and reformed it in 1976, as the Central Office. In 1983 disappeared.

21. Fernando Moreno Barberá (Ceuta, 22 June 1913 - Madrid, 12 May 1998) is a Spanish architect, who studied in Germany. He designed many university buildings and social houses. Experimented with Organicism, brutalism and functionalism. Author of the Facultad de Derecho de Valencia, Facultad de Filosofia y Letras de Valencia, Escuela de Ingenieria Tecnica Industrial de Madrid, Universidad de Kuwait.

22. The Power plant, electricity plant and a Wood old magazine were in the interior of a brick “house”. It was catalogued, so it took a time to explain what to do.

23. The architects were Jacques Herzog, Pierre de Meuron, Harry Gugger, and many others. And Ferrovial Agroman Empresa Constructora.

24. Francesco Sabatini (Palermo, 1721 - Madrid, 19 February 1797) an architect and militar engineer who worked preferently in Spain in the service of the Royal Kings. Maestro Mayor de las obras Reales, with Carlos III. He modernized Madrid with Works in Palacio Real, Palacio Aranjuez, Puerta de Alcala, Puerta de San Vicente, San Francisco el Grande, Palacio Godoy.

25. Antonio Fernandez Alba (Salamanca, 17 December 1927 - Madrid, 7 May 2024) Spanish architect and professor in ETSAM. Member of the Real Academia de Bellas Artes de San Fernando.

26. Antonio Vazquez de Castro Sarmiento (Madrid, 4 September 1929). Spanish architect. Worked in Urban Planning called Poblados dirigidos in Madrid, with social character, With Iñiguez de Onzoño. Caño Roto, Polideportivo Magariños. Reina Sofia, specially the transparent lifts with Iam Ritchi. Full professor in ETSAM. Director general de Arquitectura del Mopu.
Jose Luis Iñiguez de Onzoño (Bilbao, 4 July 1927 - Madrid, 24 October 2022) Spanish architect near rationalism movement who worked a lot in offices and flats Mutua Madrileña.

27. Jean Nouvel (Fumel Francia 12 agosto 1945). French architect. Premio Pritzker, Premio Aga Khan. Author of Torre Glories, Fundacion Cartier, Museo Nacional de Doha de Catar, Louvre de Abu Dabi, Instituto árabe in Paris. Innovator in the modular architecture.

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Chapter 7

Museums in London

Cecilia Antonini Lanari

After the Second World War, the British museum overview was confronted not only with the need to rebuild damaged buildings, but also with the question of the new use and adaptation of existing architecture for museum functions. This process had both practical and cultural value, as the new use of historic spaces was interpreted as part of a national identity strategy. The post-war period brought a renewed emphasis on the public role of museums: not only conservation, but also education, civic participation and support for scientific and industrial progress.

After the Second World War, the scientific museum overview in Britain suffered a profound transformation: structural interventions, expansion, increased accessibility, and integration with contemporary themes such as the environment, technology and communication.

In the 1950s and 1960s, with economic growth and the development of the welfare state, many museums expanded their collections, exhibitions and educational activities. Industry, technology and science became very concrete themes: the war had demonstrated the strategic importance of science, and this was reflected in museum programs.

At the same time, the audience became larger and more diverse: schools, families, non-specialist visitors, people from different regions. The idea that science should be accessible spread beyond academic circles to museums, exhibition calendars, children's workshops and interactive exhibitions.

After the Second World War, Britain devoted itself to restoring damaged galleries, protecting objects, creating new storage facilities, educating the public through more dynamic exhibitions, school workshops, events, expanding guided tours and updating existing facilities with new technologies.

In general, since the post-war period, the adaptation of existing architecture to museum functions in Great Britain has followed two main lines: on the one hand, conservative restoration and the new use of historic, often industrial, spaces in line with the scientific content to be exhibited; on the other hand, the incorporation of new technologies and spatial solutions to meet contemporary needs for air conditioning, lighting, interactivity, and sustainability. This process has not only contributed to enriching the museum landscape, but also to preserving and reactivating the building heritage, transforming disused places into lively and innovative cultural centres.

7.1 Tate

In 1889, Henry Tate,[1] an industrialist who had made his fortune as a sugar refiner, offered his collection of 19th-century British art to the nation and funded the first Tate Gallery.
Tate was a great patron of the Pre-Raphaelite artists, and his bequest of 65 paintings to the National Gallery included John Everett Millais's "Ophelia" and J.W. Waterhouse's "The Lady of Shalott". The bequest was rejected by the trustees because there was not enough space in the gallery.
A campaign was launched to create a new gallery dedicated to British art. With the help from Tate himself, the Millbank Gallery, now known as "Tate Britain", was built and opened in 1897. Tate's first bequest of works, together with works from the National Gallery, formed the founding collection.
English art and antiques dealers Sir Joseph Joel Duveen (1843-1908) and his son Lord Joseph Duveen (1869-1939) made significant financial contributions to the first Millbank gallery.
In 1957, the Tate Members association was founded as Friends of the Tate Gallery to raise funds for the purchase of artworks and to support and promote the work of the gallery.
The Tate Museum Complex today is divided in four places: two in London (Tate Britain and Tate Modern), one in Liverpool and one in St. Ives.
Tate Britain is dedicated to both contemporary and ancient British art. Tate Modern is for modern art. Tate Liverpool was created to exhibit works from the Tate Collection, which comprises a collection of mainly British art from the 1500s to the contemporary era, as well as modern art by international artists. Tate St Ives exhibits works by modern British artists, including those from the St. Ives School.

7.1.1 Tate Britain

Tate Britain, located in Millbank in the Westminster district of London, stands on a site that between 1816 and 1842 was occupied by a large penitentiary. After its closure, the prison served as temporary accommodation for convicts awaiting deportation to Australia.
The foundation of the gallery is linked to the philanthropist Henry Tate (1819-1899) and the project was entrusted to architect Sidney Smith, who had also designed several libraries funded by Tate. The "National Gallery of British Art" was inaugurated by the Prince of Wales on 21 July 1897 and opened to the public on 16 August of the same year.
In 1898 the gallery was expanded with new rooms, including one dedicated to sculpture. At the same time, the issue of housing the bequest of J. M. W. Turner was addressed. The decisive contribution came from the patron Joseph Joel Duveen, who financed the Turner Wing, inaugurated in 1910. A few years later, under the direction of Charles Aitken, the first temporary exhibitions were introduced (1911), beginning with a retrospective of Alfred Stevens.
During the First World War, part of the collection was moved to underground shelters, while some rooms of the gallery were requisitioned for hospital and administrative purposes.
In 1926 the Modern Foreign and Sargent Galleries were opened, thanks to the generosity of the Duveen family, in a ceremony attended by King George V and Queen Mary.

However, the gallery suffered severe damage during the Thames Flood of 1928, which submerged more than 200 paintings. In 1932 the institution officially adopted the name "Tate Gallery", which had already become common usage. In 1937 the new Duveen Sculpture Galleries, designed by John Russell Pope[2] and the first in England purpose-built for sculpture, were inaugurated.
At the outbreak of the Second World War, artworks were evacuated to country houses and to London Underground stations. The gallery was directly hit during the bombings of 1940 and 1941, which destroyed parts of the roofs and skylights. After the conflict, the Tate's garden was used as allotments until 1946. (Fig. 1)

Fig. 1 - Bombing destruction of the Tate Britain. (From "The Times", 1940)

Ambitious plans for extension were proposed in the 1960s, but it was not until 1979 that the northeast quadrant extension, designed by Richard Llewellyn-Davies,[3] was completed. It provided new exhibition halls, conservation studios, photographic laboratories and storage facilities, and was inaugurated by Queen Elizabeth II. (Figs. 2-3)

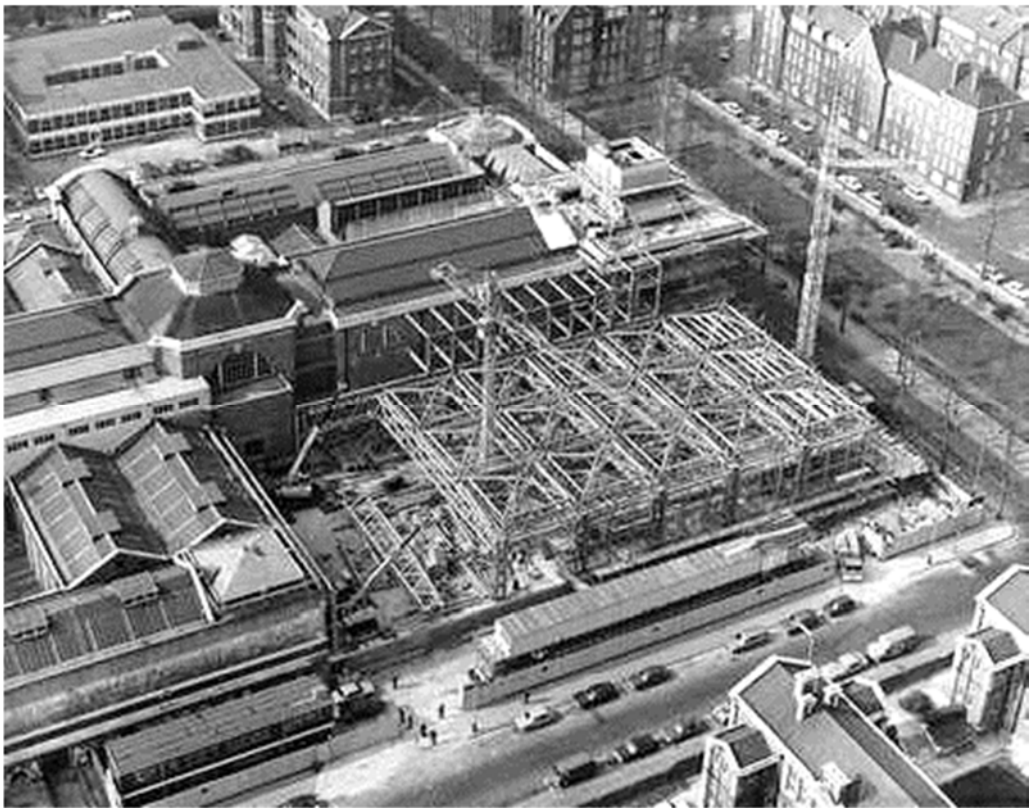

Fig. 2 - Extension of the Tate Britain. Work in progress, 1979. (From Tate Britain Official Website)

Fig. 3 - Inside of the new extension under construction. (From Tate Britain official website)

A major development came with the Clore Gallery (1987) (Fig. 4), financed by the Clore Foundation[5] and designed by James Stirling and Michael Wilford.[5] It was built to house the Turner Bequest, including sketchbooks, drawings and paintings, and incorporated new print and drawing rooms accessible to the public.

For the centenary of its foundation (1997), the Centenary Development was launched, designed by John Miller and Partners.[6] It included five new galleries, the refurbishment of nine others, a new exhibition space and a new entrance on Atterbury Street.

Fig. 4 - The link between the existing architecture and the Clore Gallery, Tate Britain. (CAL 2016)

Later, the practice Caruso St. John carried out the restoration of the Rotunda (2013), (Figs. 5-6) reintroducing materials and decorative motifs inspired by Smith's design. The new central staircase, terrazzo floors and the use of the Rotunda's niches as display spaces restored the building's historic grandeur while meeting contemporary museological needs.

Fig. 5 - Tate Britain Rotunda and staircase. (Tate Britain official website)

Fig. 6 - Rotunda lower ground and stairs. (Tate Britain official website)

Architects James Stirling, Michael Wilford and Associates incorporated a prints and drawings room into the design, allowing the public to view sketchbooks.
The changes of Tate Britain reflect the complex cultural and architectural history of a museum that has adapted to the social, artistic and urban transformations of more than a century. From its nineteenth-century birth as the National Gallery of British Art, through extensions, wars and natural disasters, to the most recent renovations, Tate Britain has consolidated its role as the primary reference point for British art from the sixteenth century to the present day. Today it represents not only a museum of international importance, but also a living architectural document, layered with interventions that testify to the ongoing dialogue between tradition and innovation.

7.1.2 Tate Modern

In the 1940s, the architectural plans of Sir Giles Gilbert Scott for the Bankside Power Station[7] were unveiled, and construction began in the post-war years. The plant, conceived in a monumental industrial architecture, was inaugurated in 1962 and remained in operation until 1981, when it was decommissioned following the oil crisis.

The origins of the Bankside museum are unusual in many respects. It was not the initial spark for an urban development plan, but when the project was first announced in December 1992 by the director of the Tate Gallery, Nicholas Serota, the public reacted very favorably, while politicians remained silent. This, however, allowed the project to be safeguarded from political interference, enabling the Tate's curatorial architects to evaluate the idea and develop the project independently. However, no public consultations, plans or progress reports were published. (Fig. 7)

From 1992, the Tate initiated plans to establish a new gallery dedicated to modern and contemporary art. After evaluating several possible locations, in 1994 the Bankside Power Station was officially chosen as the site of the future Tate Modern. The Take took over the Bankside in August 1996. The visitor centre, in an existing single storey building next to the power station, was opened to the public in January 1997, funded through sponsorship by Ernst and Young. Prior to this, the centre – which includes a project office, meeting room and exhibition space – was used mainly to explain the gallery project to potential donors and other key participants. An exhibition of proposals for a Millennium Bridge that will span the Thames between Bankside and St. Paul's was held at the centre for six weeks shortly after it opened. This helped to publicize the centre's existence and generate public interest in the project as a whole. Following the exhibition, the centre was opening to the public until October 1997 when it closed temporarily; the centre was also used as a base for consulting and informing local people about the project.

Fig. 7 - Tate Modern housed in an ancient station. (Tate's official website)

The following year, the Swiss architectural practice Herzog & de Meuron[8] won the international competition for its conversion.
The project makes use of an existing industrial structure, but this particular building belongs to a type that is the opposite of the "neutral" architecture so often chosen for similar purposes. Sir Giles Gilbert Scott's power station, designed around 1940 but only commissioned in 1960, is not an anonymous structure, but a landmark on the London skyline. (Fig. 8)

Fig. 8 - London skyline where we can see the importance of the Tate Modern architecture in it. (From https://www.visitstay.co.uk/tate-modern/)

Construction works began in 1997 (Fig. 9) and culminated in the official opening of Tate Modern on 11 May 2000 (Fig. 10). The inaugural display, with Louise Bourgeois' monumental commission for the Turbine Hall, marked a turning point in museology: the collections were presented thematically and trans-historically, breaking away from the traditional chronological arrangement.

Fig. 9 - Removal of power station machinery, 1997. (Tate's official website)

The new skylights have significantly altered the overall appearance of the building, and the large atrium evokes the entrance plaza of the Pompidou Centre, but from a functional point of view, it is much more than just an atrium.
The exhibition rooms have been designed taking into account the suggestions made by the artists consulted during the planning stage and are therefore able to meet the artistic requirements of the works. The common areas, on the other hand, are designed to satisfy many different needs, from educational to recreational and commercial, without however creating too clear a distinction between their functions.
While Bilbao, for example, is characterized by a clear divide between the exterior and the exhibition rooms, here Herzog and De Meuron have achieved a harmonious balance between external symbolism and internal function, between artistic needs and those of the public, between functionality and form. The Tate Gallery of Modern Art combines the needs of both art and the public, creating a harmony that has long been lacking in many other museums.
In the years that followed, the Turbine Hall became one of the most significant experimental art spaces worldwide, hosting large-scale commissions by artists such as Anish Kapoor (2002), Olafur Eliasson (2003), Rachel Whiteread (2005), Ai Weiwei (2010), and Kara Walker (2019).
At the same time, Tate Modern strengthened its role through major retrospectives and monographic exhibitions, including Frida Kahlo (2005), Henri Matisse (2014), and Yayoi Kusama (2012).

From an architectural perspective, the most important expansion was the inauguration of the Switch House (now Blavatnik Building) in 2016, also designed by Herzog & de Meuron. This extension increased the display space by 60% and introduced the Tanks, a dedicated area for performance and experimental practices.
During the 2010s and 2020s, Tate Modern consolidated its position as a platform for reflection on global issues, ranging from climate change (with the declaration of a climate emergency in 2019) to migration and new forms of collective participation.
In 2025, on the occasion of its 25th anniversary, Tate Modern announced the exhibition Gathering Ground, conceived as a synthesis of contemporary international artistic trajectories. Since its opening, the museum has welcomed more than 115 million visitors, confirming its status as one of the world's leading centres for contemporary art and museum architecture.

Fig. 10 - Carsten Höller, Test Site, 2006. (Tate's official website)

For the sake of completeness, the Tate Museum complex also includes some information on the other two Tate locations, which, however, are not in London. Specifically, Tate Liverpool and Tate St. Ives.

7.1.3 Tate Liverpool

In the 1980s, Alan Bowness, then director of the Tate, initiated the idea of creating a "Tate of the North," a gallery with its own distinct identity dedicated to modern art and aimed at engaging a younger audience through an active educational program. (Fig. 11)
The chosen site was a former warehouse in Liverpool's Albert Dock, once a bustling hub for goods such as tea, silk, tobacco, and spirits, but by then in a state of abandonment. Following the dock's regeneration in 1981, which included the establishment of the Maritime Museum and new leisure facilities, the project gained momentum. (Fig. 12)
In 1985, architect James Stirling was commissioned to design the new Tate Gallery Liverpool. While preserving the exterior brick and stone structure with its Doric colonnade, Stirling transformed the interiors into a series of simple and elegant galleries suitable for displaying modern art. The gallery opened to the public in May 1988. (Figs. 13-14)
Tate Liverpool gained further prominence when Liverpool was named European Capital of Culture in 2008. To mark the occasion, the gallery hosted the Turner Prize in 2007, the first time the award was held outside London. Today, with over 600,000 visitors annually, Tate Liverpool plays a central role in presenting major European exhibitions of modern art.

Fig. 11 - Tate Liverpool. (Tate's official website)

Fig. 12 - Entrance porticoes to the Tate Liverpool. (Tate's official website)

Fig. 13 - Exhibition room with different showcases. (CB 1991)

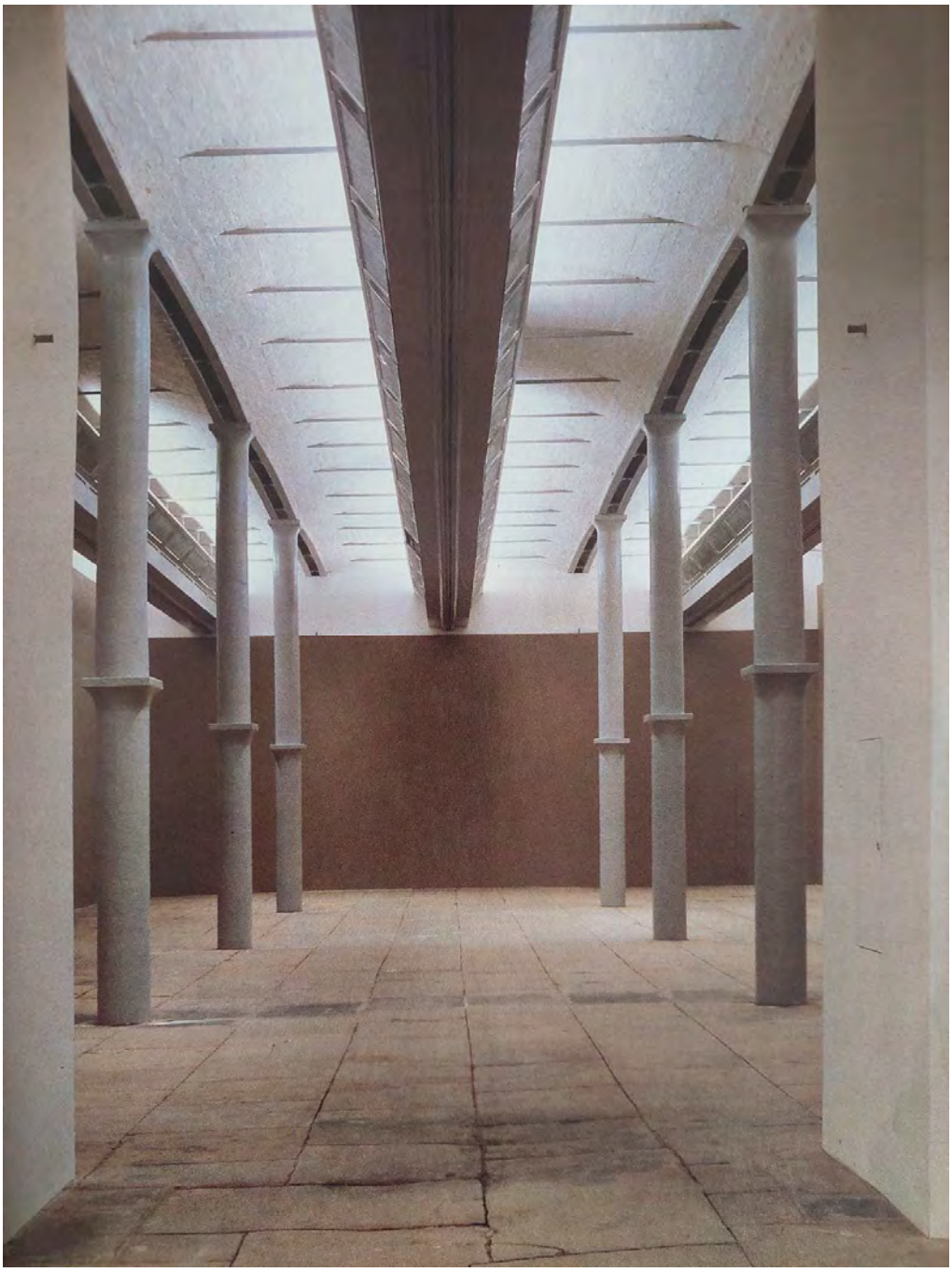

Fig. 14 - Inside Tate Liverpool. Note the architecture and the lighting diffused from above. (CB 1991)

7.1.4 Tate St. Ives

St Ives, a small town in Cornwall on the southwest coast of England, might seem an unlikely location for a major art gallery. However, its artistic connections date back to the Victorian era, when many artists were drawn there by its distinctive quality of light. Among those associated with St Ives are Barbara Hepworth, Naum Gabo, Alfred Wallis, and Mark Rothko. (Fig. 15)
The Tate established a strong link with the town in 1980, when it took over the management of the Barbara Hepworth Museum and Sculpture Garden. By the mid-1980s, the decision was made to build a gallery dedicated to artists who had lived or worked in St Ives, using works from the Tate's collection.

In 1988, a site was chosen on the grounds of a former gasworks overlooking Porthmeor Beach and the Atlantic Ocean. Architects Eldred Evans and David Shalev were commissioned to design the new gallery, whose forms echoed the industrial heritage of the site, including the central rotunda that became the building's focal point. (Fig. 16)

Construction began in 1991, funded by local community contributions, the Henry Moore Foundation, and the European Regional Development Fund. When Tate St Ives opened in June 1993, it welcomed over 120,000 visitors in just six months.

Due to this high attendance, a major renovation and expansion was planned. The project was completed in summer 2017: the first architects, Evans and Shalev, redesigned the existing building, while Jamie Fobert Architects created a new extension that doubled the gallery's exhibition space, improved facilities, and added dedicated areas for art handling and collection care.

Fig. 15 - Outside of Tate St. Ives. (Tate's official website)

Fig. 16 - Inside exhibition route of Tate St. Ives. (Tate's official website)

7.2 National Gallery

The National Gallery of London, founded in 1824, is a museum that houses a rich collection of over 2,300 paintings from various periods and schools, spanning from the mid-12th century to the early 20th century.
The architecture currently housing the museum, on the north side of Trafalgar Square, is the third to serve this function and, like its predecessors, has often been considered inadequate. The only part that has remained essentially unchanged from the first (1832-1838) construction is the façade designed by architect William Wilkins,[9] while the rest of the structure has been gradually altered and expanded over the years.
The National Gallery opened to the public on May 10, 1824, housed in Angerstein's building[10] at 100 Pall Mall. In 1826, paintings from Sir George Beaumont's collection, offered to the nation three years earlier on the condition that an appropriate building be found, were added, along with 34 paintings from Reverend William Holwell Carr in 1828. The Pall Mall location was often overcrowded and criticized for its small size compared to the Louvre, causing national embarrassment. A structural failure forced the museum to temporarily relocate to 105 Pall Mall. In 1832, construction began on a new site at the old royal stables in the Charing Cross area, on land that had been transformed into Trafalgar Square in the previous decade. The project was designed by architect William Wilkins. It was a prominent city location, described by board member Sir Robert Peel as "in the heart of London" and easily accessible to people of all social classes. In the 1850s, some requested another move, partly due to central London's pollution and partly due to design flaws, but ultimately it was decided that removing the National Gallery from Trafalgar Square would restrict public access, and the museum remained. (Fig. 17)
When the Second World War broke out, the paintings were transported for safety reasons, first to various locations in Wales and then to Manod Quarry, near Festiniog, in North Wales. Director Kenneth Clark's initial idea was to have the paintings shipped to Canada, but he received a telegram from Winston Churchill forbidding him to do so.

Fig. 17 - National Gallery. (CAL 2017)

7.2.1 William Wilkins' project

The idea to build the National Gallery at Trafalgar Square was first proposed by architect John Nash,[11] who envisioned it replacing the Royal Stables, while a Parthenon-like building for the Royal Academy would occupy the centre of the square. A design competition was held in 1822, and although Nash submitted a proposal with C. R. Cockerell, the commission was awarded to William Wilkins, who had submitted last-minute drawings. Wilkins aimed to create a "Temple of the Arts" inspired by historical models, but budget constraints and compromises resulted in a building widely criticized for its appearance. Its layout, however, echoes Venetian Mannerism and elements of St. Mark's Basilica, combining symbolic references with a unique spatial rhythm.
The architecture was limited in depth, as it backed onto a poorhouse and barracks, and interior space was modest, with the eastern wing occupied by the Royal Academy until 1868. Wilkins' façade initially attracted ridicule, even from King William IV, though later assessments, including from Prince Charles in 1984, praised it.

Fig. 18 - Barry Galleries. Now called the Julia and Hans Rausing Room, 2020. (National Gallery London official website)

Subsequent there were some extensions of the museum such as those by Sir James Pennethorne who added a richly decorated gallery in 1860–61, though it worsened space constraints. Edward Middleton Barry[12] (built the Neo-Renaissance Barry Galleries (1872-76) (Fig. 18), arranged around a central octagonal hall, establishing a central axis that guided future expansions. Later, John Taylor extended the rear rooms with the Staircase Hall, including a domed vestibule and mosaic decorations by Boris Anrep (1928-1952), which celebrated modern virtues and contemporary figures. The north and west wings were expanded while maintaining symmetry and classical elements. In 1929, the Duveen Gallery was added with a barrel-vaulted ceiling. Modernist north galleries (1975) were later remodelled in the 1990s to echo 19th-century styles.

These expansions, together with the restoration of the Barry Rooms in 1985-86, reinforced a coherent architectural unity while accommodating the gallery's growing collection. (Fig. 19)

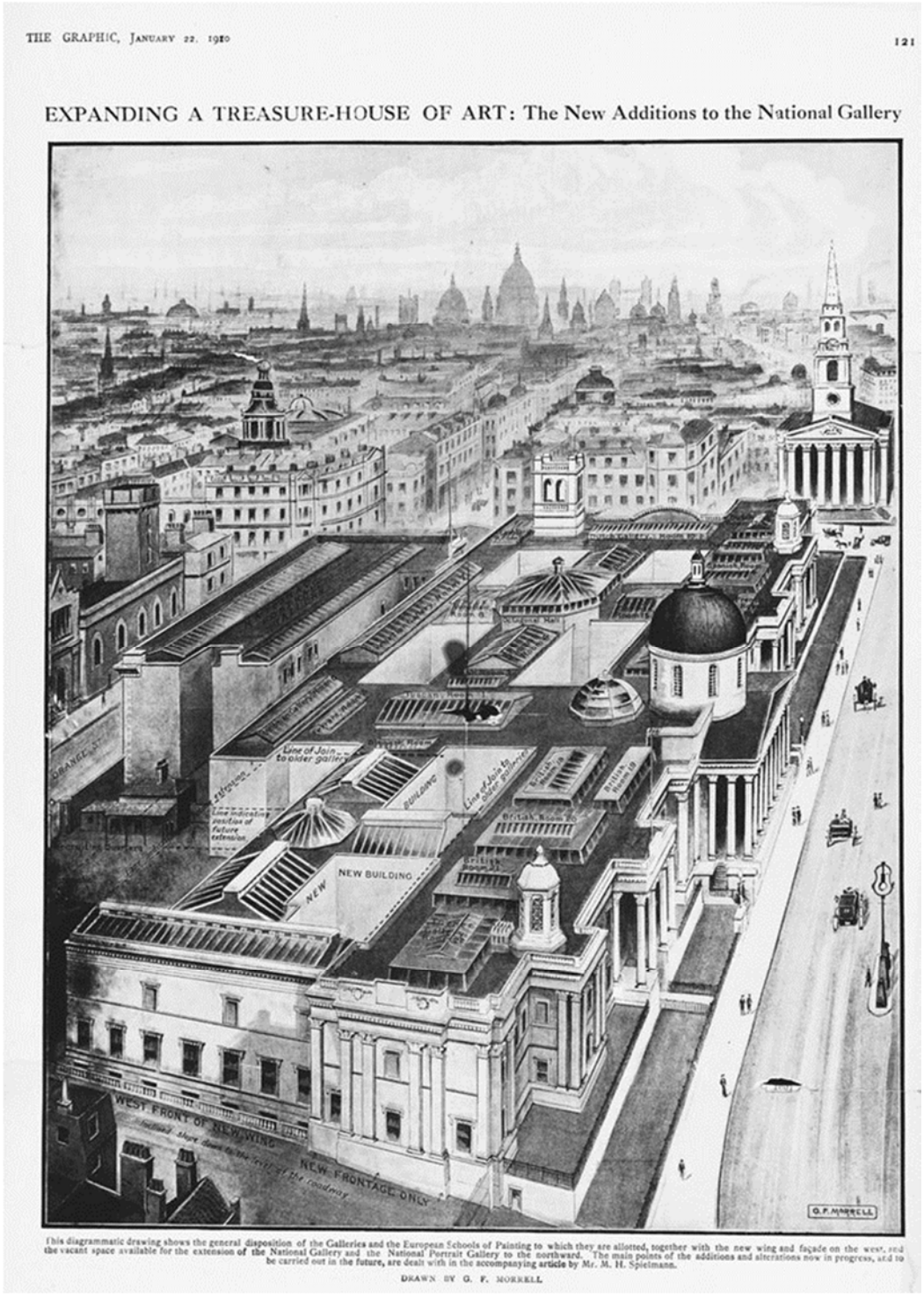

Fig. 19 - Expanding a Treasure-House of Art: The New Additions to The National Gallery by G. F. Morrell. Bird's-eye-view of the National Gallery including the new Barry Rooms at the top left, 1910 (From "The Graphic", 22 January 1910)

7.2.2 Sainsbury Wing

The most significant recent expansion of the National Gallery is the Sainsbury Wing, designed by postmodern architects Robert Venturi and Denise Scott Brown[13] to house the Renaissance painting collection, completed in 1991. Its construction was delayed after Prince Charles criticized an earlier modernist extension proposal by Ahrends, Burton, and Koralek.
Since the end of World War II, to the west side of the National Gallery was left a free space formerly occupied by a furniture store that was destroyed during the bombing, leaving the coveted northwest corner of Trafalgar Square as the center of public controversy. (Fig. 20)

Fig. 20 - The empty area near the National Gallery before the 1980s. (From https://en.wikiarquitectura.com/building/sainsbury-wing-national-gallery/, last view October 2025)

In 1950 the government bought the corner with the idea of expanding the building by William Wilkins, but the austerity imposed as a result of the war forced one of the most central corners of London remained empty for years, being used occasionally as parking. In early 1980 the government announced a public competition to design a building of mixed-use shops on the ground floor and extension of the National Gallery on the top floor. The parties, including representatives from the gallery, not agreed as to the architect, being suspended all projects until 1983 when plans were reviewed and reluctantly accepted by the parties, except the Prince of Wales in 1984 in a speech to the Royal British Architects Institute design branded as “monstrous carbuncle… in the face of a much loved and elegant friend…”. In 1985 the three brothers Sainsbury, business tycoons, proposed to take over the cost of enlargement putting a condition that the building was not mixed use, eliminating the commercial project. Began the search for new architects from names such as Henry Cobb of Pei & Partners, James Stirling and Robert Venturi, being chosen the latter for his “soft postmodernist style”.

The project included office spaces beneath the gallery, and a scale model was displayed at the Royal Academy in 1983. In 1985, a donation from John Sainsbury and his brothers enabled the creation of a dedicated building for the gallery. The wing blends with Wilkins' façade while reinterpreting classical architecture in a subtle postmodern architecture. (Fig. 21)

"The full range of cutting-edge contemporary architectural knowledge was put into practice by Venturi and Scott-Brown in the Sainsbury Wing of the National Gallery in London. The relatively small and discreet extension adopts the proportions, articulation of the façade and material (the splendid Portland stone, generously laid) of the main neoclassical building dating back to 1837, and the rhythm of the pilasters on its subtly curved façade creates a sort of precisely crafted screen: the interplay of imitation and interpretation, reality and mask, has been taken to the limits of virtuosity. Inside the building, a massive entrance staircase with spectacular views of Trafalgar Square and a sequence of spaciously designed rooms, housing the museum's services such as the entrance hall, bookshop, restaurant and auditorium, work together to form a new type of museum building, whose functional and architectural quintessence remains, however, the exhibition rooms for the collections on the first floor".[14]

This is how Vittorio Lampugnani, director of the German Architecture Museum (1990-1995), described the intervention in his essay *Looking at Architecture with New Eyes,* which accompanied the announcement of the 1991 Pritzker Prize awarded to Robert Venturi.

Fig. 21 - View from Trafalgar Square approaching the Sainsbury Wing, with new transparent glass and gates. Insertion of the new in the existence.

The architects also carefully studied the connection point between the existing architecture of the National Gallery and the Sainsbury Wing, using compatible materials and a simplified architectural language with clear references. This connecting space is used as a filter between inside and outside, between one part of the National Gallery and another. (Fig. 22)

Fig. 22 - The "bridge" between the existing architecture and the Sainsbury Wing. (From https://en.wikiarquitectura.com/building/sainsbury-wing-national-gallery/, last view October 2025)

Unlike the richly decorated 19th-century rooms, the Sainsbury Wing's galleries are deliberately simpler and smaller to suit the size of the paintings. (Fig. 23)

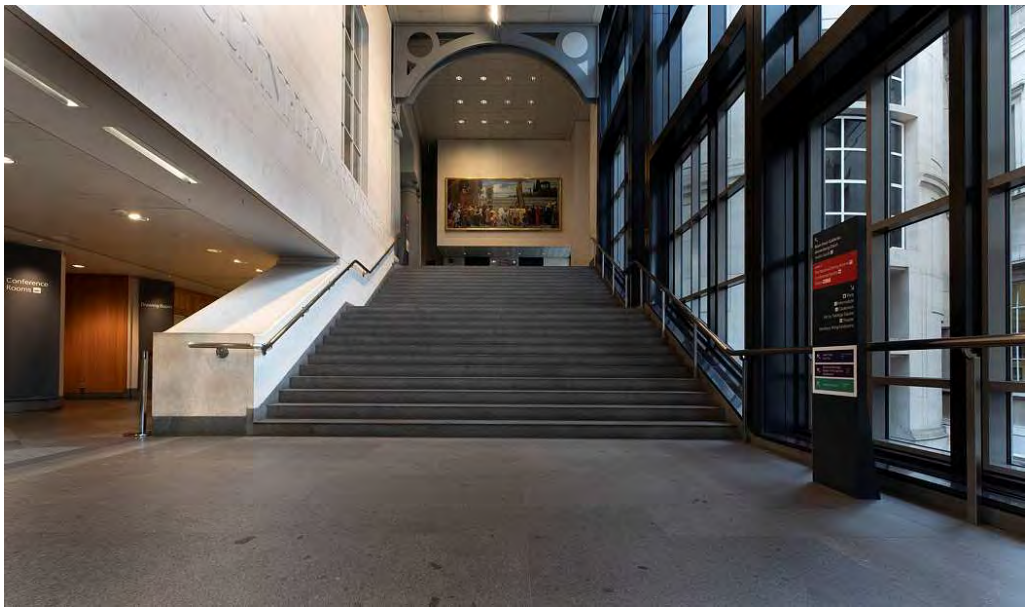

Fig. 23 - Sainsbury Wing stairs in 2019. (From "Museum Heritage" online magazine July 2021)

Venturi has used the same Portland stone in the main facade that facades lining the Wilkins building, in others uses brick or glass.
Inside the rooms are decorated in keeping the permanent collection that store, wooden floors combined with the light colors of the walls. The temperature and humidity are automatically controlled by computers for better protection of fragile wood panels of Renaissance paintings.
There are "micro galleries" in which are placed numerous computers that can be used by specialized assistants for information on the exhibits.
Inspired by Sir John Soane's Dulwich Picture Gallery, the white walls with gray stone details reference Brunelleschi's architecture.

Venturi's postmodern influence is evident through stylistic references to Pall Mall palaces, the Vatican's Scala Regia, Victorian warehouses, and ancient Egyptian temples. (Fig. 24)

Following the pedestrianization of Trafalgar Square, the Gallery converted former office spaces on the ground floor into public areas, used courtyards, and incorporated spaces from the neighbouring National Portrait Gallery. The East Wing project by Jeremy Dixon and Edward Jones opened in 2004, providing a new ground-level entrance from Trafalgar Square, with the main entrance refurbished and reopened in September 2005.

Fig. 24 - Cross-section perspective looking north through (from the left) the Sainsbury Wing and Wilkins rooms. (By Selldorf Architects page)

7.3 Isle of Dogs

The Isle of Dogs is a peninsula in East London, surrounded on three sides by the River Thames. It is part of the London Borough of Tower Hamlets and the Docklands area. It includes the districts of Millwall, Cubitt Town, and Blackwall. Historically known for public housing, it now hosts the Canary Wharf office complex, including One Canada Square, the tallest habitable building in the UK. The area shows strong social contrasts, with both very wealthy and deprived neighbourhoods. (Fig. 25)
The name “Isle of Dogs” is uncertain: it may come from Henry VIII’s hunting dogs or a corruption of “Isle of the Docks.” At the beginning it was a marsh, then reclaimed in the 13th century, flooded in 1488, and reclaimed again in the 17th century.
Urbanization began in the 18th century, and the area became a major commercial and port center, attracting many dock workers.

Fig. 25 - Bird view of Isle of Dogs, London. (From https://www.informagiovani-italia.com/isle_of_dogs3, last visit September 2025)

The area, which is predominantly alluvial in nature, has a geomorphological origin linked to the river sedimentation processes of the lower reaches of the Thames. Until the early 19th century, the peninsula was characterised by marshy and sparsely populated land, with limited agricultural and pastoral use.
With the advent of the Industrial Revolution and the commercial expansion of the British Empire, the area underwent a profound infrastructural transformation. In 1802, the West India Docks were inaugurated, designed to efficiently manage trade with the Caribbean colonies, particularly the traffic of sugar, rum and spices. (Fig. 26)
This intervention represented a milestone in the modernisation of London's port system, leading to economic and demographic growth in the area. The Isle of Dogs became one of the main hubs of the Port of London Authority, hosting warehouses, shipyards and logistics infrastructure.
In the 19th century, transport links improved with the London and Blackwall Railway and the Greenwich foot tunnel (1902).

Fig. 26 - A view of Isle of Dogs. We can recognize the Dockland Museum on the right. (From https://www.informagiovani-italia.com/isle_of_dogs3, last visit September 2025)

During the Second World War, the area suffered heavy bombing, which destroyed most of the port and industrial facilities. Despite attempts at reconstruction after the war, competition from container ports and the gradual shift of maritime traffic towards the east led to rapid economic and social decline from the 1960s and 1970s onwards.

After the war there was a brief recovery, but with the arrival of container shipping, the docks became obsolete and gradually closed in the 1970s-1980s, leading to unemployment and social decline.

The permanent closure of the docks between 1970 and 1980 led to widespread unemployment and the abandonment of numerous industrial areas. In response to this situation, in 1981 the British government established the London Docklands Development Corporation (LDDC)[15] with the aim of promoting urban regeneration and attracting private investment. The LDDC's actions led to the conversion of the industrial fabric into a new high-density business district, culminating in the construction of the Canary Wharf complex, which opened in the 1990s. This intervention marked the transformation of the “Isle of Dogs” into a financial centre of global importance, second only to the City of London. During the LDDC’s intervention, were built new offices, housing, and transport infrastructure were built, including the Docklands Light Railway and the Jubilee Line extension.

Fig. 27 - Museum of London Docklands.

In the 21st century, the Isle of Dogs is an area with a high concentration of tertiary activities and medium-to-high-end residences. The contemporary urban planning of the area integrates vertical office buildings, advanced transport infrastructure (DLR, Jubilee Line, Crossrail) and newly designed public spaces. The presence of urban parks, such as Mudchute Park and Farm and Millwall Park, helps to maintain an ecological and social balance within a highly urbanised context.

7.3.1 The Museum of London Docklands project

Here, we can find the Museum of London Docklands. It represents an important example of architectural preservation and urban heritage valorisation. The museum traces the history of the London docks, from the commercial first use of the 18th century to the post-industrial transformation of the Docklands. The building housing the museum, the n. 1 Warehouse,[16] is a significant architectural heritage site, designed as a warehouse for storing goods. (Fig. 27)

The Museum of Docklands tells the story of one of the greatest port cities in the world.

The Museum of London Docklands embodies adaptive new use of industrial heritage. Its architecture and materiality-originariuos brickwork, timber beams, and dockside location-serve as living testimony of the maritime past. Unlike a new-build cultural institution, this project deliberately anchored the museum in the authentic fabric of the Isle of Dogs, creating a dialogue between heritage and urban transformation.

The museum's permanent galleries cover four centuries of docklands history, including the transatlantic slave trade, the rise of London as a global port, and the everyday lives of dockworkers and communities. Notably, the "London, Sugar & Slavery" gallery[17] addresses Britain's colonial entanglements, situating the Isle of Dogs within global networks of exploitation and commerce.

By doing so, the museum contributes to ongoing discussions about memory, identity, and historical justice.

Built between 1800 and 1804 by George Gwilt and his son, the No. 1 Warehouse was an integral part of the West India Docks, the main commercial hub of industrial London. Its architecture reflects the functional and security requirements of the time: large interior spaces for storage, massive wooden columns to support heavy loads, and windows protected by wrought-iron bars for ventilation and safety. The building has been classified as Grade I Listed, recognizing its exceptional historical and architectural value.

The No. 1 Warehouse is an example of Georgian industrial architecture, where form follows function. Exposed brickwork gives solidity, while wooden columns and visible beams demonstrate the engineering of the era. Arched windows and iron-barred openings provide natural light, ventilation, and security. The adaptation of the building into a museum required minimal intervention, preserving its historical integrity while optimizing interior space for exhibitions.

Beyond preservation, the museum plays a strategic role in the cultural regeneration of the Isle of Dogs.

It offers free public access, educational programs, and community engagement initiatives that reconnect residents-many of whom are part of diasporic or working-class backgrounds-with their own local history. This social dimension counters the narrative of Canary Wharf as a purely corporate enclave by providing a cultural anchor rooted in the community. (Fig. 28)
Moreover, the museum aligns with theories of cultural urbanism, where heritage institutions act as catalysts for regeneration not only economically, but also socially and symbolically. By framing the Isle of Dogs as a space of historical depth rather than solely a financial hub, the museum rebalances the identity of the peninsula.

Fig. 28 - Exhibition room inside the Dockland Museum. (From https://www.londonmuseum.org.uk/docklands/, last visit September 2025)

The interior design of the museum does not directly recreate its past, there are no chests of species or barrels of molasses, although a small recreation of an 1830s rum store is tucked away in a corner. instead, elements of the authentic building form a backdrop to the museum's 12 galleries, which are spread over four floors. Visitors can see the authentic wooden queen post roof structure, while the museum's floorboards are the originarious west Indian pitch pine.
Despite its achievements, the museum faces challenges typical of post-industrial cultural institutions: securing sustainable funding, competing with larger metropolitan attractions, and maintaining relevance in a rapidly changing urban landscape. The relocation of the main Museum of London to Smithfield raises questions about how the Docklands site will continue to position itself within the city's museum ecology. (Figs. 29-31)
It is not just the museum's physical fabric that connect with the dock's history. Nevertheless, the Isle of Dogs remains a case study in how cultural projects intersect with urban redevelopment. The museum ensures that the area's narrative is not entirely dominated by financial capital, but also by historical consciousness and collective memory.

Fig. 29 - Exhibition show cases in Museum of London Docklands.

Fig. 30 - Technological and educational systems in the museum. (From https://www.londonmuseum.org.uk/docklands/, last visit September 2025)

Fig. 31 - Exhibition room in Dockland Museum. Showcases and display panels are the main systems used. (From https://www.londonmuseum.org.uk/docklands/, last visit September 2025)

The “MiD” also needs to be a particular kind of industrial museum, concerned not just with the material remains and recollections of dock work, shipbuilding and the other Thames’s trades, but also with the ways that systems of labour organization. (Fig. 32)

Fig. 32 - Interactives give visitors a sense of how the docks were a warehouse for the world's commodities. (From "Museum practice", 2003, p. 18)

The museal journey through the galleries is a prescribed route arranged by period rather than by theme. the experience is of a sustained and serious engagement with a conventional narrative history, illustrated by objects and images with some videos and technological instruments. (Fig. 33) the regimented chronology of the galleries does little to encourage the visitor to make longer term and more analytical connections.

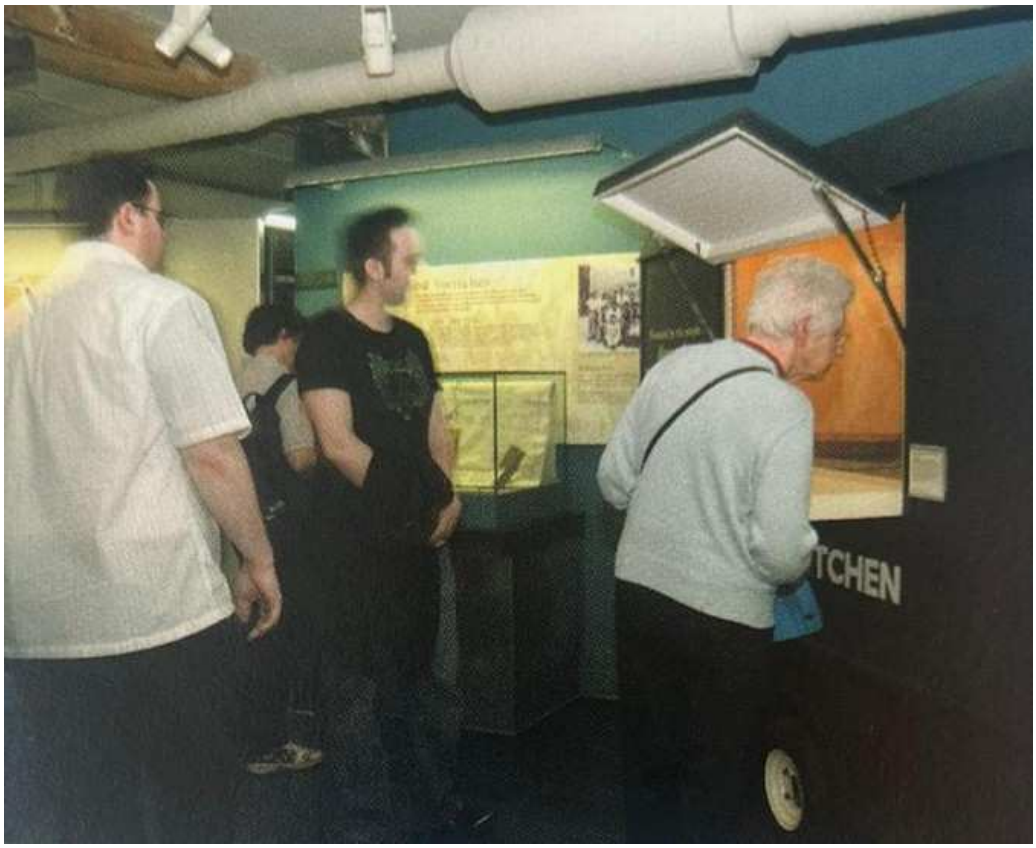

Fig. 33 - The social history of the docks is presented most effectively in the Docklans at War gallery using oral history. (From "Museum practice", 2003, p. 20)

Today, the Museum of London Docklands is not only an exhibition space but also a place where architecture itself serves as a vehicle for historical memory. Preserving the warehouse allows visitors to understand 19th-century London dock life and subsequent urban transformation. The integration of ancient elements with modern museum solutions exemplifies adaptation, showing how historic buildings can be repurposed without losing their architectural identity.
The Museum of London Docklands exemplifies the dual role of museums in post-industrial cities: as custodians of heritage and as agents of regeneration. In the Isle of Dogs, it preserves the maritime and social history of an area deeply marked by global trade and colonial legacies, while simultaneously contributing to the cultural fabric of a district otherwise overshadowed by corporate skyscrapers. Its existence demonstrates that sustainable urban regeneration must integrate not only economic development but also cultural memory and community identity.
The Museum of London Docklands embodies a dialogue between history, architecture, and urban memory. The n. 1 Warehouse is a significant example of Georgian industrial architecture adapted for contemporary cultural use, highlighting the importance of preserving architectural heritage as a tool for historical knowledge and sustainable urban development.

Notes

1. Henry Tate, also known as Sir Henry Tate, 1º baronetto (1819-1899), was an English entrepreneur and art collector known for founding Tate Britain in London.

2. John Russell Pope (1874-1937) was an American architect known for designing important American public buildings, including the "National Archives and Records Administration" (completed in 1935), the "Jefferson Memorial" (completed in 1943) and the "West Building of the National Gallery of Art" (completed in 1941), all in Washington, DC. He also worked in Great Britain and France: in fact, he designed additions to the "Tate Gallery" and the "British Museum" in London, an unusual honor for an American architect, and the "War Memorial in Montfaucon-d'Argonne", France.

3. Richard Llewelyn Davies, barone Llewelyn-Davies (1912-1981) was a Britain architect. He also was a Professor of Architecture at The Bartlett, University College London, from 1960 to 1969, and Professor of Urban Planning and Head of the School of Environmental Studies from 1970 to 1975. He became known, for hospital design and master planning in the UK with his associate John Weeks. Major early commissions included the design of Northwick Park Hospital and offices for The Times newspaper.

4. The Clore Foundation was established by Charles Clore and is now incorporated with his daughter's Duffield Foundation. The Foundation has supported a wide range of organizations including the Royal Opera House, the Tate, the Royal Ballet, the British Museum, the Natural History Museum, and many others.

5. James Stirling (1924-1992) was one of the most influential architects of the 20th century, capable of reinventing modernism with a personal and ironic language. From his training in Liverpool to major European museums, via teaching at American universities, his career had a profound impact on international architectural debate. Michael James Wilford (1938-2023) was an English architect from Hartfield, East Sussex. In 1960, he joined James Stirling's practice and in 1971 they founded the Stirling/Wilford partnership. Wilford taught extensively in schools of architecture including posts at Yale, Harvard, Rice, the University of Cincinnati in USA, the University of Toronto, McGill University Montreal in Canada, University of Newcastle, Australia, the Architectural Association in London, and the University of Sheffield, England.

6. John Harmsworth Miller (1930-2024) was a British architect. He is best known for his large-scale projects with universities and museums in England and Scotland, including Tate Britain, the Whitechapel Gallery, the Fitzwilliam Museum, the Scottish National Gallery and Newham College, Cambridge.

7. Bankside Power Station is a decommissioned power station located on the south bank of the River Thames, in the Bankside area of the Borough of Southwark, London. It generated electricity from 1891 to 1981. It was also used as a training base for electrical and mechanical student apprenticeships from all over the country. Since 2000 the building has housed the Tate Modern art museum and gallery.

8. Herzog & de Meuron is an architectural firm founded in Basel in 1978 by Swiss architects Jacques Herzog (Basel, 19 April 1950) and Pierre de Meuron (Basel, 8 May 1950), winners of the Pritzker Prize in 2001. They are particularly remembered for their use of concrete, which for the two architects was never a material to be hidden or masked; on the contrary, its intrinsic qualities were constantly exalted, demonstrating how it can be both raw and refined, massive and capable of surprising visual lightness, opaque but also reflective in the light. The architects attribute to it the role of a silent but powerful protagonist.

9. William Wilkins (1778-1839) was a British architect. Wilkins was influential in the development of Trafalgar Square in London, which had been opened as part of a project by John Nash. He designed the new National Gallery building in the neoclassical style and also drew up plans for the layout of the square itself. Some of these were not implemented, although the plan carried forward by Charles Barry after Wilkins' death replicated many of his ideas. The appearance of the National Gallery (1832-38) attracted adverse criticism from the outset.

10. John Julius Angerstein (1735- 1823) was a Russian-born British businessman and art collector who worked an underwriter for Lloyd's of London. His paintings were very important and so King George IV and British Prime Minister Lord Liverpool decided to incorporate his collection for the Nation, which led to the founding of the National Gallery. John Julius Angerstein's collection consists of thirty-eight paintings, including works by Titian, Raphael, Rembrandt and Rubens. The policy of continuously acquiring masterpieces from around the world throughout the century characterises the National Gallery as an example of a “museum of the ruling bourgeoisie”, alongside the British Museum and the Louvre in Paris.

11. John Nash (1752-1835) was an English town planner and architect who was knowledgeable about neoclassical and neo-Gothic architecture.

12. Edward Middleton Barry (London, 7 June 1830-London, 27 January 1880) was an English architect. A pupil of his father Charles and T. H. Wyatt, he was active in London, where he built the Houses of Parliament based on his father's designs. He was responsible for the reconstruction of the Covent Garden Theatre (1859-60) and the construction of the Great Ormond Street Children's Hospital (1871-76). He designed the extension of the National Gallery.

13. Robert Charles Venturi Jr. (1925- 2018) was an American architect and one of the leading figures of the postmodern movement. He won the prestigious Pritzker Prize in 1991. He taught at numerous universities, including Yale, Princeton, Harvard and UCLA, and was an honorary member of the Academy of Design Arts in Florence. He designed numerous buildings, but it is above all his theoretical work that has had a major influence. Denise Scott Brown (1931) is an American architect. She worked in Giuseppe Vaccaro's studio in Roma, designing several housing units for the INA housing plan. In 1958, she moved to Philadelphia, where she attended master's courses in architecture and planning at the University of Pennsylvania, where Louis Kahn was also a lecturer. From 1960, she taught at the same university, where she met and later married Robert Venturi. She later also taught at Yale. From 1967, she worked first with the Venturi and Rauch studio and then with Venturi, Scott Brown & Associates.

14. V. LAMPUGNANI, *Looking at Architecture with New Eyes,* essay for the presentation of Pritzker Prize, 1991.

15. The London Docklands Development Corporation (LDDC) was an agency established by the UK government in 1981 to redevelop the depressed Docklands area in East London. During its seventeen years of existence, it was responsible for the redevelopment of an area of 22 square kilometers. Although initially strongly opposed by local councils and residents, it is now generally considered a success and is used as an example of large-scale redevelopment, although tensions remain between older and newer residents.

16. The architecture of the Museum of Dockland (MiD) is housed in Number One Warehouse, West India Quary: the remnant of a row of warehouses that were once three quarters of a mile long. N. 1 was built in 1802 to store coffee, rum, molasses and sugar. At the time it was one the largest brick buildings in the world.

17. In the setting of this historic sugar warehouse, the London, Sugar & Slavery gallery reveals how London's involvement in slavery has shaped the capital since the 17th century. Key artefacts in the gallery are the surviving papers of Thomas and John Mills, who owned plantations in St Kitts and Nevis, providing us with glimpses into the lives of both the enslaved and the slaver. In the gallery you can experience an immersive sound and light show which is projected on the gallery walls every 20 minutes.

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Chapter 8

Neues Museum in Berlin

8.1 Premise

It is a way to retrace the various studies and research experiences, I had in Berlin and Germany during repeated research stays. In this case from the 1990s and continuing into the 2000s at the TU Berlin.
With this contribution, we wish to pay homage, first and foremost, to professor Wolfgang Wolters, then to professor Michael Petzet and prof. Jorg Haspel.
In those years in Berlin, in University lecture halls, museums, various construction sites, and throughout the city, history has been experienced daily through Reconstruction, Restoration, insertion of contemporary architecture and museum adaptations.
The Neues Museum in Berlin like the entire Musumsinsel expresses all of this.
The particular history of the pre-existence, among destruction and the long process of Reconstruction/Restoration with new addition and adaptation allows us to capture many significant moments for contemporary conservation.

Fig. 1 - View of the last façade (without south dome) of the Neues Musem, with colonnade, lawn, flowerbeds, and the stair stringer of the National Gallery, 1930. Zentralarchiv der SMB. (AA. VV., *The Neues Museum, Berlin,* Leipzig, Berlin, 2009 p. 14)

8.2 Chronology

The dramatic history of the 20th century can be summarized as follows. In a chronologically way:
1939 – September. The Neues Museum was closed to the public. At the beginning of 1940 the exhibits were gradually evacuated. Some of the large collections had to remain in the Palace.
1943 - on the night 23-24th November. The main staircase area was gutted after being hit by firebombs. Kaulbach's frescos are destroyed.
1945 – on 3th February several high-explosive bombs strake the Neues Museum, partly destroying or inflicting severe damage on the north-west wing and south-west, the south dome and the passage way to the Altes Museum.

Fig. 2 - Neues Museum façade. (AA. VV., *The Neues Museum, Berlin*, Leipzig, Berlin, 2009, p. 18)

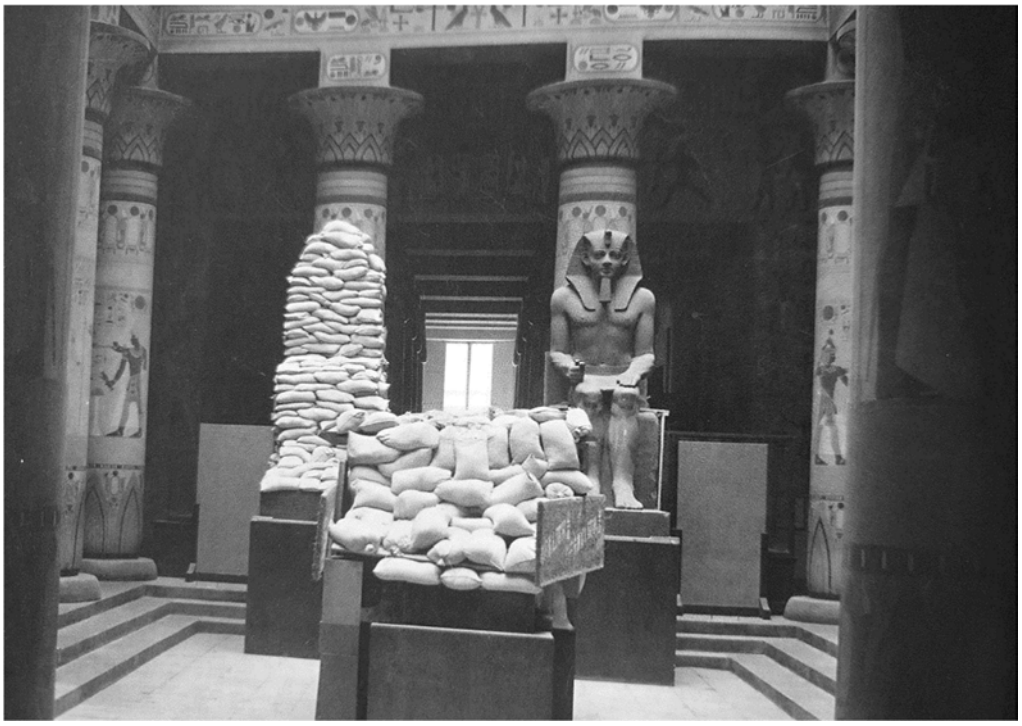

Fig. 3 - The Agyptischer Hof before its destruction 1942 with sandbags as a protective messure against bomb damage. (AA. VV., *The Neues Museum, Berlin*, Leipzig, Berlin, 2009, p. 18)

After II World War

1985 - The "Politburo" (Socialist Unity Party of Germany) and the Council of Ministers of the German Democratic Republic (GDR) adopt a resolution on the general "reconstruction of the Berlin Museum Island".

1992 - Commissioned by the Berlin Senate Department for Urban Development and expert Commission in monument protection wrote an appeal "for a complementary restoration" (published as *Beitrage zur Denkrnalpflege in Berlin,* n. 1, 1994) with essay: Ernest Badstübner, Hartmut Dorgerloh, August Gebeβler, Thomas Mader, Helmut F. Reichwald, Manfred Schuller, Wolfgang Wolters.

Fig. 4 - Columns at the depot. (photo David Chipperfield architect DCA) (AA.VV., *The Neues Museum, Berlin,* Leipzig, Berlin, 2009, p. 20)

Between 1993 and 1994: The competition

"Complementing the partially destroyed Neues Museum, including the necessary extension in the area of the Kupfergraben Construction, or reconstruction of connecting passage ways to the Pergamon Museum, construction or reconstruction of a connection between the Neues and Altes museum".[1]

In March 1994 the international jury chaired by Max Bächer, proclaims. George Grassi wins first prize, followed by David Chipperfield Architects, Francesco Venezia, Frank D. Gehry and Axel Schultes.

1994-1997 But Stiftung Preußischer Kulturbesitz are not convinced by the design for a museum. The President begin a review and advisory procedure to submit new proposal. The remit is now limited to the rebuilding and restoration of the Neues Museum in its old volume but now with the additional function of being a main entry to Museum Island with connections to the Altes Museum and the Pergamon Museum.

In December 1997, after a new competition between Gehry and Chipperfield asked further modify their plan. “Considerable doubts still remain on issues of historic preservation and the feasibility for a functioning museum”.[2]
In December 1997 the board of trustees of the Stiftung Preußischer Kulturbesitz decides for Chipperfield.
In 2000 was presented the current state and discussed at the public symposium by the TU Berlin under the auspices of prof. Wolfgang Wolters.
Between 2003 and 2004 after official ceremony with exhibition showing the plans for complex “Reconstruction/Restoration” is held.

Fig. 5 - Momischer Saal (space 2.02 in November 2004). (AA. VV., *The Neues Museum, Berlin,* Leipzig, Berlin, 2009, p. 48)

Fig. 6 - Momischer Saal (space 2.02 in June 2008). (AA. VV., *The Neues Museum, Berlin,* Leipzig, Berlin, 2009, p. 48)

Fig. 7 - Easter Kunstkammersaak (space 3.02) in November 2004. (AA. VV., *The Neues Museum, Berlin*, Leipzig, Berlin, 2009, p. 72

And finally, 5th March 2009, an official ceremony for the completion of the principal work.
The complex museum reality and not only in Germany, is beginning to find interesting solutions with the Neue Pinakothek in München (1976-1981) and the Staatgalerie in Stuttgart (1979-1983).
A certain "disappointment" is manifested with the Kulturzentrum near Potsdamer Platz in Berlin.
It unfolds around the central nucleus consisting of Hans Scharoun's Philarmonie, the Staat Biblioteck and Mies Neue Nationalgalerie, to which new architectural structures have been added which house the Kunstgewerbemuseum, the Kupferstichkabinett, the Kunstbibliothek, and the Gemäldegälerie.

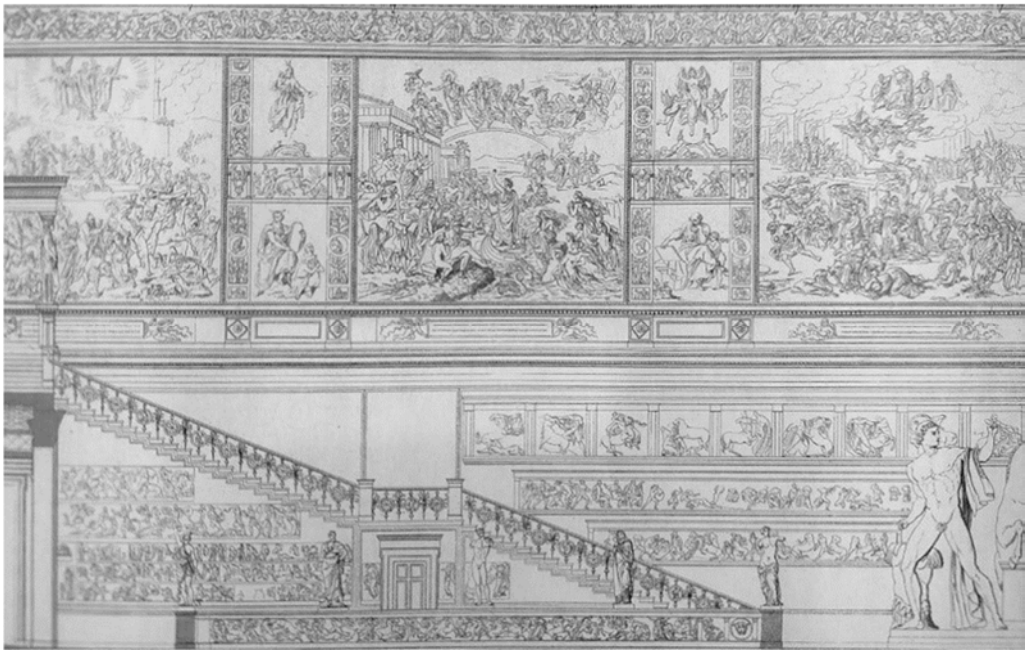

Fig. 8 - Friedich August Stuler. Das Neues Museum in Berlin. 24 plates 1862, plate 17. Showing the staircase hall of the Neues Museum with Kaulbadis words and a number of gypsoplats, detail (AA. VV., *The Neues Museum, Berlin,* Leipzig, Berlin, 2009, p. 24)

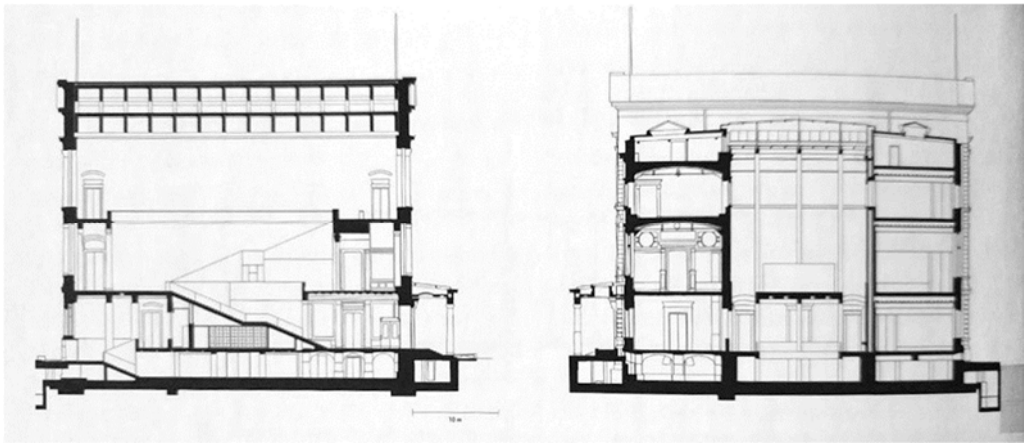

Fig. 9 - Longitudinal sections from top to bottom. Section A-A through staircase hall, looking north. Section D-D, east wing, Egyptian Courtyard with platform, new building. (AA. VV., *The Neues Museum, Berlin*, Leipzig, Berlin, 2009, p. 58)

Fig. 10 - Moderner Saal, historical column arrangement with barrel vault (AA. VV., *The Neues Museum, Berlin,* Leipzig, Berlin, 2009, p. 86)

Fig. 11 - Moderner Saal, condition prior to reinstallation (AA. VV., *The Neues Museum, Berlin,* Leipzig, Berlin, 2009, p. 86)

8.3 Historic and actual profile

Stuler's Neues Museum in the mid XIX century had opened the way for the future construction of the Alte Nationalgalerie, the Bode Museum and the Pergamon Museum, helping to shape Museum Island as a sort of new Acropolis intended to present Berlin as the German Athens of the 19th century.

Fig. 12 - Reintegration of the "lacuna". (CB 2009)

The Neues Museum wanted to express a vision of archaeology as the story of a living history, not devoted to the study of the past but rather an attempt to graft the ancient into the reality of people.

2009 should be remember for the reopening of the Museum in Berlin which Frederich William IV had commissioned in 1843 for Friedrich August Stuler to complete the work begun by Karl Friedrich Schinkel with the construction of the Altes Museum.
A rebirth designed by David Chipperfield which also consecrated the inclusion of the Museum Island in the UNESCO World Heritage List, after almost 60 years of planning and eleven of works.

Fig. 13 - Reintegration with pieces of different types of stone. The War drama has been preserved. (CB 2009)

The "reborn" museum has opened its spaces to the public who had been waiting for a long time, for the final result of a long journey that began with the fall of the Berlin Wall and the New Reichstag, with the new achievements recomposing not only the frame work of the great national institutions, but a new image of the city.
Chipperfield did not underestimate the reality that in Berlin, history is also polities and so he tried to reconcile Ruskin's cult of Ruins with a positive conception of the New/undoubtedly, the request of the committees…, led him to a calm reflection as did the dialogues with Wolfgang Wolters.
Berlin, the city of contradictions, highlighted the different architectural attitudes at the end of the nineties, from the almost morbid attraction towards the reconstruction of entire parts of the urban pre-existence, Brandeburg platz, Leipzigerplats to the creation of new architecture (Potsdamer Platz) to the restoration of the Castle opposite the Altes Museum to critical-conservative insertions.

Fig. 14 - Reintegration and union of the new part with the old part of the museum. (CB 2009)

Fig. 15 - The signs of terrible moment (the War) in the columns of Museum which are conserved. (CB 2020)

The author of the Neues Museum has incorporated the most advanced and thoughtful German and Italian theoretical developments.
Without forgetting the direct influences echoing the works of Guido Canali in "S. Maria della Scala" in Siena (1993-2003).
Thus Chipperfield preserved rather than rebuilt and gave a clear definition to the intervention, treating the authentic remains as a schedule of German History. He did not create a *tabula rasa,* nor a backdrop for a new background, but rather a patient process of reintegration in which the columns, the walls, the fragments of plaster and decorations were captured.
The complex result is difficult to summarize in just a few pages, offers a clair interpretative of the various operational approaches when working on a partially destroyed pre-existing structure.
Examples of pictorial restoration are condensed from the treatment of gaps the insertion of new elements, such as the staircase. Thus the multiple implementation of the various adaptations can be traced.

8.4 Theoretical reflections. Criteria and methodological approach between reconstruction/restoration/adaptation

Gottfried Kiesow writes in a 1988 essay, provides some definitions useful for operational developments: authenticity derives from the author, creator and means genuineness, credibility, reliability, while originality is defined as autonomy, being peculiar, particular. These assertions are the basis of many reflections.

"There cannot be a coincidence between the destroyed original and the copy created later, because there would be a change in the material".

And he continuous: … in monuments identity is constituted to a large extent by authenticity that is genuineness, credibility and reliability.[3]

He quotes Dehio: we do not preserve a monument because we consider it beautiful, but because it is a piece of our national existence. Protecting monuments but rather exercising an act of piety.[4]

Citing the case of St. Michael's Church in Hildesheim, Reconstruction faced an identity crisis. He then sends to clarify the difference between complete reconstruction and the integrative reconstruction of partially destroyed pre-existence. This method is justifiable instead of false (Rehabilitation) with optimized use.

A second essay in which further anticipations for the Berlin decisions can be found in Hartwag Schmidt on the concept of Reversibility. "The result of the intervention must be reversible, that is, it must not cause any damage to the monument in the event of its removal. In short, even Morsch wrote, the meaning always remains the same: the possibility of removing the materials introduced into the material structure".[7]

The essay concludes with a statement: Reversible measures are for the most part the simplest and must respectful and therefore also most tolerable.[6]

A subsequent essay, a source of inspiration for the intervention, may have been that of Georg Morsch from 1987 "the widest possible conservation of the stratifications of historical substance rather than their maximum visibility". Then the full validity of the Venice Charter is reaffirmed. Finally, it is started that: "This heritage must be preserved as intact as possible for and ever-new debate of ideas… because it is the task of restoration so pass this historical substance in its integrity".[7]

A fourth reflection is due to Walter Frodl who in 1987 specified that: "I must confess that I was not at all enthusiastic about the reconstruction of the Goldener Saal in Augsburg, but I am beginning to think about it.

The project presented disappointed the prospect of a modern reworking.

When post-war reconstruction proposed the Reconstruction of individual significant monuments for ideal, aesthetic, or sentimental reasons, the circumstance had to be justified by the emergency situation. Thus we had the reconstruction of the historic centers of Poland and the creation of copies of lost monuments".[8]

The author retraces several theoretical moments of the 20th century to reiterate that the Amsterdam Declaration and the concept of integrated conservation transcend the reality of the individual monument.

At the same time, he recalls how many historical and artistic visual values have fallen into ruin, thus reevaluating copies our visual memories than can play a role in collective sentiment.
Michael Petzet still in 1988 wrote: the reflection articulates concepts and operational aspects. "Reconstruction yes, reconstruction no, and this is where controversies and discussions arise."
Although reconstruction means pristine state in our language reconstruction and pristine situation are not the same thing.
Reconstruction means (more than anything) the Rebuilding of preexistence destroyed.
The concept of Reconstruction (Wiederaufbau) does not require the need to approach the appearance of the lost origin.
In opposition, Pristine state refers to the act of reconstruction a lost "original".
In addition to the complete pristine state then is also the partial pristine-state, and intervention measure which is defined as completion (Ergänzung).
Furthermore, a reconstruction cannot be made without a solid scientific basis.
Then on some terminological misunderstandings but this highlights the difficulty of navigating this complex field.
The conservative's skepticism toward any form of reconstruction rests primarily on the awareness that history cannot be revived that reconstruction cannot replace the "origin".
In particular cases, reconstructions can also be proposed to better clarify a fragmentary condition within a furnishing or within still existing built parts.
The author reviews series of restoration interventions in Europe and presents a diverse spectrum of possibilities: restoration that in some individual cases was carried out with similar forms and material, that aimed at reconstructing phases prior to the monument and the removal of all the remains of the past and the new beginning with a modern architecture.[9]
And the Hanno Walter Kruft in 1993 wrote: *Rekonstruktion als Restauration? Zum Wiederaufbau Zerstorter Architektu.*
This essay highlights the debate on post-war reconstruction touching on the fundamental question of how public opinion views monuments.
Although the distancing from architectural reconstruction is clear, the latter are nevertheless accepted as works of the present.
And again: "the question of the level of destruction, which is important, cannot be given an approximate answer.
He concludes by starting that the debate on the reconstruction of architectural monuments in Germany has received a decisive impetus since reunification, arguing that we are faced with political decision of primary importance.
He also argues that it would have been disastrous if reunified Germany needed such symbols of identity, not intended as an attempt to look to the past.
These reflections constitute the theoretical substratum that I perceived when the topic of the Neues Museum was being debated in Berlin".[10]

8.5 Project and realization

The Neues Museum. Architectural concept

The spirit of the entire complex intervention program implemented can be found in the reflections on the projects authors themselves and of the various operational phases.

Reconstruction, conservation, restoration, renovation, and repair are all at our disposal, no technique has a moral certitude of its own, only the purpose of its application can invest it with one. [11]

And the author continues: "…Desiring neither to imitate nor invalidate the remaining complex of ruined fabric, a Piranesian structure of brick and architectural fragments, our concern has been motivated desire to protect and to repair the remains, to create a comprehensible setting and to reconnect the parts back into an architectural whole".[12]

And also "The meticulous process of repair and restoration carried out under the guidance of Julian Harrap. The Neues Museum contains a series of major interventions/moment where the neutral imitation of the (origin) was judged to be insufficient".[13]

We can see clear references to the Venice Charter, and seven earlier the Historie principles of Georg Dehio. At the same time, some solutions recently implemented in Italy seems to have been adopted, such as the Santa Maria della Scala in Siena.

Julian Harrap writes in the *Restoration Concept*; these included wall paintings, painted decor, cornice and door frames which had survived in a remarkable state of preservation.

The *Niobidensaal* "was almost completely preserved while the decoration in the *Romischer Saal* was completely intact at the northern end, but highly fragmented at the southern end".

The rooms on the upper levels of the museum were in many ways some of the most romantic spaces imaginable, with fragments of decoration that had surveyed exposure to the weather for decades since war.[14]

A new form of architectural expression is in dialogue with ancient.

In summary the project restores the context in a way that makes the structure and sequence of the spaces legible. It was necessary be reconstruct the southeast corner including the dome, the apse of the Greck courtyard and the volume that redefines the L-shaped northwest corner. The staircase itself was rebuilt, with contemporary character.

It should be noted that recycled bricks were used, integrating with the preserved parts. It is important remember that: structural consolidation was necessary. In fact, the unstable ground was frozen with nitrogen dioxide, while the works took place.

Museological Concept

The Neues Museum is an organic part of the complex organism called the museumsinsel. After the fall of the Berlin Wall, the decision was clearly on the Neues Museum as the New home of Berlin's archaeological collections.

The idea of an "Archaeological Promenade" constitutes the basic of the architectural adaptation of the museum display.

It is important remember some precedents in this procedure. Chipperfield recalled Albini, Scarpa, Minissi and Canali… "a new element with great care an attention to detail".
Dietrich Wildung wrote: "the principle of intercultural, comparative displays, adheres to traditional practice of the Museumsinsel, as manifested in the ensemble formed by the processional street and the Ishtar Gate from Babylonia, the Market gate from Mileto, the Pergamon Altar and Palace facade from Mshatta".[15]
It was followed chronological arrangement of museum exhibits. The museological concept interacts with the architecture of preexistence.
In particular, for exhibition designer Michele de Lucchi from Milan has created the installation for structures, display and showglasses with the authorities and the museum curators. We have the interaction between architecture and displays.
The Apollo Saals forms a prelude to the space containing the head of Nefertiti, probably in the main attraction for many visitors.
In detail, Nefertiti receives visitors "in majestic solitude" in the Northern Domed Hall, at the inter section of extensive sightlines.[16]
Like the other museum, the Neues Museum establishes a dialogue with its visitors using audio-guides.

Fig. 16 - Stairhall. View of the east wall and ruined caryatid porch in 1985. Zentralarchiv der SMB. (AA. VV., *The Neues Museum, Berlin*, Leipzig, Berlin, 2009, p. 60)

Fig. 17 - Stairhall. 2020 New construction of the stairs. The door is the only thing remained. (CB. 2020)

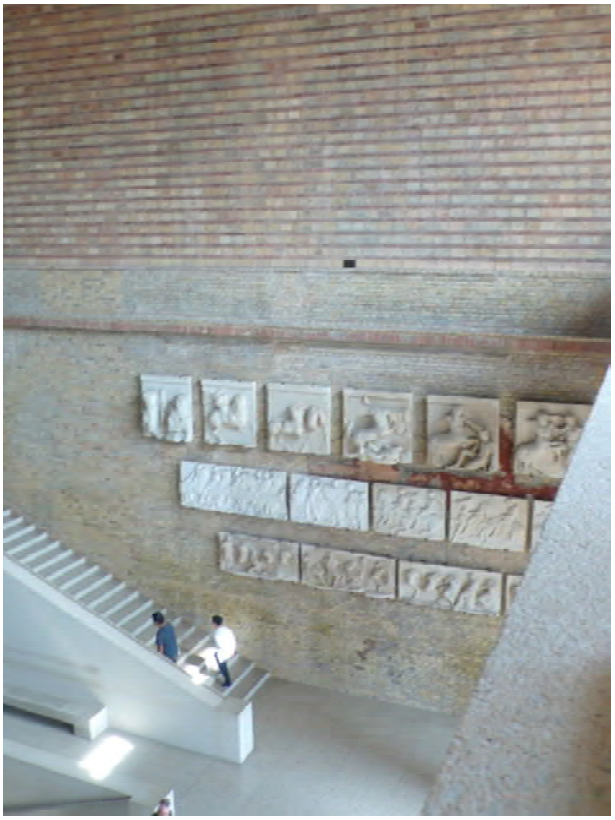

Fig. 18 - Stairhall. Detail of the fragments exmposed on the wall. (CB 2020)

Fig. 19 - Stairhall. Detail of the stairs and the railing of a stone. (CB 2020)

Fig. 20 - Stairhall. Detail of the door with the elements that remained from the destruction. (CB 2020)

Fig. 21 - Glass and iron cover on the top of the cloister. (CB 2020)

Fig. 22 - Second floor with the remains of the paintings. (CB 2020)

Fig. 23 - Restoration of the ancient space with exhibition showglasses. (CB 2020)

Fig. 24 - New showglasses for the Egyptian remains. The essential line is important. (CB 2018)

Figs. 25- 26 - The Nefertiti bust in the museum. The problem of people that don't allow to see the work of art. (CB 2018)

Fig. 27 - The mosaics and the new passarels to see and protecting them. (CB 2018)

Fig. 28 - Detail of the mosaics. (CB 2018)

Fig. 29 - The exhibition rooms. Show-cases are too big compared to the room. (CB 2018)

Fig. 30 - The entrance. We can see the necessity of make it bigger. (CB 2018)

Fig. 31 - The ancient wooden chests with fragments and pieces of mosaics, as arrived to Berlin. Today they are exposed in a contemporary show-case. (CB 2020)

8.6 Considerations

In summary, the north-west wing was completely reintegrated with an external envelope in reemployed bricks, the color of which had been selected to relate to the surviving parts.
The rhythm of the windows echoes the initial ones, but with a design of absolute sobriety, contained within the scheme of solids and voids.
The windows are frameless. The treatment of the external surfaces represents the decision to stop time: it allows the ruinous aspect of the pre-existing structure to be presented.
For the interiors, it was decided to reorganize the space. Both courtyards were excavated down to the basement, allowing, in the so-called Egyptian courtyard, a view from above of the display of Sarcophagi.
The Egyptian courtyard, to the north, illuminated by zenithal light, is stabilized with the new insertion of a 50x50 cm reinforced concrete pillar structure which supports a gallery and a new translucent glass and steel roof.
The main staircase, “rebuilt” in a new shapes and materials, in white prefabricated concrete with stone aggregate, is the result of a reintegration with a compact body, in contrast with rough walls, in reddish bricks which remained without decorations.
Great importance was given to the conservation of the interior decorations. This was decided room by room based on the different states of conservation. Thus, what remains can be seen in patches of color and the original finish.
The bare walls were painted and shaded using grout and paint, and where the bricks were missing, local historic ones were reemployed.
The Palladian and mosaic floor were reinstated for use. Furthermore, the missing and no longer usable elements were replaced with new ones.
In conclusion, we have a complex critic-conservative restoration in Berlin, with contemporary museographic solution.

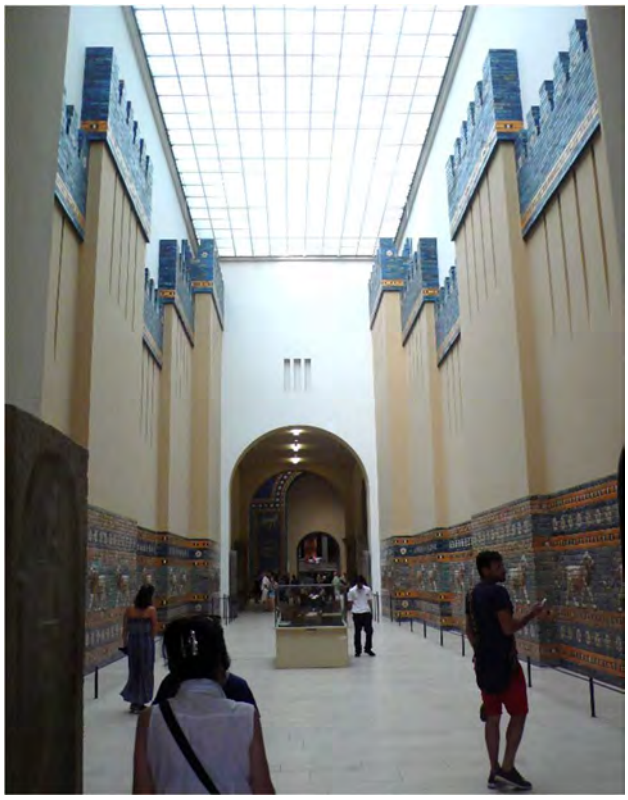

Fig. 32 - Neues Museum. Recomposition of the ancient walls and fragments from Babylonia. (CB 2020)

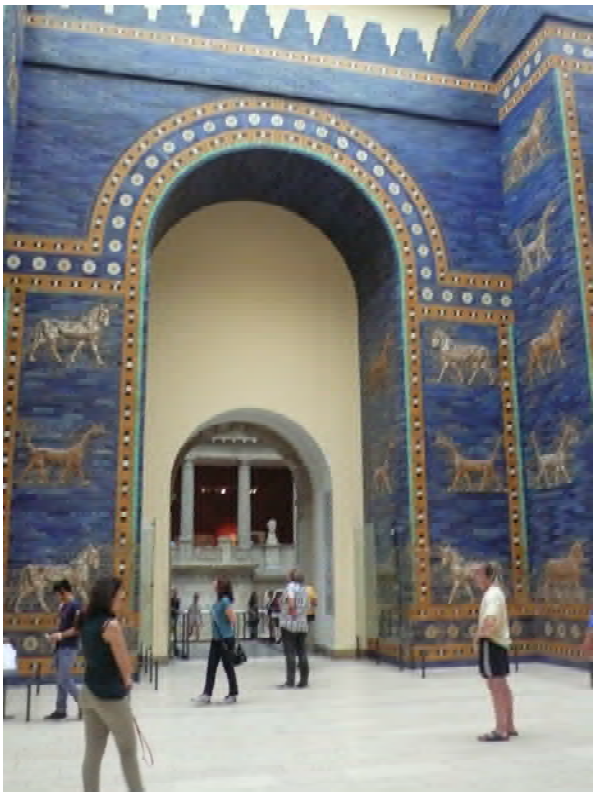

Fig. 33 The blue walls from Babylonia with the lions decorations. (CB 2020)

Fig. 34 - Reintegration of the tail of the lions. (CB 2020)

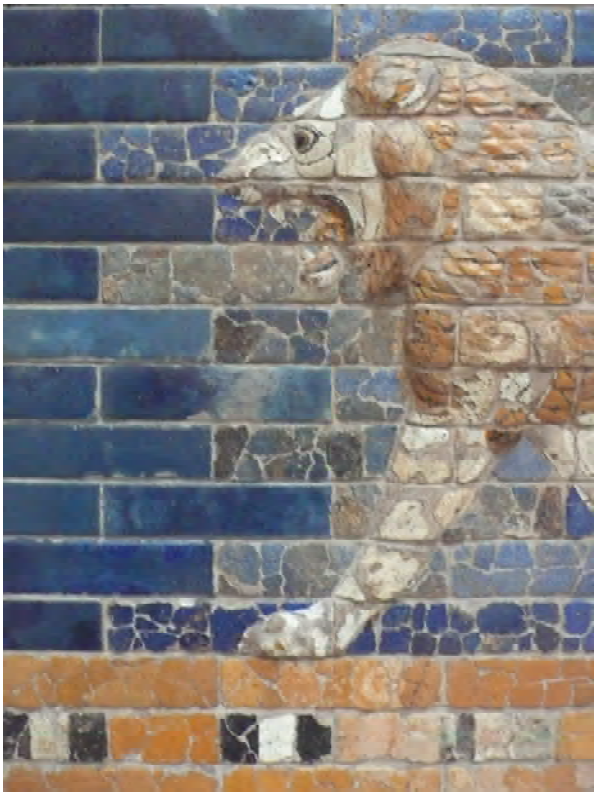

Fig. 35 - Reintegration of small pieces of bricks. (CB 2020)

Fig. 36 - The recent integration of the Pergamon Altar inside the museum. Probably it is too much new. (CB 2020)

Fig. 37 - Reintegration of "lacune" in the walls and exposition on pedestals of work of arts. (CB 2020)

Fig. 38 - Contrast between the new part and the old Neues Museum. New entrance to the south (James-Simon Galerie). A deliberate distinction is evident with the dense cluster of pillars. (CB 2018)

Fig. 39 - Lateral view of old and new part of the museum and its context. (CB 2018)

Fig. 40 - Detail of old and new columns. Traces of the War can be seen in the ancient pillar. (CB 2020)

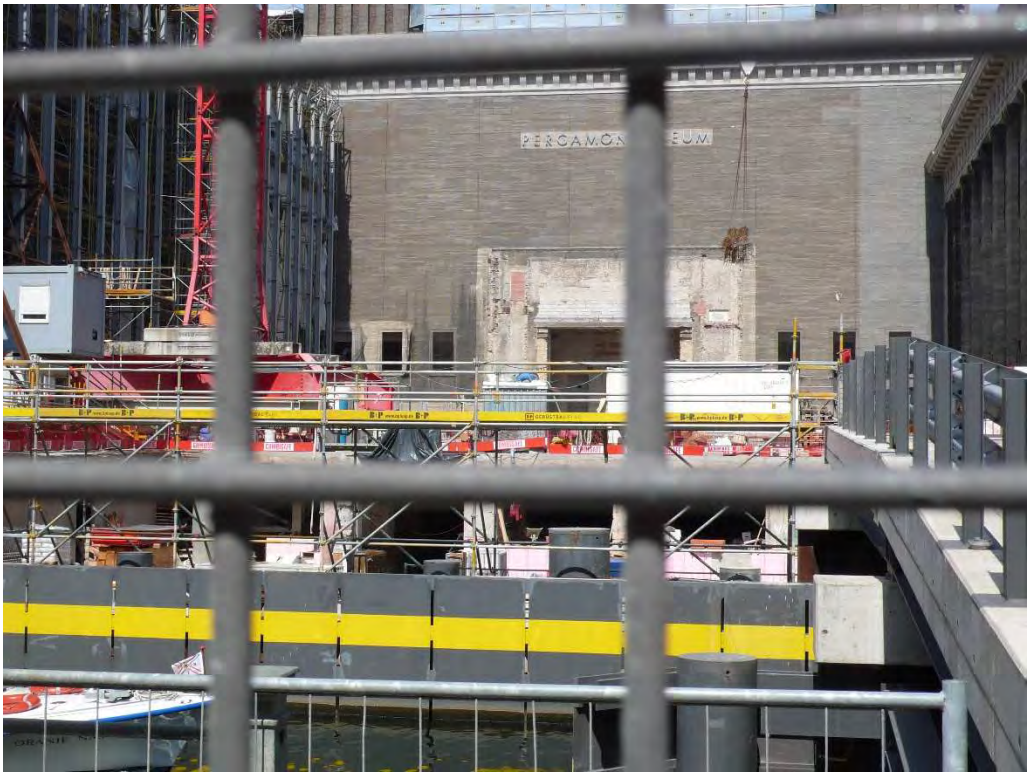

Fig. 41 - Museum during work in progress. (CB 2018)

Fig. 42 - Contemporary architecture in front of Neues Museum with reflects. (CB 2020)

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6. Ibidem.

7. G. MORSCH, *Denkmalpflege zwischen Wissen and Gewissen,* in "Denkmalschutz Informationen", 11, 1987, pp. 46-52.

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9. M. PETZET, *Kopie, Rekonstruktion und wiederaufbau,* in "Juhrbuch der Bayrischen Denkmalpflege", n. 42, 1988, pp. 175-179.

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Chapter 9

Some issues of the adaptation work

Susana Mora Alonso-Muñoyerro

The volume is dedicated to museums, but the approach to the use of existing architecture over time has always been consistent. Therefore, we believe it is essential to devote a few pages to the more general topic of the compatibility of interventions on our architectural, historical, artistic and archaeological heritage from a broader perspective.

9.1 Typology: big to big & small to small adaptations - big to small & small to big adaptations

Function creates form, but what is to be done with the form once the function has disappeared? Can the existing form accommodate the new function? The whole business of working with existing architectures turns upon the form/function dialectic: a conversion only succeeds when there is a good match between new function and existing form. It is therefore necessary to analyze the nature of the existing built fabric before one can suggest a new use. Because "out of the encounter between old envelope and new requirements and means, a unique object will be born — one which is no mere juxtaposition, but a synthesis from the point of view of both construction and architecture" (Claude Soucy).
There may exist a symbolic affiliation as when, for example, a church it is built within a pagan temple. The use to which any architecture is convened converted in feature a symbolic content at least equivalent to that found in the authentic one.
We can organize pre-existences in different scale: from small to small, big to big, big to small and small to big. In particular, for the first one, architecture does not meet the modern habitability and comfort standards, which are being implemented. The former use (housing, prison, hospital, etc.) might have been lost, and the adaptation into apartments and houses be seen as an opportunity. This is the case of residential architecture that are no longer in use (old houses, palaces, jails, monasteries, convents, etc.) and seen the opportunity to adapt it to a more modern way of living. Typically, the existing building won't comply with the current standards of habitability, security and comfort, which should be implemented in the project of adaptation.

There could appear the necessity to modify typology-based features, such as floor height, housing division, etc. For example, think about “Le Murate” in Florence by Mario Pittalis, that was a prison adapted to a “mixed use housing”. (Figs. 1-3)

Fig. 1 - Particular of “Le Murate” in Florence. (SM 2018)

Fig. 2 - "Le Murate", Florence, as a prison, before the intervention. (Private collection SM)

Fig. 3 - "Le Murate" in Florence by Mario Pittalis. (S.M. 2018)

From big-to-big scale, transformation requires finding a new use to the pre-existence, while maintaining unity and the qualities of space. It may be difficult to find spaces for compartmental use (offices, bathrooms, etc.) and to accommodate systems and installation facilities. These may require some creative solutions. In a similar way, there are pre-existences with a unitary, closed composition that have lost their use. This is the case with old churches which no longer hold a religious use. The main feature of this historic architecture is its own morphology, space and ornamentation. The new use should respect these qualities of the building, which are more suitable for representative or public functions (theatre, concert hall, library, etc.). The division of the building with mezzanines or storey should be carefully considered and avoided when possible. Think about the Church of Pias Schools of San Fernando in Madrid converted to a library thanks the project by Linazasoro & Sanchez Architects. (Figs. 4-5)

Fig. 4 - Church of Pias Schools of San Fernando in Madrid before the works. (Private collection SM)

Fig. 5 - Church of Pias Schools of San Fernando in Madrid after Linazasoro and Sanchez intervention. (SM 2018)

From big to small scale, the historic building that undergo these types of transformation are usually industrial architecture and they are valued for their historical role in the urban context, and the economic value of its construction, but not necessarily for their artistic or architectural values. In this section it is presented the case of the adaptation of a former industrial building into a program which requires smaller and more compartmented spaces, such as housing. One of the main concerns is to preserve elements and spaces that are representative of the architecture or to design any new space that can explain its previous scale. About this, we should remember the restoration of the Former ¨Ceramiche Titano¨ Factory in San Marino adapted to a residential by Gabetti & Isola Fusari. (Figs. 6-7)

Figs. 6-7 - Former ¨Ceramiche Titano¨ Factory in San Marino. (SM 2018)

Finally, moving from small to big scale presents some uncommon transformation: the replacement of residential buildings by new buildings of tertiary use, or the conversion of houses, palaces, farmhouses, etc. can occur in public uses of small-medium scale (municipal offices, visitor centres, libraries ...). This conversion into a large-scale view (municipal offices, visitor centres, libraries, etc.) is infrequent and have many inconveniences. (Figs. 8-9)

Fig. 8 - Azkuna Zentroa - Alhondiga Bilbao before the works. (Private collection SM)

Fig. 9 - Azkuna Zentroa - Alhondiga Bilbao after the works from warehouse to public use. (SM 2015)

9.2 Programme: extensions; bubbles

Function creates form. but what is to be done with the form once the function has disappeared? Can the existing form accommodate the new function? The whole business of working with existing buildings turns upon the form/function dialectic: a conversion only succeeds when there is a good match between new function and existing form. It is therefore necessary to analyze the nature of the existing built fabric before one can suggest a new use. because “out of the encounter between old envelope and new requirements and means, a unique object will be born — one which is no mere juxtaposition, but a synthesis from the point of view of both construction and architecture” (Claude Soucy).
There may exist a symbolic affiliation as when, for example, a church it is built within a pagan temple. The use to which any building is convened converted in feature a symbolic content at least equivalent Io that found in the original.
About the functional program we can talk about Extensions, bubbles, parasites and horizontal and vertical compartmentation.

Extensions
An extension consists of the construction of new architectural spaces to satisfy the needs of an already existing building. An extension may be required due to the need or desire to accommodate new program, to the obsolescence of the historical building or due to an adaptation to a new use. Different strategies can be followed to insert the new spaces, establishing different relations to the historical architecture. Talking about extensions we consider alongside, within, around and under. (Fig. 10)
An extension alongside is the most common type of adaptation, which consists in the construction of a new structure attached and connected to the previous building. The complex can be perceived as a whole body or it can be designed as a new pavilion clearly distinguishable from the authentic. (Fig. 11)

Fig. 10 - Guggenheim museum extention by Gwathmey, Siegel & Associates in 1990 following F.L Wright’s project. (Private collection SM)

Fig. 11 - Gothemburg Law Court by Gunnar Asplund around 1934-1937. (SM 2015)

An extension is an uncommon case. It would involve building a new space next to every side of the historical building surrounding it. This can serve the purpose of giving the architecture a new façade, like in the case of Palladio's Basilica. (Figs. 12-13)

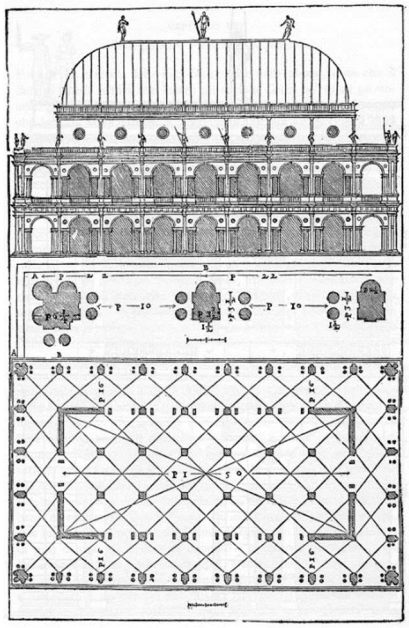


Fig. 12 - Vicenza Basilica by Andrea Palladio. (Private collection SM)

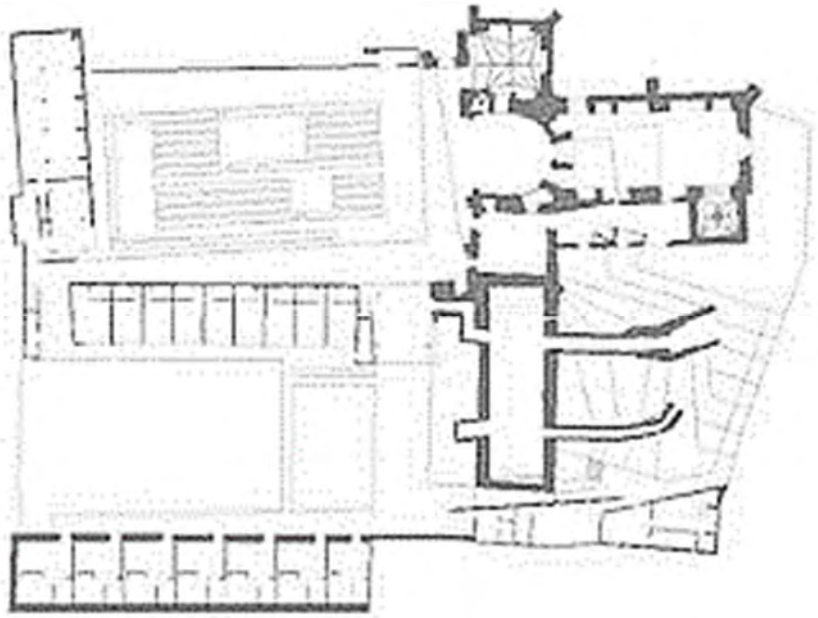


Fig. 13 - Hispanic-Portuguese-Institute 'Rei Alfonso Henriques. (Private collection SM)

Talking about an extension under the preexistence, the intervention is developed underground in order to preserve the old building. The new space can be located under the building, as a basement, or next to it. A problem this option would face is the necessity of entrance to the extension, which could be solved with new independent access. The Caixa Forum in Barcelona, for example, projected by Roberto Luna and Arata Isozaki can be an important example of it (Figs. 14-15).

Fig. 14 - Extension of Caixa Forum, Barcellona Spain. (SM 2011)

Fig. 15 - Extension of Caixa Forum, Barcellona Spain. (SM 2011)

An example of extension under the architecture can be seen in Madrid, in Spain, in particular on the project for Prado Museum by Rafael Moneo. (Figs. 16-18)

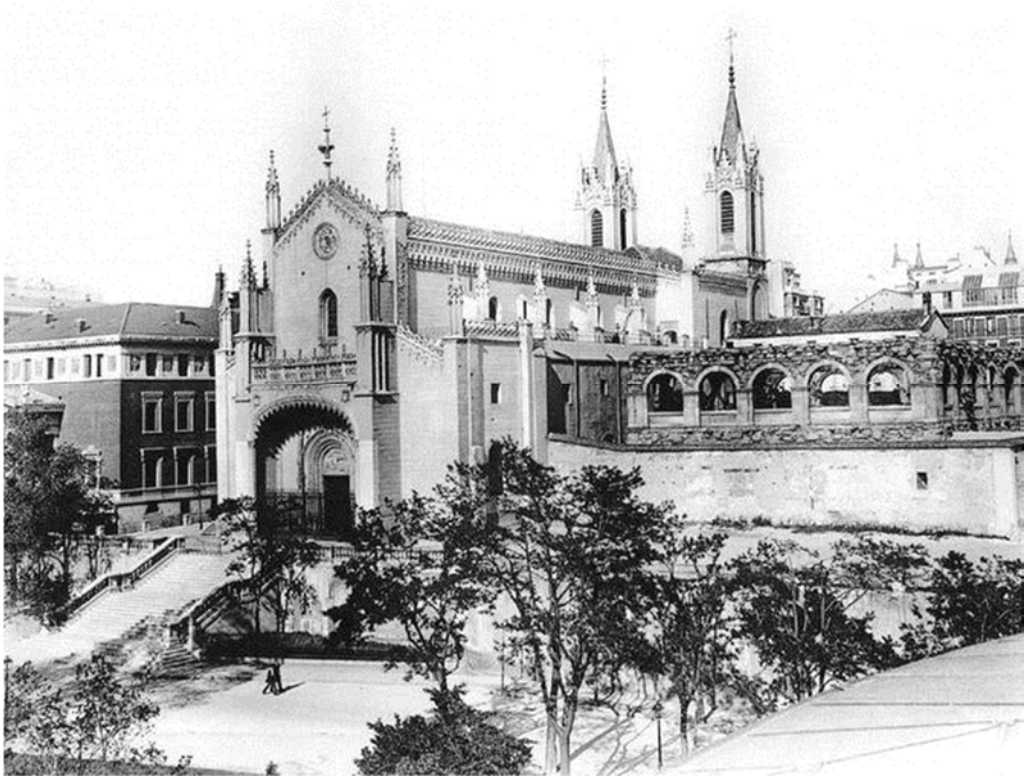


Fig. 16 - Prado Museum before the extension. (Private collection SM)

Fig. 17 - Prado Museum with the new extension. (SM 2020)

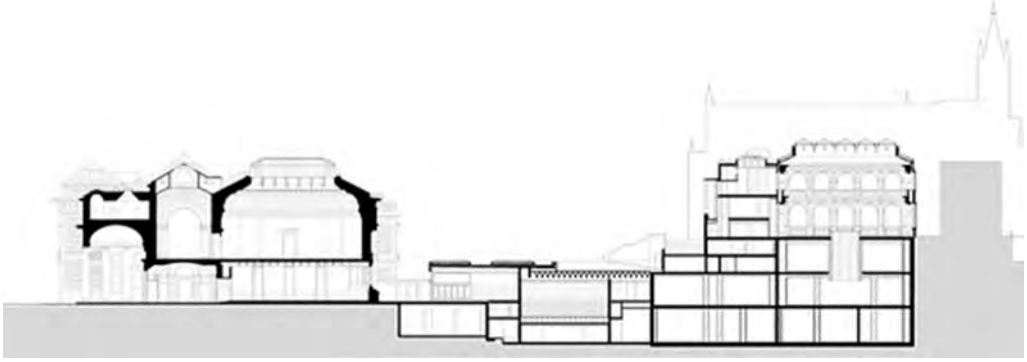


Fig. 18 - Transversal section of Prado Museum with the new extension. (Private collection SM)

The last type of extension is within This is the case of a building designed around patios and courtyards, which can now be covered to serve new functions. An example of this es the Mosque-Cathedral of Córdoba, in which the cathedral was built in the mosque's patio. A more recent example is the British Museum by Forster and partners. (Figs. 19-20)

Fig. 19 - Interior courtyard of the British museum in London, United Kingdom. (SM 2018)

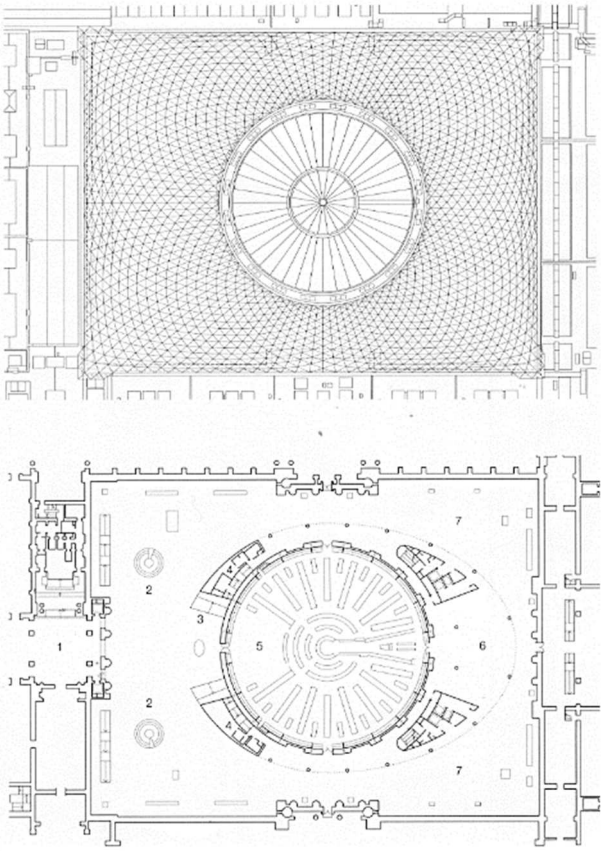


Fig. 20 - Plans of Interior courtyard of the British museum in London, United Kingdom. (Private collection SM)

Bubbles – inserted boxes

This type of intervention consists in the insertion of 'boxes', architectural object and spaces design in order to complement the functional needs of the building's function. Boxes and bubbles may provide thermally insutated spaces, bathrooms, water, gas, electricity, drainage and air-conditioning installations, staircases, etc. The main advantage in the use of boxes in the adaptation of historical buildings is that this element is able to fulfil the functional requirements of a certain use, without transforming the image of the valuable spaces. Another advantage of this alternative is the possibility to prefabricate the inserted elements, its flexibility, etc.

There are a lot of examples in the world on bubbles insertions; one of these is the House in Azeitão, in Portugal done by Aires Mateus. (Figs. 21-22)

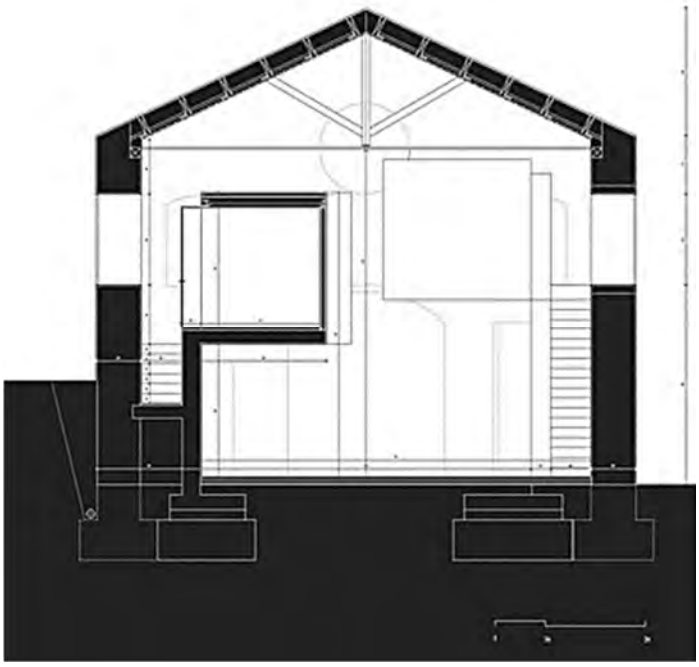


Fig. 21 - Section of House in Azeitão, in Portugal. (Private collection SM)

Fig. 22 - Bubbles in House in Azeitão, in Portugal. (Private collection SM)

Parasites

Similar to the boxes and bubbles, parasites are an architectural strategy that allows to change the scale of a space (the container) by introducing a formally complex object. The parasite invades the space, apparently not touching its limits and generating a new system of opened and closed spaces. It creates spaces closer to the human scale.

One of the requirements of this strategy is to touch as few elements of the historical building as possible. Another point to take into account is to design spaces of the right size, big enough for the proposed activities, otherwise, this architectural piece would only be a sculpture. Think about Casa dos Cubos. (Figs. 23-24)

Monitoring and environmental interpretation center in Tomar, Portugal, by Embaixada Arquitectura.

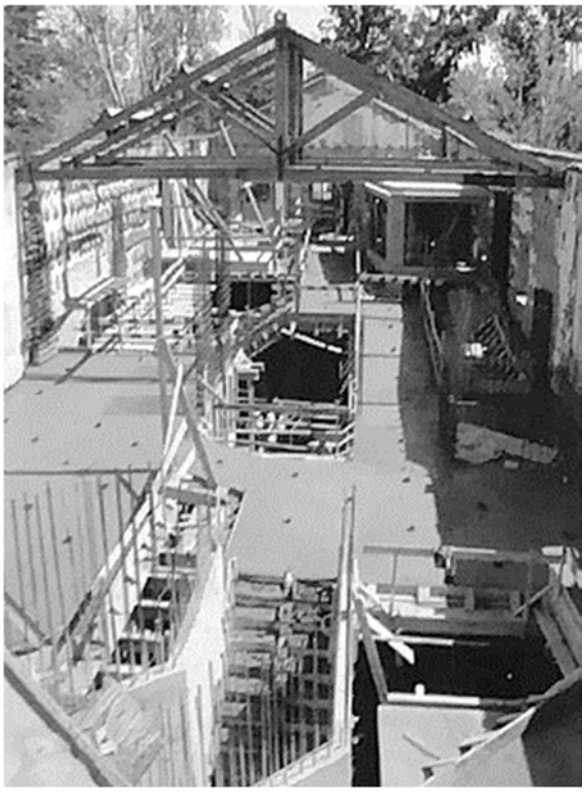


Fig. 23 - Casa dos Cubos. Monitoring and environmental interpretation center in Tomar, Portugal. (Private collection SM)

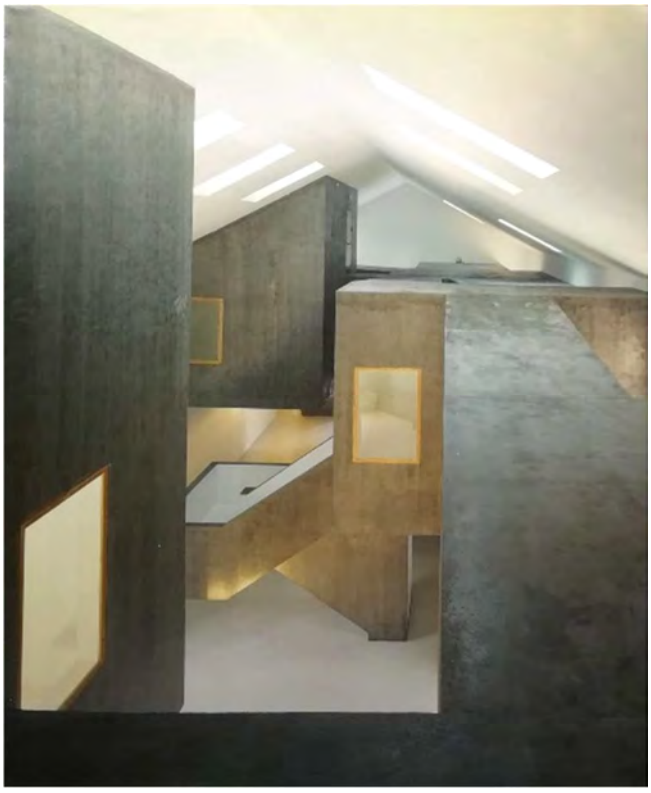


Fig. 24 - Casa dos Cubos. Monitoring and environmental interpretation center in Tomar, Portugal. (Private collection SM)

9.3 Circulations: horizontal and vertical circulations

The term "circulation" refers to the movement of people through, around and between buildings. Inside the buildings, the circulation spaces are spaces predominantly used for circulation, such as entrances, hallways and lobbies, corridors, stairs, breaks, etc.
The circulation spaces can be classified as those that facilitate horizontal circulation, such as corridors, and those that facilitate vertical circulation, such as stairs and ramps.
In architecture, circulation refers to the way people move and interact with a building. In public buildings, circulation is especially relevant, with circulation elements of great importance.
In particular, the routes of circulation are the routes that people take through and around buildings or urban places. Circulation is often considered as the "space between spaces", which has a connective function, but it can be much more than that. It is the concept that captures the experience of moving our bodies around a building, in three dimensions and in time.
About connection we can talk about different aspects of architecture: pavement, walkways, stairs, elevators, escalators, etc.
The pavement (of the Latin *pavimentum*), in architecture, is the horizontal base of a certain construction that serves as support for people, animals or any piece of furniture. A pavement can have different types of coating (wood, ceramics, natural stone, concrete, etc.). (Fig. 25)
When adapting a historical building, these are three of the factors considered in the pavement design.
Specially in the case of ruins, pavement determines where the public is allowed to step in. It could also indicate a path or route.

Fig. 25 - Santa María de Carracedo monastery, León, Spain. By Salvador Pérez Arroyo and Susana Mora Alonso-Muñoyerro. (SM 1990)

9.4 Enclosure: protective enclosure, lightweight roofs, façades and finishings

The fundamental cell of architecture is the use of space; the envelope is the element that defines this space. The envelope emerges as an element of delimitation of the living space, but it is not its only function. “Enclosure” means attention in climatic comfort, as a barrier or filter to control temperature, sun, wind and humidity, in aesthetics values, where the envelope configures the image that the architecture offers to the exterior, in the resistance and stability, in acoustic comfort, for which the envelope can act as an attenuator of the external solonids, as absorber of the interior noise and also as a resonance element, in water tightness to air and water and visual comfort, as for the vertical glass facade must connect the user with the outside environment, promoting the entry of natural light into the interior spaces.
We can divide “enclosure” in four parts: in protective enclosure, lightweight roofs, facades and interior finishings.
About protective enclosure we will develop some possibilities in the case of the protection of archaeological remains throughout some examples. The objective of these structures is double: to protect the findings from the weather and to enable the visit of the archaeological site to the public. One of the most important cases of it in the history of the architecture conservation and restoration is the intervention by Franco Minissi in Villa del Casale in Piazza Armerina in 1958. (Figs. 26-27)

Fig. 26 - Villa del Casale di Piazza Armerina. (SM 1981)

Fig. 27 - Inside of the Villa del Casale di Piazza Armerina. (SM 1981)

Few years ago, in 2015, BSA Architects projected a 'new' protective architectural space in Plaza San Juan, Burgos in Spain. In it, architects realized a wooden and iron cover. (Figs. 28-29)

Fig. 28 - New cover in Plaza San Juan, Burgos, Spain. (SM 2016)

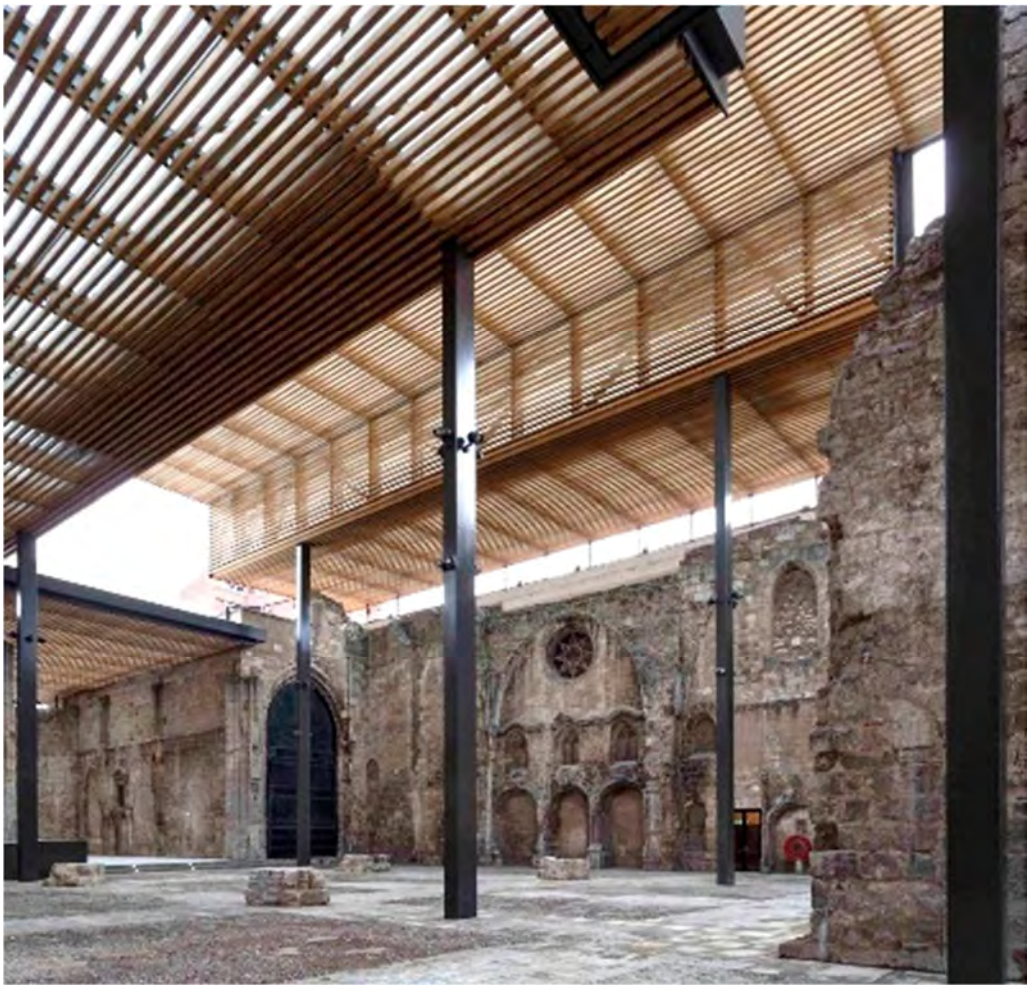


Fig. 29 - Inside view of the new cover in Plaza San Juan, Burgos, Spain. (SM 2016)

The possibilities of lightweight constructive systems in the intervention on historical buildings have two different opportunities: o the extension of the historic building into their patios and courtyards. Covering these spaces allows us to incorporate functions into this element that previously just provided light and fresh air. The main solution is the use of glass systems as Foster & Partners did in the interior courtyard of the British museum of London, United Kingdom in 2015.

Covering existing architectures which have lost their roofs, or those where a new translucent roof would bring more light into the building. Both glass and textile solutions can be appropriate for this matter. Textiles (PES-PVC, ETFE, silicone, PVDF, waterproof, etc.) These could provide some thermal insulation and light control. About it we can remember the intervention done by Ferran Vizoso and Nuria Bordas in Sant Pere de Corbera d'Ebre in Tarragona, Spain. (Fig. 30)

Fig. 30 - Sant Pere de Corbera d'Ebre in Tarragona, Spain. (SM 2017)

Another important question is the interaction between ancient building adaptation and vertical enclosures. The following concerns may be detected in volume completion, architecture extension, thermal enclosure, interior and exterior finishes.
About the first issue, historic buildings in ruin or with missing parts may require que construction of a new enclosure. This new element could need to be differentiated from the authentic part. About it remember Santa María Vilanova de la Barca (Figs. 31-32) and its project by AleaOlea architecture & landscape Laia Renalias, Carles Serrano, Leticia Soriano, Roger Such.

Fig. 31 - Santa María Vilanova de la Barca before the intervention.
(SM 2010)

Fig. 32 - Iglesia Santa María Vilanova de la Barca after the intervention.
(SM 2018)

In some cases, architecture needs to be extended. Extension do not necessarily have to meet strict image conditions, but it needs to meet the same comfort and security requirements as modern constructions as House in Lles de Cerdanya near Barcelona in Spain and the intervention by arch. Arturo Frediani. (Fig. 33)

Fig. 33 - House in Lles de Cerdanya. (SM 2018)

As seen previously, one of the enclosure tasks is regulating the temperature with the environment: thermal insulation. The implementation of insulation could be done through the exterior or the interior face of the walls, changing its appearance and needing a new finishing.
One clear example is the work done in 2002 in Caixaforum Madrid thanks to the architects Herzog & de Meuron. (Fig. 34)

Fig. 34 - Caixaforum Madrid. (SM 2020)

New finishes needed should establish some relation with the preexisting ones, either of contrast or to resemble the authentic surface. In each case, porous systems (brick, concrete, plaster, etc.) or compact systems (plastic, metal, etc.) may be used.

Pavement is the physical support for people, furniture and activities. The pavement should be resistant to weight and could need further specifications.

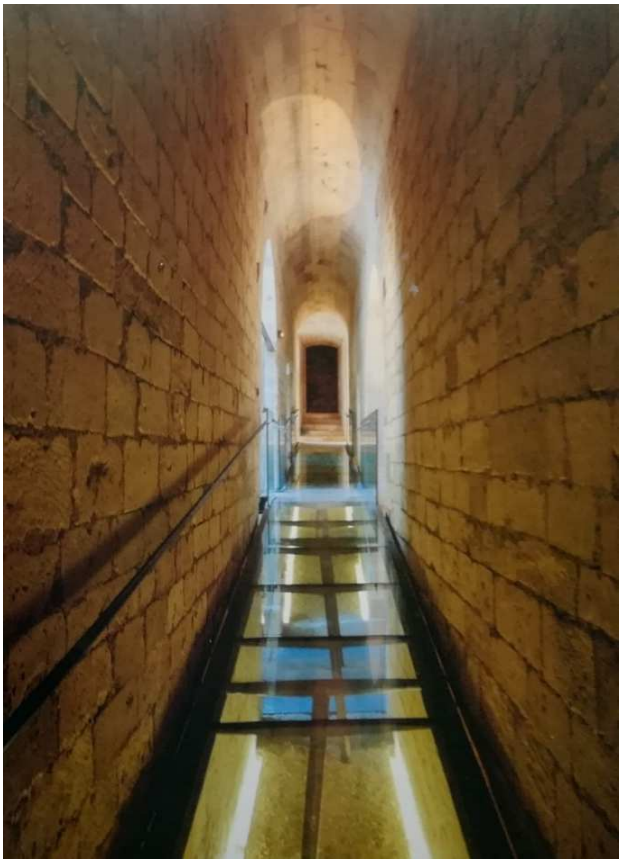
The pavement is also part of the architectural aesthetics. Within historical buildings, the added floorings should respect the textures, materials and colors in the rooms, unless there are other intentions.

About walkways, we can say that it is the element that is used in the work to move from one place to another on the same level. It will be at least 60 cm wide and will have a safety railing. Its purpose is to connect isolated points or areas across a void, like a bridge, or to protect a valuable surface while enabling to visit it and contemplate the pavements. Walkways are constructive elements supporting bending stress. Therefore, not only should be chosen its coating material, but also its structure, the distance between supports, the railings, etc.

One of the most famous cases in Italy where we can find a good application of walkways is Pilotta in Parma (Figs. 35-36) in the centre of the Country. There, architect Guido Canali used these horizontal connections not only to connect disconnected architectures, but also as part of the route in order to make it more immersive.

Figs. 35-36 - Connection bridges projected by G. Canali in Pilotta, Parma. (SM 2012)

For example, we can remember the Montmajour Abbey in Arles, France (Figs. 37-38) and the project by arch. Ruddy Ricciotti who realized a metallic and glass walkway. The supporting elements are inclined to give a light-weight image.



Figs. 37- 38 - Particular of walkways in Montmajour Abbey in Arles, France. (SM 2016)

Another relevant example of walkways is intervention on the Brasilian National Pinacotheque in Sao Paolo, Brazil where Paulo Mendes Da Rocha (Figs. 39-40) realized a horizontal connection in the courtyard to link different rooms and obtain a linear and simple route for visitors.

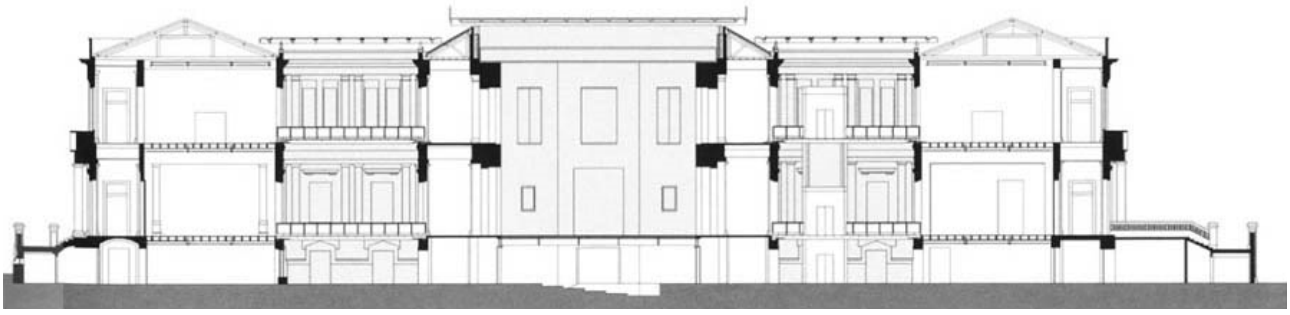
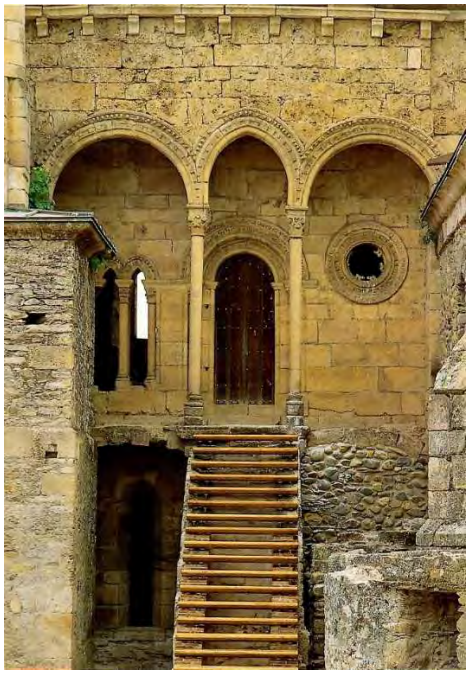


Fig. 39 - Section of Brasilian National Pinacotheque in Sao Paolo, Brazil. (Private collection SM)

In some cases, pre-existing structures may have been damaged during war or by earthquakes or may have remained incomplete, which is why they need to be connected vertically through stairs, escalators, elevators, travellators, etc. This Staircases serve the purpose of communicating spaces on different levels. Therefore, it is the main element of vertical circulation and plays a decisive role in how a building is used. Typically, staircases are located within open spaces to allow a good contemplation of these spaces from different points of view. Staircases can also be studied from its form and typology (Straight, L-shaped, Winder, U-shaped, Spiral, Curved, Bifurcated, Ladder) and its structure and material.

Fig. 40 - Brasilian National Pinacotheque in Sao Paolo, Brazil. (Private collection SM)

We want to remember the intervention by arch. Salvador Pérez Arroyo and arch. Susana Mora Alonso-Muñoyerro in Santa María de Carracedo monastery in Burgos (Spain). In this church, the two architects realized two very distinguished staircases; both are in wood and metal but the first is external and has only one ramp to hit the difference in level, while the second is a very interesting and original spiral stair. (Figs. 41-44)



Figs. 41-42 - Santa María de Carracedo monastery before and after works by S. Mora Alonso-Muñoyerro and S. Perez Arroyo. (SM 1990)

Figs. 43-44 - New stairs in Santa María de Carracedo monastery before and after works by S. Mora Alonso-Muñoyerro and S. Perez Arroyo. (SM 1990)

Sometimes stairs must be added in a preexistence for security reasons as the example of Milan on the Palazzo della Ragione, where Marco Dezzi Bardeschi (Fig. 45) projected an emergency staircase out of the architecture.

Fig. 45 - Stairs in Palazzo della Ragione, Milan by M. Dezzi Bardeschi 2002. (SM 2015)

In modern historic buildings, elevators serve the same purpose as staircases, without the fatigue of walking up the stairs. In the case of building adaptation, the new use may require accessibility improvement, whether the function is residential or opened to the public.
The most remarkable case is the implementation of elevators within the urban context. This new use of the element is meant to solve the accessibility problems to the historical sets, many of which are isolated and steep due to its defensive origins.
The implementation of elevators, travellators and escalators could generate a discussion about its necessity and its integration into a historical environment (shape, materials, etc.). Think about the insertion of the glass tower from Reina Sofía Art Museum in Madrid (Fig. 46) following the project by Íñiguez de Onzoño y Vazquez de Castro in 1991. They add a big glass elevator out of the pre-existence respecting the existing architecture and following the principles of restoration, in particular reversibility and distinguibility.

Fig. 46 - Reina Sofía Art Museum in Madrid conversion into a large-scale view (municipal offices, visitor centres, libraries, etc.) is infrequent and have many inconveniences. (SM 2020)

9.5 Systems: climatization, fire protection, water supply and evacuation

Architecture installation are all those systems that provide the architecture with the comfort, security and accessibility conditions that it requires. This includes the systems that supply energy and matter to habitable constructions. Retrofitting historic buildings allows an increase in comfort standards, but it is important to assess the compatibility of the intervention with the existing building. The evolution of society has led to an improvement in the quality of life and an increase in comfort requirements in our buildings. For this reason, the use of historic buildings requires an improvement in installations and the implementation of those without. In addition, when changing the use of a historic building, the possibility of implementing the facilities that the new use requires, and the compatibility of these with the values of the building, must be assessed as an important factor. The use requirements must respect the fundamental values of the building; otherwise, other options should be considered.

The most decisive installations in construction, given their volume, are the air conditioning and evacuation installations. On the other hand, lighting installations are those that allow for greater design possibilities and enable the building's values to be emphasized. The other installations (fire protection, water supply and evacuation, etc.) are not decisive, but must be considered.

The incorporation of installations for the adaptation of historic buildings allows the increase in comfort standards, but it is important to assess the compatibility of the intervention with the existing historic building. The evolution of society has led to an improvement in the quality of life and an increase in comfort requirements in our heritage. For this reason, the use of historic buildings requires an improvement of installations and the implementation of those without. In addition, when changing the use of a historic building, the possibility of implementing the facilities that the new use requires, and the compatibility of these with the values of the building, must be assessed as an important factor. The use requirements must respect the fundamental values of the architecture; otherwise, other options should be considered.

We can divide these installations in ventilation, fire protection, plumbing and discharge of water and electricity installation.

Ventilation is one of the most important aspects of a pre-existence and its adaptation of a new use. In some cases we have to consider chimneys effects. They have traditionally been used as extraction ducts for the renewal of air. and the traditional house ventilates and renews through the conduit of extraction of smoke from the home or the kitchen. since the sucking effect it evokes 'drags' the air from the rest of the space, penetrating the new air by infiltering the enclosures. In those spaces where heat is not generated. the fireplace is activated by Venturi effect causing the suction of the interior air.

We have seen that the chimney effect is the result of the temperature difference between the interior of the building and the surroundings. and that is characterized by the generation of pressures of different sign from a point of neutral pressures located in the upper area of the building. With outside temperatures lower than the interior, the air renovation will penetrate the building through the lower floors. heating up to be evacuated in the upper zone.

Ventilate has traditionally been used as a cooling system. Some of the traditional mechanisms already cited in popular architecture as ventilation systems are cooling, from the wetted patios with fountains and plants to the wind towers. All natural ventilation systems involve some cooling, as the convection generated contributes to dissipate the heat accumulated in the construction, and the speed of the generated current contributes to raise the acceptable temperature. In this sense, mixed systems based on the chimney effect will be the most efficient, but this effect is no longer significant as the outdoor temperature increases. The most widespread ventilation cooling technique
is the night cooling. Its foundation is the nocturnal descent of the temperatures. so that, if we achieve a high rate of air circulation through the building, it will yield by convection the accumulated heat during the day. The next day the cycle resumes. With the building cooled it can act again as a heat sink.
To be efficient, a certain mass of construction is required, the capacity to accumulate heat is basically proportional to the mass - so that the building has a high "time constant" - thermal capacity by accumulation.
Conceived as a means for environmental education and dissemination, the building adopts natural ventilation systems based on the use of non-polluting natural resources, which reduce the consumption of conventional energies for indoor air conditioning.
These systems are based fundamentally on two concepts. On the one hand, the conception of the totality of the envelope of the building as an element for capturing and exchanging energy with the exterior, which is produced when the natural circulation of the air by convection and favoring the greenhouse effect.
On the other hand, the consideration of the interior space as an accumulating mass of energy by thermal inertia, to which the underground excavation of the basement contributes, extending the temperature gradient between the underground part and the upper part of the vault.
The building has conventional systems for air conditioning installations, underfloor heating, domestic hot water production and artificial lighting. The volumes of the auditorium, library and cybercafé have individual air conditioners that allow independent operation of each of the zones, to ensure flexibility of use. Meanwhile, the volume of training, offices and the environmental building have underfloor heating. The climate controllers and the ventilation units are housed in the basement floor, in the longitudinal side tunnels. The room for boilers, pumps and chillers serving the floor heating and air conditioners are in the basement of the annex building. This building, which emerges as a tower, is proposed not only as a visual milestone of the action from the urban point of view, but as an icon that identifies its environmental character.
Taking advantage of its height and oriented in the direction of prevailing winds in the area, the northwest façade takes a chamber bounded by an air-permeable outer layer of adjustable metal slats and an interior polycarbonate enclosure. A metallic substructure that separates both layers supports a dense network of water sprayers arranged in all the heights of the façade. In this saturation chamber, the incoming air is cooled by evaporation and follows a downward vertical movement as its temperature decreases and its humidity increases.

In the lower part of the chamber, a forced extraction system is located, with fans that drive the air to the ducts that run along the two underground tunnels located under the longitudinal facades. These ducts end in recessed nozzles that provide fresh air for the natural air conditioning of the basement.
Another important question is the fire protection, that is a matter of multidisciplinary and transversal knowledge that affects the building as a whole and its projected process: program layout, structures, construction... The achievement of three objectives must be sought: security of persons, protection of assets and continuity of the activities.
We must consider two concepts:
Prevention: measures to prevent the risk from becoming in accident or sinister, avoiding that, by conjunction of factors, the fire starts.
Protection: measures designed to prevent the spread or limit its consequences if it despite the prevention, the accident or loss occurs, both in human losses and material losses. All this must go hand in hand with a firefighting plan that includes detection, alarm and extinction systems.
We can remember the largest Primark store in Spain, and particularly the second at the international level, located at number 32 of the Gran Vía in Madrid, (Figs. 47-48) has involved the rehabilitation of an old multi-storey building that has been completely renovated inside to protect against fire. structure of floors with mortar and establish a good execution of ventilation ducts and smoke extraction, among other objectives.

Figs. 47-48 - Different systems in Primark Gran Vía, Madrid. (SM 2023)

Compartmentalization in fire sectors is vital to contain the spread of fire and allow time for evacuation and extinction itself. Likewise, the control of fumes generated is of crucial importance, as it is the cause of most of the victims in case of fire. Sectors have the following characteristics:
Volume of the room where the fire has started: The smaller the room, the faster the flames develop, due to rapid heating.
Height of the room. The shorter the space is, the faster flames will progress.
Ventilation. The development of the fire depends on the supply of oxygen. A strongly ventilated space will cause a stronger fire.
With respect to fire protection, it is important to differentiate between the different types of structures. for example, for steel structures, remember that steel is an excellent conductor of electricity and heat.
This, together with the fact that steel loses its strength at a certain temperature, makes metal structures catastrophic in the event of a fire. Steel can be protected by covering it with intumescent paint or fire-resistant sheets.
Still in wooden structures, this is flammable and spreads, wooden structures gradually lose resistance and even the burnt structure retains some resistance. Wood can be protected with foam or fire-resistant slabs, or oversized elements.
or concrete structures perform well against fire. Fire destroys its chemical structure and removes strength from reinforcement. The main fire protection measure is to increase the width of the cladding layer.
There are different types of fire-fighting systems: lighting and emergency signals, fire extinguishers and ventilation are among the most common.
One may think of the plumbing as apparently simple installation, which occasionally cause some damage and that has no space for evolution. Nothing further from reality.
Nowadays any change in plumbing require breaking and changing finishings, changing pipes, etc. Prefabrication processes represent an opportunity for the building of sanitary installations (bathrooms, sinks, washbasins). The optimization of the benefits of plumbing and sanitation facilities, together with the implementation of prefabrication in construction, generating solutions of prefabricated toilets. Commercial systems have been developed for the assembly of the plumbing and sanitation network usually associated with dry-mounted partition walls.

9.6 Illumination: natural, artificial and some lighting systems

When restoring and adapting existing architecture to new use, it is important to consider both natural and artificial light and the relationship between them. That relationship also depends on the use to which the architecture is adapted: in a museum, for example, the light should enhance the architecture, but also be suitable for the exhibits. Can be important to use zenital light, when it is possible, and add slats or screens to spread light, avoid glare and avoid the incidence of direct sunlight.

About artificial lights we can distinguish in:

General lighting: It consists of direct component luminaires mounted on the ceiling, evenly spaced. It is a very used system due to the flexibility to distribute and modify the work zones. Since the lighting is substantially the same everywhere, the location of the furniture is facilitated. Energy efficiency is normally low because the secondary work areas receive as much light as the main ones. The quality of light, especially reflections, is also a problem, because it is difficult to find a work area outside the glare zone. (Fig. 49)

Localized lighting: It is a non-uniform arrangement, in which the luminaires are concentrated on the work areas. It has greater efficiency, because the areas where you do not work are not illuminated in the same way as the work ones. The direct glare and reflections can be minimized, since the system allows a wide degree of freedom when distributing the luminaires. However, flexibility in the distribution of furniture is less, unless electric lanes or other modifiable systems are used. (Fig. 50)

Fig. 49 - Example of general natural and artificial illumination. Cavallerizze space, Leonardo Da Vinci National Museum of Science and Technology, Milano. (Private collection SM)

Fig. 50 - Localized lighting in RES Electrical offices in London. (Private collection SM)

Focused lighting: it illuminates the area of the visual task and its immediate surroundings are illuminated. It achieves the maximum versatility, quality and energy efficiency, as it uses direct lighting, located on the furniture or directed towards it. Direct glare and reflections can be avoided when the luminaires are properly positioned. To avoid excessive contrasts, complementary ambient lighting is recommended. Usually, this kind of lighting is used for the exposition in museums. (Fig. 51)

Illuminating spaces dedicated to a functional purpose is one of the most common lighting tasks. Requires the illumination two elements, the general environment and the working station. This is achieved by different combinations of general/localized lighting, focused (direct) lighting and ambient (indirect) lighting. (Fig. 52)

Fig. 51 - Focused illumination in Museum of Palazzo Venezia, Roma. (CAL 2023)

Fig. 52 - Example of space illuminated for its new use. Biblioteca Escuela Pias in Madrid. (SM 2018)

Most of the lighting tasks governed by work place standards and standards for pedestrian traffic routes come under this category, whether these be the illumination of work surfaces or the actual floor.
Artificial lighting could have different aims. It can be an ambient light which it is indirect lighting reflected on the ceiling and walls. Provides a low intensity diffuse lighting, sufficient for simple visual tasks and circulations. It is often used together with direct or focused lighting. Direct glare and reflections can be almost completely avoided with this strategy.
Areas of intense clarity in the ceiling should be avoided and, to prevent direct glare, luminaries should be above eye level.
Sometimes lighting can be used to focus on some particular element of the architecture or, for example, the collection exposed. It is used when you want to highlight an object or a part of a building. This lighting should be about ten times higher than the level of surrounding lighting. As this type of lighting is very subjective and has a great visual impact, the designers must take extreme care when using it. (Fig. 53)

Fig. 53 - Artificial light for the Library in Monaco. (SM 2022)

Artificial light can also be decorative where the object to highlight are the lamps and luminaries themselves. Although the glare here is called a flash, it can also be annoying if it is too bright or a complicated visual task must be performed. In most cases, decorative lighting also provides part of the strictly functional lighting.

Finally, this lighting can be used to indicate routes, escape routes, etc. Orientation lighting improves perception by adding light points and lines, e.g. along pathways and on stairs. The light must function as a signal. Illuminating the room is of secondary importance here. Low illumination levels are sufficient for orientation purposes. Small luminaires with high luminance clearly set themselves apart from their surroundings.

For the first time, the role of actively participating in the transmission of information was expressly entrusted. The fact that clearly illuminated areas involuntarily attract attention was taken into account. The adequate distribution of the luminosity allowed ordering the abundance of information of the environment. The areas with essential information could be enhanced by accentuated lighting, while secondary or disturbing information could be attenuated by a lower level of illumination. The visual environment was appreciated in its structures and in the importance of its objects.

The same principle applied to orientation in space, p. ex. the rapid differentiation between a main entrance and a secondary entrance, as well as the accentuation of objects, as in the case of the presentation of products or the enhancement of a sculpture.

Wall lighting can be performed using point-form or linear luminaires. Wallwashers are characterised by the even progression of brightness along the wall. Washlights project the light evenly onto the wall surface, while maintaining the downlight effect on the room. Linear light sources for wallwashing with fluorescent lamps provide a perfectly even brightening of the wall. (Figs. 54-55)

Fig. 54 - Artificial lighting to highlight the architecture. Kunstmuseum Ravensburg. (SM 2016)

Figs. 55-56 - Artificial lighting to highlight the architecture. Kunstmuseum Ravensburg. (SM 2016)

The perimeter illumination out of a haunch is positioned directly on the wall. It produces a grazing light effect and emphasises the surface texture. The luminaires for ceiling washlighting can be suspended from the ceiling or mounted on the walls (Fig. 57). As linear luminaires, light structures act as independent architectural elements, whereas ceiling washlights are more secondary to the architecture. Light structures emit diffuse light with low brilliance.

The choice of luminaire type is dependent on the ratio of room area to room height. In low rooms with large floor areas an even illumination of the ceiling using light structures presents itself as the best option. Ceiling washlights require a large distance from the ceiling due to their asymmetric light distribution.

Also objects in the room can be illuminated flexibly using track-mounted spotlights or floodlights. When illuminating an object with one spotlight in the direction of vision, the modelling effect is weak. Two spotlights with a spot or an oval flood lens shining from different directions create a balanced, three-dimensional effect.

Narrow beam spotlights accentuate the object, while luminaires with a wide-beam light distribution show the object in the context of its surroundings. This reduces the modelling effect.

Furthermore, objects on the wall can be flexibly illuminated with track-mounted spotlights or floodlights.

- Spotlights highlight the picture, while the surroundings seem to recede into the background.
- Contour spotlights ensure very strong, effective emphasis of the picture.
- Individual wallwashers accentuate the picture more discretely than spotlights.
- Several wallwashers illuminate the wall evenly. The picture is not emphasised.

Fig. 57 - Artificial illumination in Siena Cathedral. (SM 2017)

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Chapter 10

Contemporary atmosphere

Attempting a conclusive discussion on the history of the museum covered in the volume seems rather arduous, however the study carried out has allowed, given the abundance of material, a restitution of facts and figures that have been recorded over time.
In closing these pages, it seems appropriate to reintegrate that ample space has been devoted in the first chapters to three figures essential to understanding museography in Italy from 1950s to the present day and beyond. Attention has been paid to the theoretical orientations of restoration and their operative application. It was decided to focus on the main museum, projects in Europe from the 1970/1980s to the present day in order to reach broader considerations relating to some issue of adaptive work.
It is well known that in Rome and throughout Italy, the creation of museum in pre-existing architectural structures over the last 20/25 years has always been significant, even in relation to the city.
In Roma, for example the Capitoline Museum, as well as the museum of the Imperial Forums in Traian's market, constitute a clear example of openness towards the city. And also Ara Pacis Museum, Centrale Montemartini or the new complex of Palazzo Venezia and Vittoriano.

Fig. 1 - Opera del Duomo Museum in Milano. The legibility of the architecture and the projected show-cases. Intervention by Guido Canali. (Private collection CB)

In Milano, the Duomo Museum and the Grande Brera were significant. The first intervention was done by architect Guido Canali (Fig. 1). For this Museum, the Palazzo Reale in Piazza del Duomo in Milano was adapted and the fundamental principle followed by the architect was that a visit to a museum, rather than just providing specialized knowledge of its exhibits, should be a joy in itself, a form of entertainment, even for a non-specialized public. This principle of "understatement" was applied in the choice of materials in order to favour the works exhibited and the ancient surroundings.
About the Grande Brera, it is a unique cultural system connecting three extraordinary Milanese institutions: the Pinacoteca di Brera, Palazzo Citterio and the Braidense National Library (Fig. 2). This project celebrates the encounter between historical, modern and contemporary art, with permanent and temporary exhibitions dedicated to exploring the dialogue between past and future. The Grande Brera project emphasizes the importance of preserving the artistic and historical identity of the neighborhood and aims to make it the cultural hub of Milan and Italy.

Fig. 2 - The Grande Brera. Inside of the Pinacoteca di Brera. (Grande Brera official website)

However, we must not forget existing facilities in smaller centres or scattered throughout the territory. A prime example is the Santa Giulia Museum in Brescia. For this museum was restored and adapted a monastery that included in its architecture San Salvatore Church, the Coro delle Monache, Santa Maria in Solario and Santa Giulia. The first three are now part of the visit route, while Santa Giulia was adapted in a conference room. The project carried out in the monastery of Santa Giulia was undoubtedly complex, not only because of the stratified architecture, but also and above all because of the archaeological excavations that emerged during the works, in particular the Domus dell'Ortaglia (Fig. 3).

Since 2023, the Santa Giulia Museum has been included in the so-called "UNESCO Corridor", which aims to connect, free of charge and without barriers, the archaeological area of the Capitolium with the Santa Giulia Monumental Complex, recounting two thousand five hundred years of the city's history along a route of approximately 1 km.

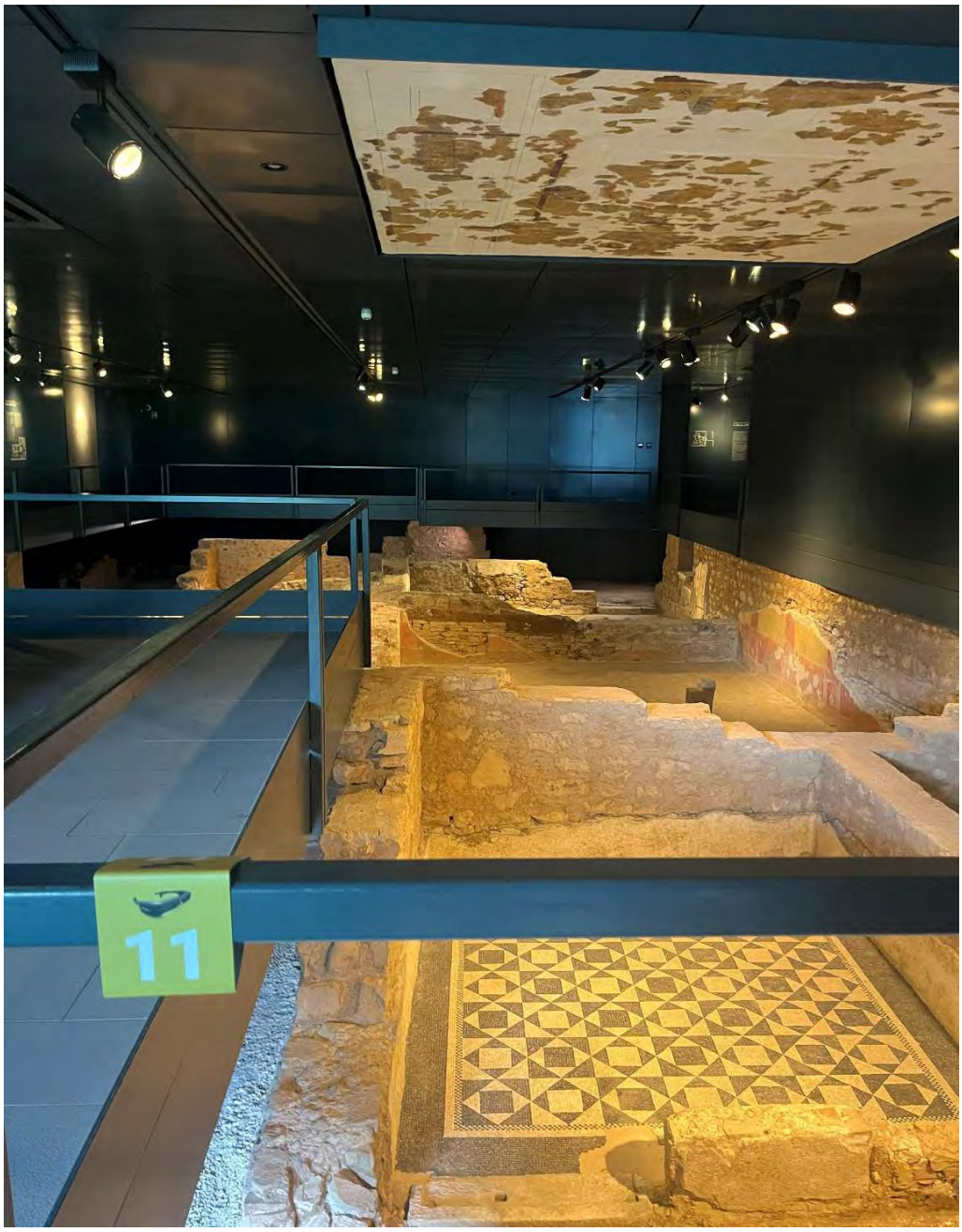


Fig. 3 - Santa Giulia Museum. Domus dell'Ortaglia musealization. (CAL 2024)

Among the many projects carried out in Italy in the early 2000s, we would like to mention the 2009 museum adaptation of the former Aldobrandini stables in Frascati, designed by Massimiliano and Doriana Fuksas, for its attention to the pre-existing vertical/horizontal connections and the integration of the new (Fig. 4). The design approach was based on the desire to remove the inappropriate additions of the last thirty years in order to achieve an architecture that shows the stratification of the various interventions over the years, while leaving the new additions distinguishable.

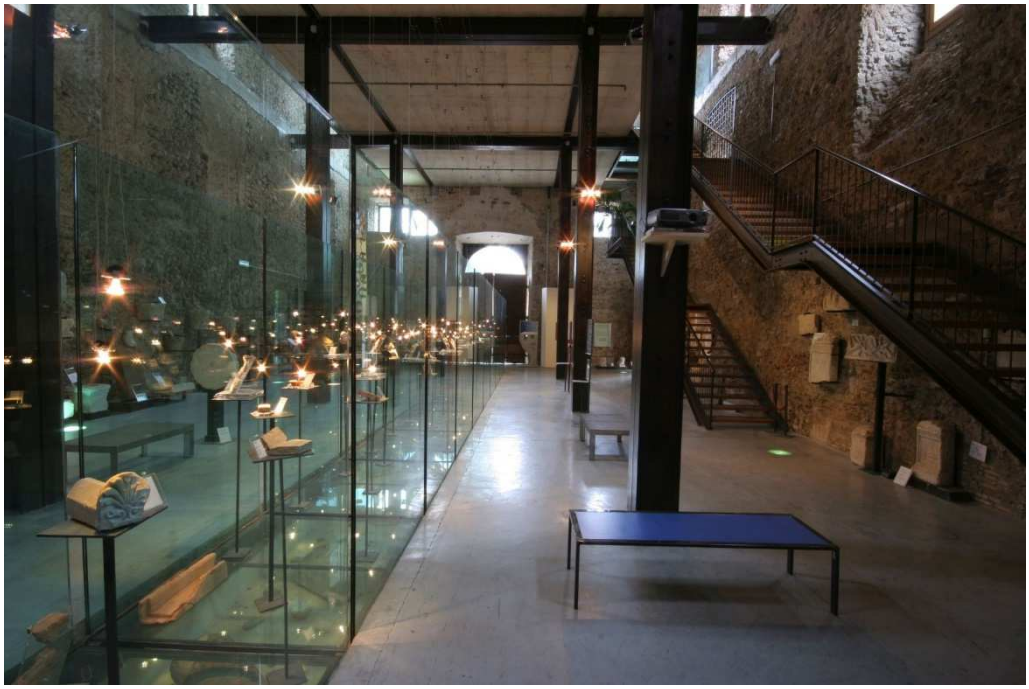


Fig. 4 - Tuscolano Museum in Frascati. Link between the ancient architecture and new insertions. (Organizzazione Museale Regione Lazio official website)

Another very important aspect of this project is the interaction between the interior and exterior through large windows that allow visual continuity with the square, placing the existing structure, the exhibitions and the visitors in constant dialogue with the city.

To this end, the restoration and conversion into museums of two large fortresses in northern Italy is also considered significant: Forte di Bard and Forte di Fortezza. Both of the projects pursued a dual objective: on the one hand, the preservation of the historical and material identity of the ancient architecture, and on the other, the adaptation of the architecture into a cultural and museum centre capable of meeting contemporary public use requirements. The interventions are based on the principles of "minimal intervention", favoring the legibility of historical stratifications and the use of reversible solutions for modern additions. The introduction of contemporary architectural and technological elements for the new use (lifts, escalators, systems, walkways) was carried out with respect for the existing, with particular attention to non-invasive integration into the architectural context.

Most of the museum examined have started a new relationship with the public, many museums are characterized by a close relationship with the city and the territory, from Agrigento, to Selinunte and also to Pontremoli, Siena and Louvre, the Tate and many others.

For example, the Modern Tate has enhanced urban life on the other side of Thames across the Millenium bridge.

Ultimately, all these examples and others demonstrate that the current museum is different, no longer static. We are faced with new realities, already experimented with Minissi with the museum as its essence.

The museum is more complex, bustling with activity; what is exhibited is a small fraction of what is preserved. The sections dedicated to exhibition are just a part of the other functions.

Consider the restoration and cataloging laboratories, the conference rooms, the custodians, and the break areas with cafe, restaurants, bookshops, etc.
The museum has become not only a “physical space, but an essential cultural one, a magnet for visitors, students and tourists.
In short, citizens feel proud to belong to a city, a region endowed with culture and creative capacity.
Among the projects carried out in Italy in recent years, it is important to mention the lighting design for the Fellini Museum in Rimini by Prof. Orazio Carpenzano. The Fellini Museum is one of the most important museum institutions in the city of Rimini, being part of the cultural center that includes the Galli Theater, Palazzo dell'Arte Rimini with the Sculpture Garden, the Fulgor cinema, the City Museum, the Surgeon's House, the Gambalunga Library, the Tiberius Bridge with the Piazza on the water and Porta Galliana, the Francesca da Rimini Arena, the Arch of Augustus, the Malatesta Temple and Porta Montanara. (Fig. 5)

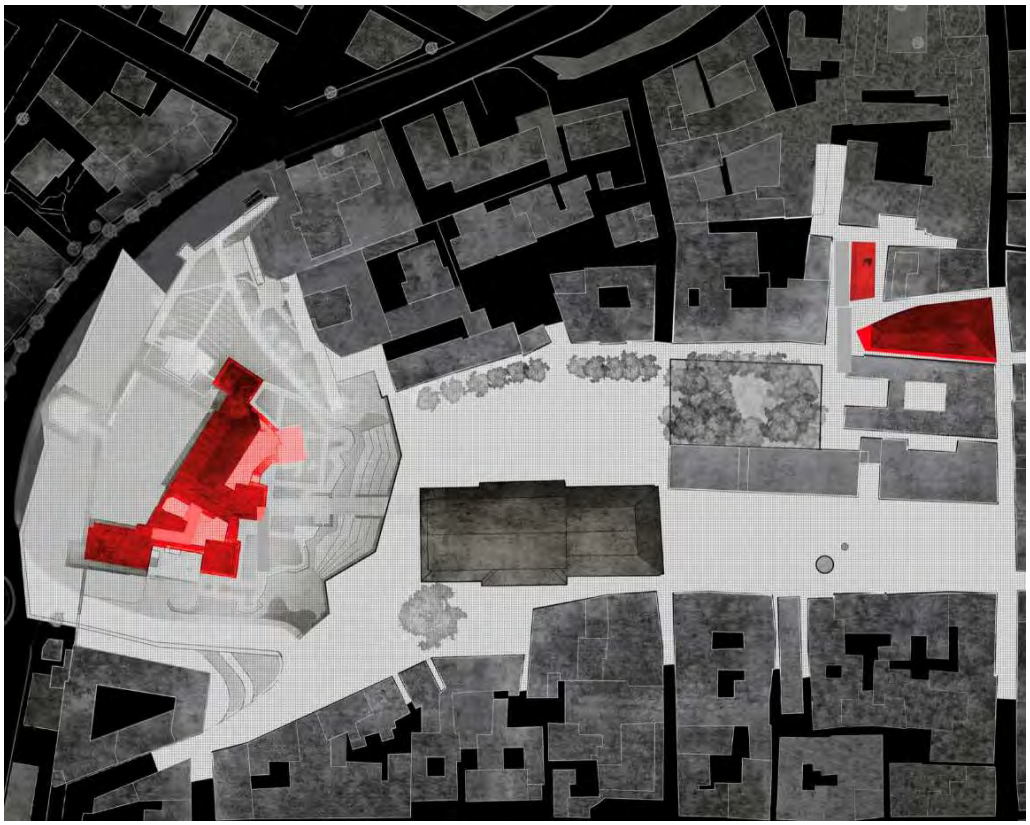


Fig. 5 - Rimini, Fellini Museum includes different architecture and open spaces. (Ph. Orazio Carpenzano)

It has been included among the "Great National Projects of Cultural Heritage 2017-2018", recognized by the Ministry of Culture. This prestige was subsequently consolidated with the awarding of the In/Architettura 2023 National Award.
In April 2018, the Municipality of Rimini announced the competition for a museum dedicated to the figure of Federico Fellini, with the aim of creating an innovative and immersive museum center, of research and artistic production, in which scientific rigor, emotion and entertainment coexist.

The project to dedicate a museum to the director stems from the intention to restore and interpret his work as a key to connecting tradition and contemporaneity, showcasing the beauty that springs from his ideas and his art, a source of inspiration and widespread wealth.

Fig. 6 - Rimini, Fellini Museum. The "Piazzetta di San Martino" transformed in a scene. We can notice the new reintegration and the ancient architecture. (Ph. Orazio Carpenzano)

The museum that the city dedicates to his genius is located in a magical place that summarizes his art, inserting itself into the urban fabric and following the spirit of Fellini's films through three key words: amazement, imagination and fun (Fig. 6). The result is a space that creates emotions and entertainment, where innovation, research and experimentation are combined with classic forms of art.

Fig. 7 - Fellini Museum. The "Corte di Mezzo". In front of the entrance there is the iconic figure of Fellinis's cinema: "Lo sceicco bianco" to create a connection inside-outside (Ph. Orazio Carpenzano)

The seamless "dialogue" that the project establishes between indoor and outdoor spaces, between museum and city, makes the Fellini Museum a pole for the revival of the territory, where creativity and imagination bring their positive contamination to Rimini and its path in the present and in the future (Fig. 7). It is a place in continuous evolution, where research, the incessant contribution of art and artists, merge with innovation and technology to enhance Fellini's poetic legacy.

The Municipality of Rimini has entrusted Studio Azzurro with the artistic direction and implementation of the immersive multimedia project, with a strong participatory value for the visitor; while the architect Orazio Carpenzano with his team created the architectural project and the layout of Castel Sismondo and Palazzo del Fulgor. The winning consortium of the competition also sees Marco Bertozzi and Anna Villari as curators and is represented by Lumière & Co. as group leader.

About our work

In conclusion to this overview of the contemporary atmosphere in museums, we would like always to recall some words of our President of the Republic Sergio Mattarella, who have always inspired our work; for example “the value of civil society, even at an International level, are entrusted to our consciences; in order to survive they need a true relationship of human relations and a sense of the Institutions and their importance”.

More recently, in the speech given on the morning of 28th April 2025 at the Quirinale, the President, to commemorate the 50th anniversary of the FAI, specified once again that “culture is an immersive force, because with knowledge, dialogue and growth European identity is increasingly promoted”.

This was the desire of the entire series of volumes, in particular of this dedicated to Restoration and museum adaptation.

Addendum

From Royal Residences to Museums: Challenges and Museographic Dialogues

Luis Pérez de Prada
(Architect, Director de Inmuebles y Medio Natural de Patrimonio Nacional)

The history of museums in Spain is closely linked to the evolution of the Royal Collections, whose origins date back to the collecting impulse of the monarchs, especially from the reign of Felipe II. Over the centuries, the spaces designated to house and exhibit these treasures have been transformed, from private residences and scientific cabinets to museum institutions open to the public. This article traces the genesis and consolidation of museums linked to the National Heritage, from the earliest examples in the 16th century to the initiatives developed during the 20th century and the most recent interventions of the 21st century, in which the exhibition of historical and artistic heritage is institutionalized in spaces specifically designed for this purpose. Through this evolution, the article reveals not only the Crown's interest in preserving and displaying its collections, but also the fundamental role that these museums have played in cultural dissemination and in the construction of Spain's historical memory.

It is undeniable that the Royal Collections are the origin of museums in Spain, and if we go back to their beginnings, it was Felipe II who created the Royal Collections and promoted the creation of spaces to exhibit them. In the building intended for the Royal Stables (Fig. 1), its architect, Gaspar de Vega, designed a space on the upper floor to house the King's vast collection of arms and armor, which remained virtually intact until the end of the 19th century.

Another example is the Monastery of San Lorenzo de El Escorial, where spaces were specifically designed to house the collections, such as the extraordinary Real Biblioteca, with bookcases designed by Juan de Herrera that allow for the storage of books and incunabula with a unified concept that facilitates their preservation and exhibition. It also includes other collections of scientific instruments such as armillary spheres, astrolabes, sundials, and maps.

Fig. 1 - View of the Felipe II's Armería, before the fire of 1884. (Jules David, Archivo General de Palacio)

This desire to exhibit collections, whether for personal enjoyment, for their close circle, or for the personalities who visited the Court, was also evident during the reign of the last Habsburg; a good example is the Salón de Reinos in Palacio del Buen Retiro, which has a clear iconographic program for the exhibition of its paintings.

With the arrival of the Bourbons, Carlos III promoted the creation of a Gabinete de Ciencias Naturales in the Palacio Goyeneche. This Gabinete, which housed the royal collection, was transformed in 1785 with the founding of the Gabinete de Historia Natural and the Academia de Ciencias. For this purpose, a new building was designed by Juan de Villanueva, conceived as the headquarters of the Gabinete de Historia Natural and Sala de Juntas. Later, during the reign of Ferdinando VII, this space was designated to house the Museo de Pintura y Escultura, which was inaugurated in 1819 and which formed the basis of the current Museo del Prado.

During the second half of the 19th century, this drive by the monarchy to institutionalize the exhibition of its collections in designated spaces was fully consolidated with the creation of the first national and provincial museums in Spain; and, in parallel, these collections were opened to the public, albeit on a limited basis, within the Royal Palaces. In 1869, as part of this cultural policy, 240 tapestry cartoons by Goya were discovered in the cellars of the Palacio Real de Madrid. This discovery spurred the creation of a Museo de Tapices to exhibit this extraordinary collection. The new museum moved several times until, at the end of the 1940s, the Museo de Tapices was established at La Granja de San Ildefonso, occupying the restored Casa de Damas, which had been destroyed by fire in 1918.

In the first half of the 20th century, other significant events, such as the 1942 discovery of the tomb of Alfonso VIII de Castile and his wife, Leonor de Plantagenet, at Santa María del la Real de Las Huelgas, allowed for a detailed study of the remains of these monarchs and their funerary offerings, which were found to be in an excellent state of preservation. This discovery spurred the creation, in 1949, of a new museum called of "Ricas Telas" in las Huelgas de Burgos.

During the second half of the 20th century, several museums were planned that deserve to be highlighted for their heritage and cultural value. A particularly significant example of museography in historical spaces is the project for the Museo de Arquitectura at the Monastery of San Lorenzo de El Escorial (Fig. 2). This initiative, developed in April 1963 by architects Javier Feduchi and Jesús Bosch, was part of the commemorative events for the 400th anniversary of the founding of the Monastery and represents an exemplary model of how to adapt a monastic and palatial environment to contemporary museographic requirements. The project focused on adapting the vaulted rooms, located in the semi-basement of the Palace of Felipe II. Partitions added in later periods were removed, restoring the galleries to their original configuration. This intervention made it possible to recover the architectural reading of the space and give it a historical coherence that reinforced the exhibition discourse.

The museum design was conceived with careful attention to the architectural and symbolic context of the Monastery. To this end, materials integrated into the building's structure were used, reinforcing the coherence between the exhibits and the architectural framework.

The arrangement of the exhibits was organized according to the natural light conditions of the different wings: the wing with natural light was designated for the display of architectural plans and drawings, while the interior wing, lacking natural light, was reserved for tools and models of machinery used in construction (Fig. 3). The display stands, inspired by Juan de Herrera's original furniture, contributed to a harmonious integration between the content and the architectural environment.

Fig. 2 - Museo de la Arquitectura at the Monastery of El Escorial, 1963. (Ph. National Heritage)

Fig. 3 - Museo de la Arquitectura at the Monastery of El Escorial, sala de herramientas, 1963. (Ph. National Heritage)

In 1968, the project was selected to be part of an exhibition at the Museum of Modern Art (MoMA) in New York dedicated to museum architecture. This international recognition highlighted the relevance of the model applied at El Escorial, emphasizing its ability to combine respect for historical heritage with clear presentation and museographic sensitivity.
Other projects designed to complement visits to the main palace spaces aimed to house thematic or collection exhibitions that, due to their size, required a unified display. In this way, they illustrate an early strategy for managing extensive collections outside the permanent decorations of the main rooms, by adapting annexes or specific spaces for particular themes, and offered a new perspective on the artistic and architectural legacy of the monumental complex.
In 1970, the Museo de Caza was founded in the Riofrío Palace; and the following year, the Museo del Traje de Corte was inaugurated in Aranjuez (Fig. 4). This latter museum, distributed across several rooms, offered a chronological journey through the different reigns, showcasing the evolution of taste for ornamentation and courtly attire. Throughout its history, the Museum underwent several renovations and, in 1997, was renamed the Museum de la Vida, finally closing permanently at the beginning of the 21st century.
In 1963, the creation of a Museo de Carruajes in the Campo del Moro gardens was proposed, and it was finally inaugurated in 1967 (Fig. 5). The building, designed using hexagonal modules, offered a functional and aesthetically pleasing layout for the exhibition of the collection of historic carriages. Also noteworthy from this same period is the opening of the Museo de Falúas Reales in Aranjuez (Fig. 6), located in a newly constructed building within the Jardin del Príncipe, intended to house several of the historic vessels preserved by the National Heritage.

Fig. 4 - Museo del Traje at the Palacio de Aranjuez, 1970. (Ph. National Heritage)

This transformation of spaces originally intended as royal residences into museum venues presents a complex set of advantages and disadvantages. Palaces, by their very historical and architectural nature, are not neutral canvases, but rather structures that inherently possess significant decoration and the inclusion of works of art that, throughout their existence, reflected the tastes of the monarchs of the time. The conversion process forces a confrontation between modern museography and the inescapable weight of the building's history and architectural memory.

Fig. 5 - Museo de Carruajes in the Campo del Moro, Madrid, 1970. (Ph. National Heritage)

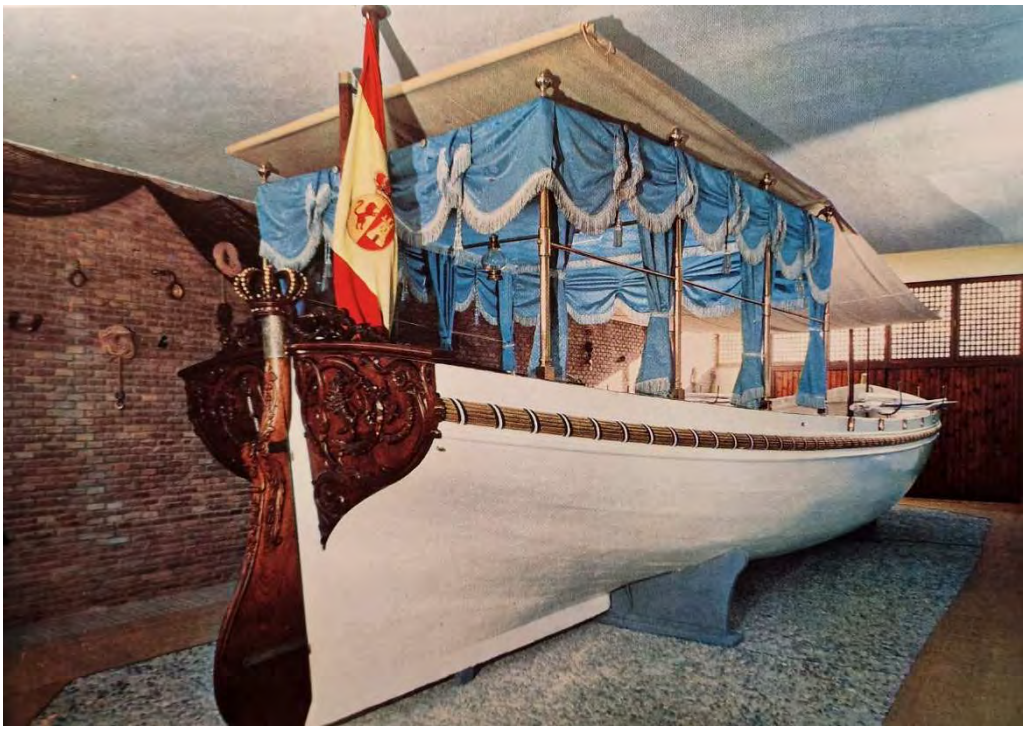


Fig. 6 - Museo de Falúas in the Prince's Garden of Aranjuez, 1970. (Ph. National Heritage)

Museography in historic buildings, especially those within palaces, poses unique challenges that require a sensitive and multidisciplinary approach. These spaces, originally conceived for residential or ceremonial functions, and which in some cases remain so today, must adapt to contemporary demands for conservation, accessibility, and communication without compromising their heritage integrity. It is also important to consider that many of the pieces displayed in palace museums were created for a specific location, with a decorative or symbolic function linked to their original setting. When moved or relocated, they lose some of their meaning, which compels the museum curator to offer interpretive keys that restore their context.

The museum projects developed during the 1960s marked a turning point in the way heritage is presented and preserved in historical spaces, especially within the realm of National Heritage. In this respect, projects such as the Arquitectura y Pintura en El Escorial museum or the Museo de Tapices en La Granja demonstrated that it was possible to integrate exhibitions into monumental environments without distorting their essence. This approach, based on respect for the architectural context and the search for specific museum solutions, has evolved into current proposals, such as the Royal Collections Gallery in Madrid. These actions maintain the same spirit of dialogue between past and present, but with more sophisticated technical and conceptual tools, capable of responding to contemporary challenges of conservation, accessibility, and cultural communication.

But if there is one project that has marked a turning point in the way the Royal Collections are exhibited, it has undoubtedly been the creation of the new museum inaugurated in 2023: the Galería de las Colecciones Reales (Fig. 7).

Fig. 7 - Galería de las Colecciones Reales in Madrid, 2020. (Ph. Luis Asin)

The idea of creating a museum to house the Crown's heritage collections dates back to the end of the Segunda República, although it wasn't until November 1998 that the formal decision was made to build it next to the Royal Palace – one of the most emblematic royal residences of the European Baroque – and it represented a major architectural and landscape challenge. The Palace, built by Giovanni Battista Sacchetti for Felipe V and later expanded by Francesco Sabatini, is located in an area that, since the 19th century, has formed part of the city's monumental skyline. With the aim of shaping the project, an international architecture competition was launched,1 thus marking the beginning of a new stage in the conception of the museum.

The Galería de las Colecciones Reales represents one of the most ambitious and contemporary examples of museography in dialogue with a historical setting. Construction was completed in 2016, and its placement at the far end of the Plaza de Armas, next to the viewpoint overlooking the Campo del Moro and the Casa de Campo, achieved a remarkable harmony with Madrid's western skyline.

The entrance to the Museum was designed discreetly, as a lateral extension of the building, preserving the public and ceremonial character of the Plaza de la Armería. This project not only elegantly resolved the relationship between contemporary architecture and historical heritage but also consolidated a new, landmark museum space for the exhibition of the Royal Collections, in the symbolic heart of the Spanish monarchy.

The completion of this project has allowed for other, smaller-scale interventions in recent years, reflecting Patrimonio Nacional's commitment to a more integrated and educational museum experience. This approach aims to offer visitors spaces that foster a deeper understanding of the Royal Sites and their historical significance in shaping Spanish cultural heritage. Examples include several interventions funded by European funds, one of which is at the Royal Site of San Lorenzo de El Escorial, with the opening of a new Visitor Reception Center located in the first Casa de Oficios.2 This architectural and museographic intervention aims to enhance the visitor experience by facilitating access to the historical and architectural content of the monumental complex.

The project proposes a linear route from the entrance through the adjacent park, connecting spaces for information, ticket sales and collection, as well as an interpretation room equipped with audiovisual and interactive resources and tactile models. This room allows visitors to better understand the historical and architectural context of the Royal Site (Fig. 8).

To architecturally unify the different spaces, a coherent construction language was chosen, based on a limited number of materials: metal profiles for structures and Viroc panels for cladding. The hall floor is slightly raised by a metal structure that supports the wooden platform, allowing for the organization of the exhibition route.

General lighting is achieved with ceiling washers that reflect light onto the vault. In the interpretation room, an intermediate wall divides the space into two pathways, also serving as a support for exhibition elements. This wall begins as a closed element for the first panels and evolves into a low wall, topped by vertical pieces that allow for the development of a metal ceiling with electrified tracks for accent lighting (Fig. 9).

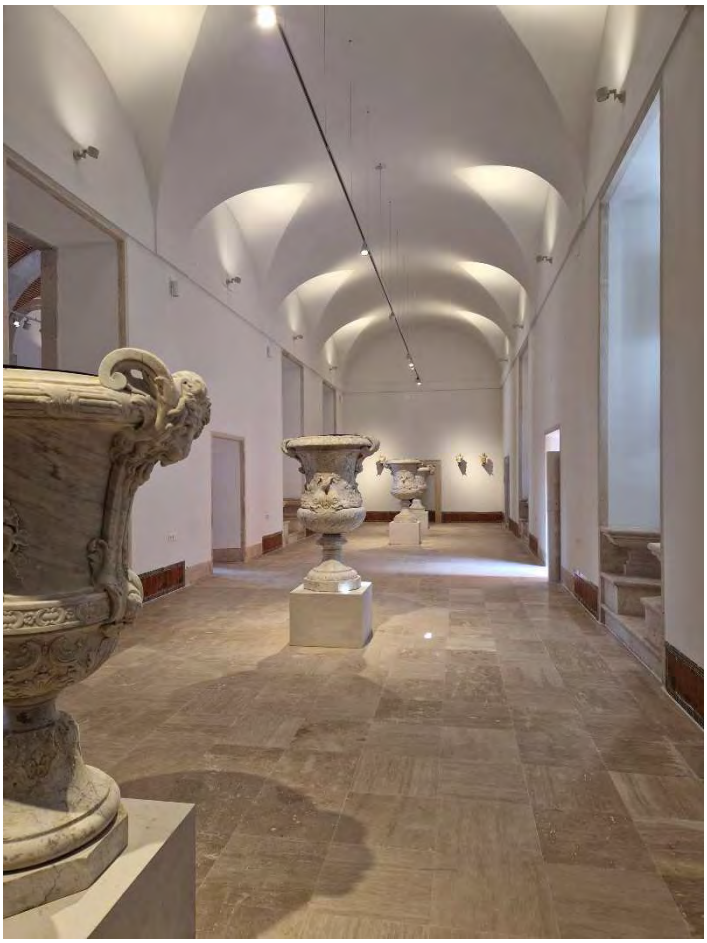
Figs. 8-9 - New Visitor and Interpretation Center at the Monastery of El Escorial, 2024. (Ph. by the author).

The intervention is completed with low walls, benches, and lecterns that explain the modifications introduced by Juan de Villanueva to the north façade of the Monastery during the 18th century. The rooms of the second bay, connected to the main space, house a restroom area and a small audiovisual projection room that complements the information provided on the panels.

The proposed design allows for the interpretation of the original architectural spaces, clearly differentiating them from the additions, through the integration of flooring, walls, protective elements, and supports by means of continuity between horizontal and vertical elements.

We also highlight the recent opening to the public of the Salas de Felipe II in the Palacio Real of Aranjuez,3 spaces that have been restored and incorporated, for the first time, into the tourist route. These rooms display historical sculptures such as the original busts of Roman emperors from the Casa del Labrador (Fig. 10), the seated sculpture of Maria Luisa of Parma, and elements moved from the gardens – for conservation reasons – such as the vases from the Jardín del Parterre and the harpies from the Jardín de la Isla (Fig. 11). This project reinforces Patrimonio Nacional's commitment to accessibility, sustainability, and historical accuracy in the museum presentations of the Royal Sites.

Within the framework of museum interventions in historical spaces, one of the fundamental challenges lies in establishing a harmonious relationship between the new exhibition installations and the pre-existing architectural and decorative elements that are inseparable components of the building's heritage value. This articulation demands a particularly complex balance in cases where the museography must preserve the solemnity and magnificence of the surroundings without the exhibited pieces being subordinated or overshadowed by it.



Figs. 10-11 - Felipe II's Rooms at the Royal Palace of Aranjuez, 2024. (Ph. by the author)

Resolving this tension involves design strategies that allow for the respectful integration of the exhibition into the space, avoiding visual competition and fostering a coherent museographic narrative, supported by contemporary exhibition systems that engage with the architectural context without distorting it.

Continuing with these efforts, the expansion and modernization of the Visitor Reception Center at the Palacio Real de Madrid has begun.4 This project includes the reorganization of access points, the restoration of the Real Botica, and the adaptation of the Salones Génova to house new services such as a cafeteria and shop. This intervention responds both to the sustained increase in the number of visitors to the Palace and to the need to adapt a historic building to its new function as a museum, which entails meeting demanding technical standards. Particularly relevant are the requirements for climate control and lighting, areas in which solutions must be implemented that guarantee the preventive conservation of the artworks without altering the architectural atmosphere of the space. The lighting, for example, must be carefully designed to highlight the pieces without compromising sensitive materials or interfering with the perception of the heritage surroundings. In this regard, the use of LED technology and lighting control systems adapted to the characteristics of the historic building is fundamental for effective implementation.

The rehabilitation of these spaces is governed by technical principles such as the reversibility of interventions, the compatibility of the materials used with the originals, and the guarantee of universal accessibility, ensuring that the solutions adopted respect both the heritage value and contemporary criteria for museum use.

In conclusion: Museography in historic buildings and palaces presents the complex challenge of reconciling the preservation of the original architecture and decoration with the functional, technical, and discursive demands of a contemporary exhibition. Whether in new construction projects that establish a respectful dialogue with the heritage environment – such as the Galería de las Colecciones Reales – or in interventions on pre-existing spaces – such as the Museo de Arquitectura de El Escorial – the central objective remains to achieve a meaningful coexistence between the exhibited collection and the historic building, so that both mutually enrich their interpretation and appreciation.

The evolution of museums in Spain, from the royal collections promoted by the monarchy to the current museum spaces in historic palaces, reflects a constant tension between conservation, interpretation, and accessibility. Over time, this institutional vocation has crystallized into museographic models that integrate art, history, and architecture, consolidating the role of heritage as a vehicle for knowledge and cultural representation.

Currently, the main challenge lies in adapting these spaces without compromising their integrity or distorting their essence. Museography in heritage contexts demands creative and technically rigorous solutions that respect the original architecture, recontextualize the works according to the space, and comply with contemporary standards of preventive conservation. Within this framework, the dialogue between past and present is not only viable but essential to ensure that heritage remains an active source of identity, reflection, and collective enjoyment.

Palace museography transcends exhibition design to become a discipline that articulates history, technique, and cultural sensitivity. Its future projection will depend on the ability to integrate these elements into museographic proposals that respect the legacy received and transform it into meaningful experiences for future generations.

Notes

1. The competition was decided in 2002, with the winning proposal coming from the studio of architects Emilio Tuñón Álvarez and Luis Moreno García-Mansilla.

2. La obra de restauración que incluye los soportes museográficos ha sido proyectada por el arquitecto Luis Pérez de Prada y la instalación museográfica a cargo de la arquitecta Desirée González.

3. Designed by architect Luis Pérez de Prada, the project was completed in 2024 and is open to the public as part of a visit to the Palacio de Aranjuez.

4. This project will be completed in June 2025 and will offer new spaces for visitors and a substantial improvement in visitor services.

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The book continues to provide the experience of restoration and adaptation of historic architectures in a compatible use, as museums. After an historical profile of Italian and European museums, with especially attention on Vatican Museums, we continued on some European exemplified cases after the Second World War. In first paragraphs have been addressed some interventions done in Fifthes and Sixties in Italy. Then we continued with Franco Minissi, Guido Canali and Andrea Bruno's experiences in restoration and adaptation works. We gave an overview of some museums and their extensions in different cities as Paris, Madrid, London and Berlin. We think that was also important to give some issues about the adaptation works in a compatible use of architectural pre-existences. In conclusion we wanted to give an overview about contemporary atmosphere about museology and museography.

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