

Giacomo Boni at the *Museo Forense*: Construction History as a Source for Architectural Innovation

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Giacomo Boni (Venice 1859 – Rome 1925), engineer, architect and archaeologist, is a key figure of the culture of the turn of the 20th century. He met John Ruskin in 1876, who he considered as his mentor for the rest of his life. This encounter was contemporary with the creation of the Society for the Protection of Ancient Buildings (SPAB) in England by William Morris, of which Boni would later become an honorary member.

Boni was appointed as Director of the Office for the Excavations of the Roman Forum in 1898. Among other projects, he converted part of the monastery of Santa Francesca Romana- Santa Maria Nova into the *Museo Forense*, following a restoration project that was initiated by him in 1900 and executed by the architect Guido Cirilli until its conclusion in 1907.

Boni's pioneering multidisciplinary and scientific approach when dealing with conservation and restoration works, his experimentation with new and old materials and the close contact with John Ruskin and the SPAB circle, makes him an extremely interesting figure, not only for the history of the discipline, but also for current architectural debates concerning new interventions on historic buildings. His intervention demonstrates the direct relationship between architectural design and construction technology, the design and construction process, the historic and contemporary living together in harmony.

THE BUILDING

Since its establishment, the monastery of Santa Francesca Romana- Santa Maria Nova and the adjacent church at the Roman Forum occupied the area at the front of the west cella of the Temple of Venus and Rome (dedicated by Hadrian in 135 AD), having its foundations directly laid upon the massive concrete platform of the roman temple (**fig.1**).

The original building suffered some very different transformations over the centuries (González-Longo 1995). The first church and adjacent monastery date from the ninth century (Prandi 1937). In 1161, under Alexander III, the church was re-consecrated as Santa Maria Nova after an extensive construction programme that included the cloister. In the thirteen century extensive reconstruction had to take place after a devastating fire. In 1352 the church and monastery were given to the Olivetan order, which rebuilt the cloister, and which still occupy a part of the monastery today. In the seventeenth century, with the purpose of enlarging the monastery, some of the original arcades

towards the cloister were blocked. The last episode was a lamentable conversion into barracks in the 1870's following the suppression of monasteries. As a result, its condition in 1900 before Boni's intervention was deplorable (fig. 2).

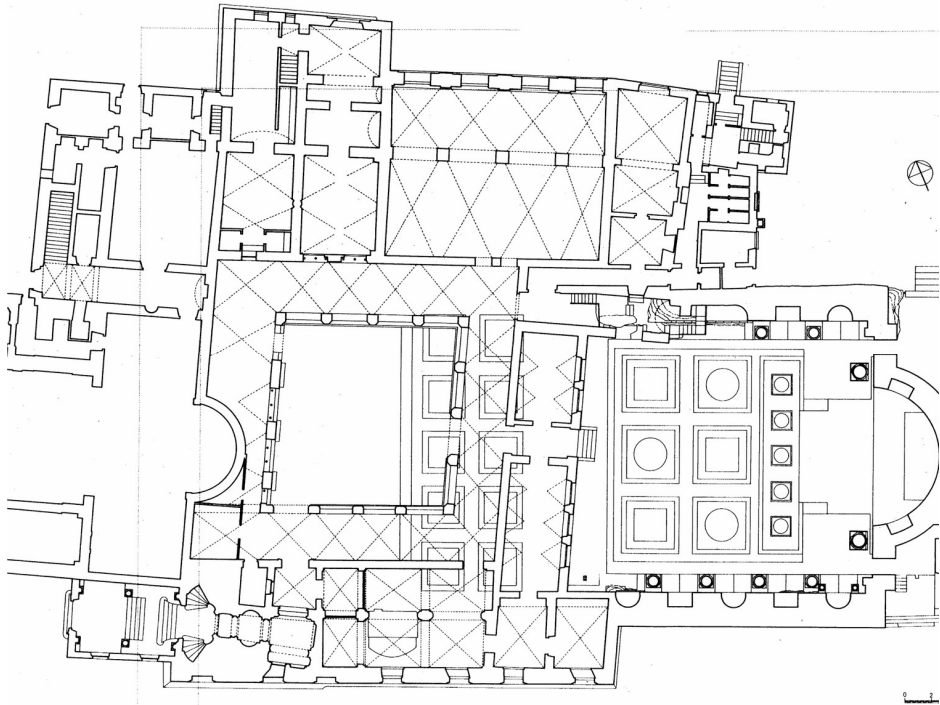


Figure 1: Ground floor plan of the monastery and church of Santa Santa Francesca Romana- Santa Maria Nova, and the western cella of the temple of Venus and Rome (author).

THE CONSERVATION PROJECT

Before undertaking the discussion on this project, some general clarification on basic concepts is needed. There is some confusion between the terms *Conservation* and *Restoration*. The Italian concept of “*Restauro*” (Bonelli, 1963) is the equivalent to the English *Conservation* (British Standard 1998): the action to secure the survival or preservation of objects of acknowledged value for the future. The English *Restoration* would correspond to the Italian “*Ripristino*”: a stylistic intervention which selects the period that the building should be returned to. In this work we will talk about the Conservation Project, intended as a comprehensive project that includes consolidation and repair work as well as new additions.

So far as the documentation of the intervention are concerned, there are a great deal of archival documents, diaries, drawings and photographs well conserved in the *Soprintendenza Archeologica*

di Roma (SAR), and the *Archivio Centrale dello Stato* (ACS) in Rome, describing the conversion of part of the monastery Santa Francesca Romana- Santa Maria Nova to *Museo Forense*.

The three key documents that have helped to reproduce the project sequence are the Outline Design proposals and estimate of cost (ACS, MPI, DGAABBAA, Div. I (1908-1924), b. 869), Boni's Excavation Diary (SAR, *Giornale di Scavo*, 1904-1907) and a report that the architect Guido Cirilli was forced to write in 1909 in defence of his interventions, after criticism from newspapers (ACS, MPI, DGAABBAA, Div. I (1908-1924), b. 869).



Figure 2. South angle of Cloister as found by Boni (AFSAR, 39)

The Brief of the Project

The building was to become the Museum and the offices for the Directorate of the Roman Forum. The brief was quite ambitious as Boni intended to have a museum that showed and interpreted the contribution of the Roman Culture to the world, but only with dispersed original artefacts or copies, because he always defended the conservation *in situ* of historic artefacts.

The project was contemporary with Boni's major excavations and discoveries in the Roman Forum, so he never had enough time to complete it as he intended. After Boni's death in 1925 further

archaeological fragments from the Roman Forum were located in the ground floor, forming the Antiquarium Forense, inaugurated by Mussolini in 1935.

The Outline Proposal

The project started on 31 July 1900, when Boni proposed to the Ministry of Public Instruction to convert the monastery into museum. Shortly after, he requested an engineer to carry out the project under his supervision and the Ministry sent Badiali, with whom Boni was not satisfied from the beginning due to his lack of attendance on the site and for not following his idea of opening a visual communication between the cloister and the Roman temple. Finally the project was changed and Boni approved it on 14 June 1901 (ACS, MPI, DGAABBAA, Div. I (1908-1924), b. 869) (**fig. 3**).

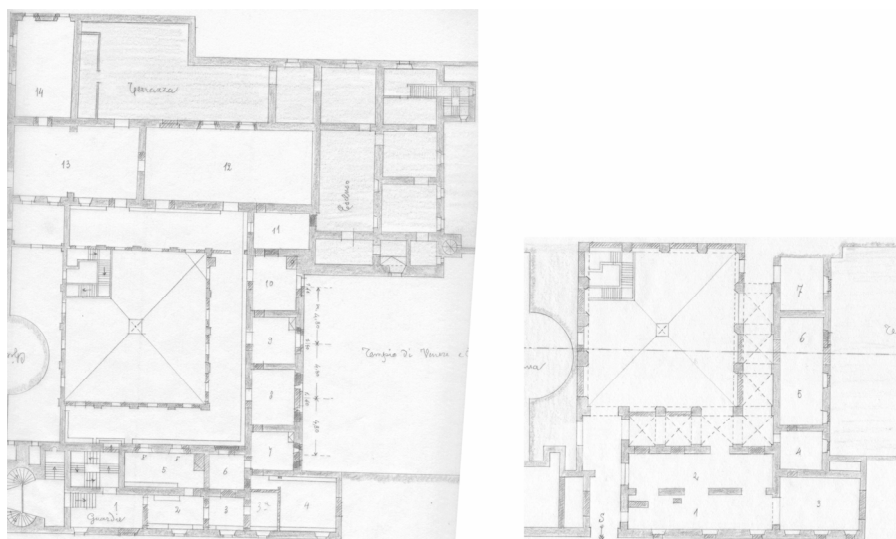


Figure 3. Plans of the outline proposal for the conversion of the building to museum, dated 1901
(ACS, MPI, DGABA, Divisione I (1908-1924), b. 869)

Preliminary Studies - Drawing and Recording the Building

In October 1901, Boni asked the Ministry to commission the survey of the building to Guido Cirilli, who was at the time carrying out other surveys at the Roman Forum (ACS, MPI, DGAABBAA, Div. I (1908-1924), b. 869).

In order to rationalise the spaces within the building, Boni made arrangements for some parts of the monastery to be exchanged with the monks, with the intention of achieving adjacent spaces for the museum. Boni was always on the best terms with the original owners of the monastery, the Olivetan monks (Tea 1932). The exchange of accommodation appeared to be satisfactory and beneficial for

both users. In May 1902 the exchange of accommodation is completed (ACS, MPI, DGAABBAA, Div. I (1908-1924), b. 869).

Probably due to Boni's lack of time to dedicate to project, coinciding with the intense period of the exploration of the Roman Forum, Cirilli was appointed as director of the works, but Boni retained a supervising role, and the decisions on the intervention had to be approved by him. There is a payment recorded in November 1907 for works until 1903 of "consolidation and conservation and conversion to *Museo Forense*". Badiali was in charge of the administration of the works.

In his self-defensive 1909 report, Cirilli stated that he started the project of "*ripristino e consolidamento*" with the survey and drawings of the building, which was then photographed before works started. A thorough measured and photographic survey was carried out and detailed plans, sections and elevations of the existing building were drawn, as existing and as proposed. The fine drawings show the care for the detail that distinguishes his work.

Investigation works preceded new works, removing modern renders to undercover the masonry, but without removing the later blockage to the fourteen century arches, in order to investigate the structural condition of the fabric. The full extent of the cloister arcade was then revealed.

The Final Project and the Procurement

Although it seems that some conservation work on site started in early 1903, the site started formally in 1904, soon after that the final project documentation is signed out by the architect Pettrignani (ACS, MPI, DGAABBAA, Div. I (1908-1924), b. 159). It seems that Cirilli was never officially appointed. He was not paid for the work carried out between 1904 and 1907 until 1912. The delay could be because the commission was not formalised by the Ministry, but by Boni directly.

The budget was very tight and the time limited. The final project would cost around 25,000 Italian Lire (not including fittings and furniture). The contract was set up in the most economical way, with "a schedule of prices" and with direct employment of labour. In order to save some money, some of them were full time employees from the Forum, carrying out the bricklaying, joinery and decoration works.

On 22 July 1908, eight years after the first proposal by Boni, the *Museo Forense* was formally instituted. In 1910 Boni was still purchasing display cabinets and other objects for the museum. In 1912 Boni placed the prehistoric tombs in the ground floor.

Changes in the Project

In the outline proposal, Boni had already anticipated some changes to the project, but without "cost

implications”. Indeed, during the investigation of the fabric, small fragments of earlier cloister arches (identified as belonging to the thirteen century) were uncovered (**fig. 4**). Despite the small section of the original arcade left, it was possible to reconstruct it. Cirilli proposed to Boni to completely reinstate the earlier cloister. Fortunately, reasons of “opportunity and economy” prevented the execution of the proposal (ACS, MPI, DGAABBAA, Div. I (1908-1924), b. 869).

There were also a series of alternative studies. There was at some point a proposal to add a large stair to the cloister. This was clearly a more stylistic approach to the restoration, trying to highlight the medieval character of the cloister and to unify the design. (**fig. 5**).

The design changed in accordance with the discoveries and successful negotiations were made with the monks regarding exchange of spaces in order to achieve a better functionality in the museum.

Consolidation Works

Boni’s Excavations Diary between years 1904-1907 (SAR) describes the ongoing consolidation works. The solution to the necessity of incorporating the recently found earlier cloister arcades was to build a new wall composed by piers and arches in breccia stone to support the remains, leaving them exposed. Probably the breccia stone was selected as structurally capable of effectively transmitting all the loads to the massive original concrete platform of the Temple. Before strengthening was carried out, the later masonry blockage of the first floor was removed and replaced with timber props and centering designed by the engineer Badiali (**fig. 6**).

The main difficulty was the fact that the structural meaning of the west part of the cloister at ground floor level had to be altered. The small fragments of the earlier arcade were within the later cloister piers, so the pier location had to be moved.

There were some structural problems, especially with some of the cloister vaults and piers. In order to overhaul the fabric, the existing render had to be stripped off and structural monitoring was carried out by using “tell-tales”. Once all the new piers were built, it was the turn of the vaults and, due to their poor condition, three vaults adjacent to the church had to be reconstructed. There was also the necessity of reintegrating some of the surrounding decorative elements and windows.

There are some discrepancies in the description of the construction sequence between the diary of excavations (SAR) and Cirilli’s report (ACS, MPI, DGAABBAA, Div. I (1908-1924), b. 869). Cirilli states that he had rebuilt the vaults once all piers and arcades were consolidated or rebuilt. In the diary of excavations there is mention of works being carried out in the arcades of the cloister after the works to the vaults.

Looking at the cross section through the cloister (**fig. 7**) it is possible to understand the complexity of the consolidation operation in this locality, built up over two thousand years, sometimes with poor fabric additions.

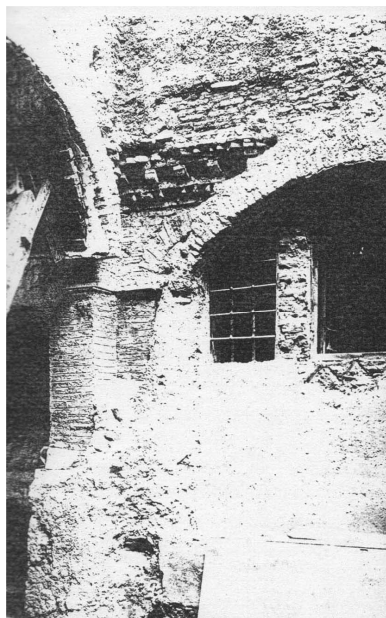


Figure 4. The pillar at the southwest corner of the ground floor of the cloister during Boni's intervention showing remains of the earlier cloister (AFSAR, 31).

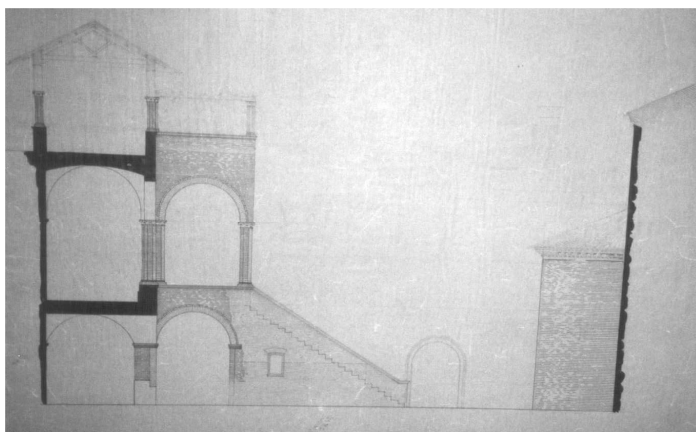


Figure 5. Study for the cloister (ADSAR, 62)

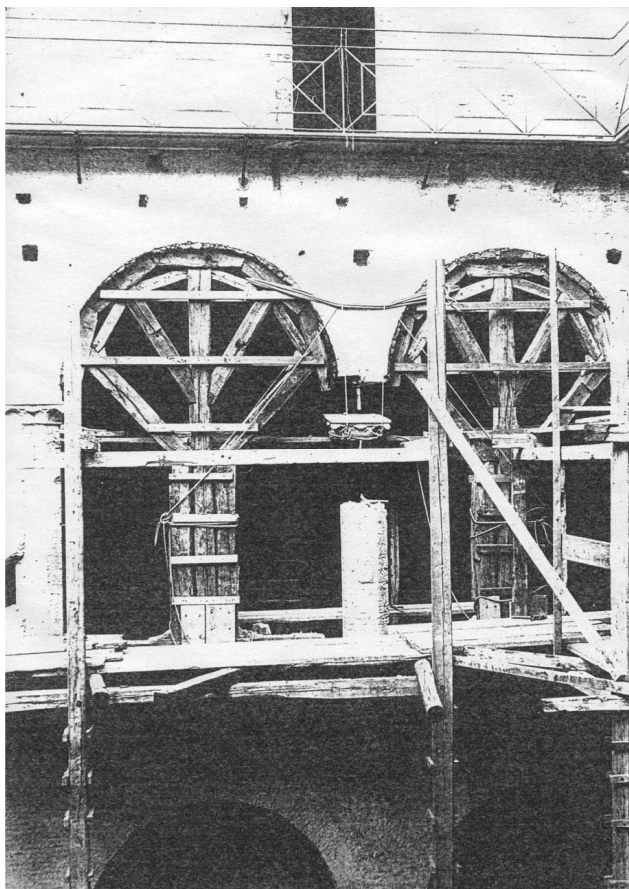


Figure 6. Timber props and centering designed by Badiali

In May 1905 Boni recorded some cracks on the vaults adjacent to the apse at first floor level and repairs were carried out subsequently. No consolidation to the foundations was needed, since they are directly supported by the concrete platform of the Temple of Venus and Rome, above which the monastery lays. In order to make the platform of the temple accessible to the future, a series of new vaults were built in October 1905 (fig. 8).

New cracks appeared, this time at ground floor level, but no repairs were carried out this time, only props were placed. In 1907 however, some cracks appeared in the apse of the adjacent church. After a polemic discussion, Boni and Cirilli demonstrated that the cracks were not directly related to the conservation works, but to the poor construction of the church wall (González-Longo 2002). Finally, this area was also consolidated in 1909 (ACS, MPI, DGAABBAA, Div. I (1908-1924), b. 869).

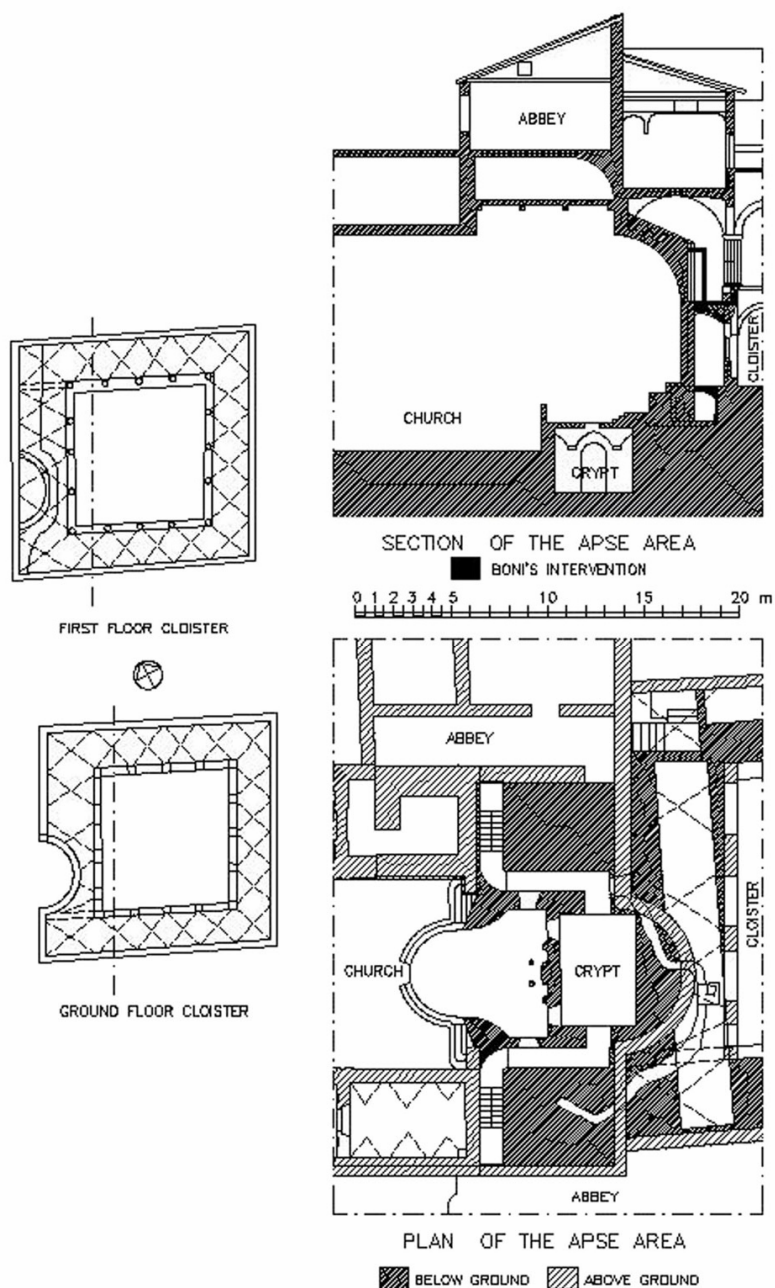


Figure 7: Plan and section through the cloister showing relationship with the adjacent church and the platform of the temple of Venus and Rome (author)

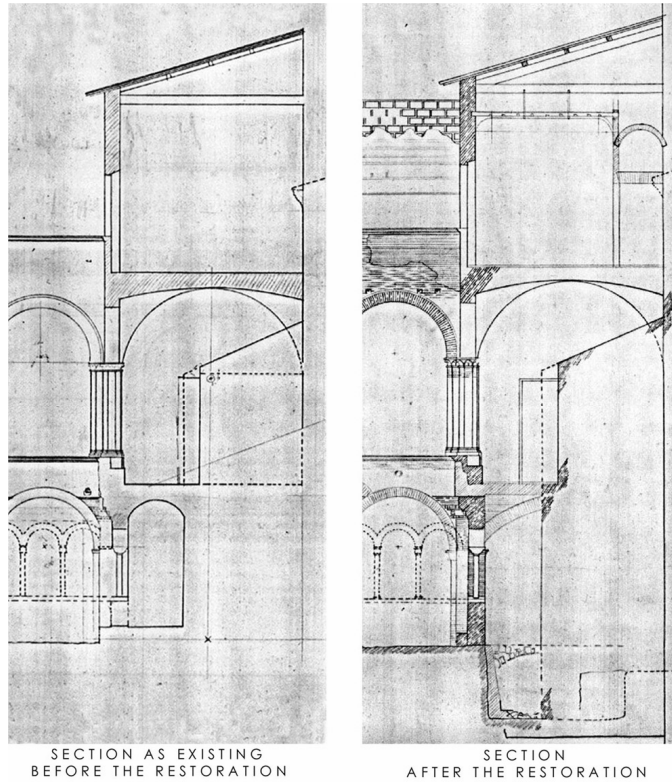


Figure 8. Section of the cloister through the apse of the church showing ground floor vaults before and after Boni-Cirilli's intervention (ADSAR, 3, 14)

Conservation and Construction Techniques and Materials

In this project, two different approaches to strengthening can be distinguished: in order to consolidate the decayed vaults and arches, Cirilli used the 'repair by building' method, i.e. removing in sections decayed and loose material and rebuilding. Cracks to masonry were repaired by washing and repointing. A different approach to strengthening was taken at ground floor level, where the high proportion of lost original arcade (*lacuna*) required a permanent visible support, in the form of a new arcade wrapping around the original one.

The breccia stone was selected not only for its strength and its compatibility with the existing masonry but also for its colour and texture, especially when broken. The effect was that the nude masonry probably appeared at the time a bit "crude"; it is probable that the intention was to cover the wall with Boni's beloved vegetation, in order to give the covered-up earlier arches the more picturesque aspect of a ruin.

The spandrels of the vaults were filled up with concrete up to the level of the pavement (ACS, MPI, DGAABBAA, Div. I (1908-1924), b. 869). In principle this operation seems not to be good practice, but it all depends on the exact composition of the concrete, whose specification is not mentioned. It is probable that Portland cement was used in a mix with large and coarse aggregates, compatible with the fill encountered elsewhere.

The timber roof structure was left intact as it was found to be in good condition, but new flooring had to be located in the main museum room, in order to cope with the increased loads imposed. The existing timber flooring was replaced with metal beams and the ceiling was composed by a plastered metallic mesh.

Boni had a particular predilection for the technology of materials and in particular their durability and their maintenance, and this often dictated project choices. For instance, in March 1906, there is a change to the cloister at first floor level from Venetian mosaic pavement to terracotta. It was found to be more adequate for the character of the cloister and also because Boni found a method to increase its resistance to ice and atmospheric agents; in May the works to the pavements stopped since there was not adequate time to lay it (ACS, MPI, DGAABBAA, Div. I (1908-1924), b. 869), but on 31 October 1906, the works started again “with the tiles already preserved by burnt oil” (SAR, *Giornale di Scavo*). The area surrounding the stair was paved with pressed ceramic tiles laid on lime mortar at the second floor and hydraulic pressed cement mosaic at the first.

New timber (chestnut and pine) windows at the second floor and metal windows to the ground and first floors were also fixed as well as the ironmongery. The design of the metal windows and frames allowed for a sort of permanent centering to the big newly opened doors and windows.

Other materials supplied were lime, *pozzolana*, gypsum and quick-set and slow-set cement. It seems that these were always requested from suppliers with products of quality. In the archives, there are invoices also for travertine steps, for “*mattoni presati di Siena*” from Carlo Frigerio, while metal frames and windows were supplied by Angelo D’Amico in 1907 (ACS, MPI, DGAABBAA, Div. I (1908-1924), b. 869).

Boni’s interest and effort for the conservation of materials has already been recognised (Calabreta 1986). Boni brought theoretical and practical aspects to bear through his consistent rejection of any treatment of a material that altered its original and authentic appearance.

The new materials were selected to match and had to be compatible with the originals, but the new elements were designed in simplified forms to be clearly distinguished from the old. The new piers and arches in breccia stone at ground floor level were given a rough tooled finish in order to blend their aspect with the existing fabric, but at the same time to make them distinguishable. A *peperino*

stone stair was built to connect the Roman temple and the first floor of the museum and benches were built into the cloister parapets, reusing materials (travertine and peperino stones) (**fig. 9**).



Figure 9. Details of new elements in travertine, breccia, peperino and metal

CULTURAL CONTEXT

The project's approach towards the existing building should also be examined within the historic and technological context in Italy and Europe at the time. After the 19th century conservation-versus-restoration debate, with the French Viollet-le Duc (1814-1879) leading the stylistic restoration and the English John Ruskin (1819-1900) promoting the romantic treatment of historic buildings, the Italian Camillo Boito (1836-1914) proposed scientific conservation.

Boni arrived at archaeology and architecture through his talents as draughtsman. These skills, together with his knowledge of English language, allowed him to get in contact with John Ruskin. Boni met him in Venice in 1876, when he was working on the restoration of the Ducal Palace, forming a long lasting friendship and considering Ruskin as his mentor for the rest of his life.

This relationship was contemporary with great activity in England towards preservation, promoted by William Morris, the creator of the SPAB. The Society was strongly influenced by Ruskin and Boni would become an honorary member, learning about the restoration debate in England at first hand.

G. Boni studied architecture in the *Accademia di Belle Arti* in Venice between 1880 and 1884 and at the same time he learnt Latin, Greek and improved his English. He strengthened his contacts with England, later becoming Doctor Honoris Causa by the Universities of Oxford and Cambridge and member of the Royal Academy. In the SPAB Annual Report (1888) it is mentioned:

The promotion of Signor Giacomo Boni, an honorary member of the Society, to an important post in connection with the Department of Antiquities and the Fine Arts at Rome, is a very gratifying circumstance, Signor Boni being an accomplished, painstaking antiquary; and the Society have every reason to expect the best results with regard to the preservation of ancient monuments in Italy from his appointment.

It is also important to note the deep knowledge of historic buildings that he had, from his early experiences as draughtsman at the Ducal Palace in Venice through his ten years experience as Inspector of Monuments, travelling all around Italy, until he became Director of the Excavations of the Roman Forum in 1898.

This combination of study, research, survey, recording, practical intervention and cultural exchange made up Boni's all-round knowledge and fair judgement on historic buildings, which he was never afraid of defending, saving many important buildings from demolition. To complete this extensive scientific and methodological rigour Boni had the capacity to cross reference information from different documentary and physical sources (classical sources, previous explorations, paintings, geology) and an incredible intuition that sometimes was not well understood and was taken as arbitrary interpretation. He did not leave his work in the mere discovery phase, but tried to analyse and to interpret the results, making a great contribution in the debate of the time.

It is a frequently mistakenly said that Boni simply applied contemporary English practises in Italy. There is enough evidence to show that the influence was mutual. Boni had the ability to learn from different sources and his work can be considered as pioneering, not only because of his methodology but also of the technology and instrumentation used in the interventions.

DESIGN PROCESS

Research and Practice

Concerning the application of this approach to the project, Cirilli carried out an extensive exploration of the site, which did not focus only on historic and technical aspects but also understood the needs of all the users concerned. It is clear from all documents that Giacomo Boni and his collaborators undertook research and cross-examination and confrontation in depth before the intervention. The building was surveyed in detail and the intervention was clearly marked in the drawings with different colours.

With the original arches to the cloister re-opened (**fig. 10**) and new windows were to the east of the monastery, in order to create a visual integration of the Roman cellae with the Medieval cloister Boni achieve his intention of "flood the building with light" (ACS, MPI, DGAABBAA, Div. I (1908-1924), busta 869).

The most evident mark of contemporary architecture was in the new purpose designed doors and windows (**fig. 11**). Boni and Cirilli had never had any intention of reinstating in this elements original materials or forms, but they designed them in a way that was contemporary, yet sympathetic with the context.



Figure 10. Current aspect of the interior of cloister (author)



Figure 11. New metal glazed doors (author)

The Method

The main criticism to Boni is that he did not publish more on his work (probably due to lack of time but mainly lack of collaborators willing to disseminate his findings). He compensated for this however by publishing a few important writings, like the one he published in 1901 on archaeological investigation methods: *Il Metodo* (Boni 1901).

In this publication, Boni makes clear how he privileges material evidence. This text discusses the stratigraphic archaeological excavation methodology. Boni had applied a similar approach in the

Museo Forense, but instead of ground excavation, the stratigraphic sections have now been done in elevation. This example stressed the importance of conserving in situ not only the remains, but also some sections that show the stratification over the time. This method also enables the appreciation and research of remains that are not well understood at the time, but which maybe understood by future generations.

A description of the ongoing works in the cloister by D. Antonio S. Bosatelli, then Rector of Santa Francesca Romana, on 7 July 1905 praises “the works by the Ministry of Public Education, carried out with scrupulous exactitude, conserving all the different phases of construction” (ACS, MPI, DGAABBA, Div. I (1908-1912), b. 143).

Critical Approach

Another particularity of this work is Boni’s will of understanding the continuity of architecture, researching all phases of the building for its better interpretation. On the other hand, Boni could be criticised in the removal of the cloister blockage for failing to recognise later periods. As far as the photographs show, this blockage was mainly an ordinary measure made to maximise the space in the cloister for the use of the barracks and Boni considered it as a poor addition to the fabric. Only the east side presented fabric material from the seventeenth century, similar to that still present at the second floor of the monastery (**fig. 12**). Boni considered that the additions should be removed because they lacked any artistic value and affected the unity of the work of art.

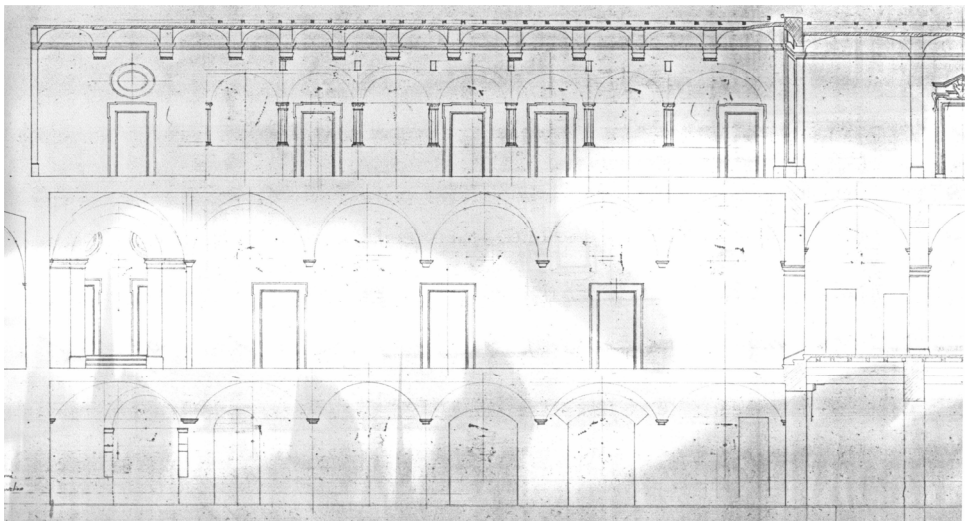


Figure 12. - Section of the cloister showing the east side before the reinstatement of the arches
(ADSAR, 4)

Intervention Criteria

Boni's intervention was in accordance with that described in his report "Competences and Performance of the Regional Technical Offices for the Conservation of Monuments" (Paribeni 1994). At the cloister of Santa Francesca Romana, Boni consistently applies his criteria based on authenticity, distinguishability, respect to the integrity of the building (new additions should be detailed in a simplified way and not compete with the old) and respect to the picturesque character (including the preservation of the patina).

Boni, using Giovanonni's concepts, "liberated" the cloister from detrimental later construction and "completed" it in order to reintegrate the work of art. We could also talk of the execution of an "anastylosis", i.e. "the re-instatement of existing fragments with the eventual addition of neutral elements, necessary for the reintegration of the whole and to ensure the future conservation" (Giovannoni 1936).

It appears that Boni has restored the building in accordance with the principles that Brandi would establish much later: "you only conserve the material of the work of art and conservation must aim at the reestablishment of the potential unit of the work of art so far as this is possible without committing a fake and without cancelling traces of history" (Brandi 1963).

His magistral way of dealing with the "lacuna" (Brandi 1963) on the west side of the lower cloister shows the accuracy and honesty of his intervention, and his remarkable technical competence. The breccia stone was selected as suitable mechanically, but also chromatically and texturally.

Even further, it can be suggested that it was also an execution following the principles of the "Critical Conservation" ("*Restauro Critico*") formulated by Renato Bonelli (Bonelli 1963), which asked for respect of the original work (the building as document) and an intervention to increase the value of the building (taking possession of it), in an effort to fuse old and new (**fig. 13**).

The concept guiding the work, as explained by Cirilli (ACS, MPI, DGAABBAA, Div. I (1908-1924), b. 869) was to make accessible all the remains from all periods to the scholars, including underground areas. His intervention is consistent with the Italian "Carta del Restauro" developed much later (Giovannoni 1936).

The principle of minimum intervention was carried out, mainly for economic reasons, but also of the scope of authenticity. Elements found in good condition were retained, decayed elements were repaired or rebuilt depending of the degree of decay. Simply designed new work was added in harmony with the architectural quality of the existing building.

We can consider that this intervention was the first of its kind carried out with a consistent and conscious conservation methodology and technique. Giacomo Boni is usually misinterpreted,

considered as another operator of the fashionable *ripristino* or stylistic reconstruction of the period. It is important to understand in full his work and know more about his defence of the authenticity of the buildings and his opposition to Viollet-le-Duc's operations of *ripristino*. It is clear that Boni carried out a conservation project, preserving at large the existing fabric (**fig. 14**). Contrary to purely stylistic restorations, different periods were left shown contemporary and the direct influence of Boni's earlier work in this project is clear. In this context, his intervention can be summarised as the result of the critical historic and artistic interpretation of the building.



Figure 13. Current view of southwest corner of cloister (author)

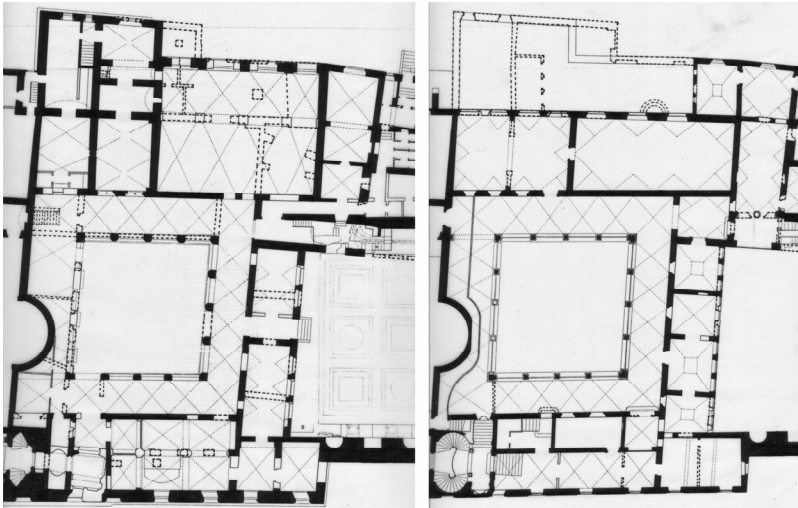


Fig. 14. Ground (left) and First floor (right) showing Boni's intervention. Filled in black existing walls left intact. Dashed lines shown demolition and consolidation operated (author)

Innovation

The circulation route was carefully planned and designed in a way that the visitors could follow a continuous route, without going backwards. The integration of the subterranean elements of the buildings (not made for a day-to-day use but for its archaeological interest), allowing in the future access to scholars, represents another important innovation of this project.

The interpretation of the building did not stop in its medieval and renaissance entity, but relates it also to its setting, the temple of Venus and Rome. The operation of reinstating the location of the original pavement of the temple in the cloister acts as a medium to explain better the monastery and its history.

Boni and Cirilli demonstrated a deep knowledge of traditional and modern techniques and the capacity of combining them when necessary. They were not obsessed by modern technology, but used it as a tool and selected the most adequate techniques every time.

But the main demonstration that Boni's approach was innovative and "modern" was the selection of the architect to carry out the works at *Museo Forense* on a daily basis. Guido Cirilli was a remarkable architect, disciple of Giuseppe Sacconi, with whom he worked in the National Monument to Vittorio Emanuele in Rome and finished his Expiatory Chapel in Monza. Cirilli became afterwards director of the School of Architecture in Venice (1929-1945), teaching drawing and composition. Carlo Scarpa was his assistant, working also in his practice, and picking up not only his interest in materials, craftsmanship and detail but also the approach to architectural design as mental and critical process of assessment of the existing built environment.

Boni and Cirilli's craft-orientated practise and what could be called *stratigraphic design* (showing all the historic layers of the building and adding new) precede acclaimed future works by Scarpa. Cirilli was also active in the fields of conservation and new design. He followed the best tradition of architects in history, those who could successfully deal with existing and new buildings without making a distinction but simply considering them as projects within a different context.

They were not interested in innovation as leaving "their mark" in the building, but in the building expressing itself, and in the innovation of making the best use of the techniques available at the time. Instead of searching references or inspiration from magazines they took them from the details of the building itself. There are no rules of guides for the projects, each building and project has their own rules, which have to be interpreted by the architect.

CONCLUSION

The building was carefully surveyed, investigated and monitored, and a proper assessment of its condition and necessary repairs was conducted. It is important to highlight the importance that the

survey and drawing of historic building had in the formation of Boni and Cirilli. The direct influence of the study of historic structures is clear. Boni and Cirilli's interest in the detail, the materials and the construction techniques are a key element in the design. But above all, even in a period of technical and administrative instability, the personal and professional integrity (and also the courage) were also at the centre of their work.

Boni and Cirilli intervene in a very "human" way, expressing the content of the building in an aesthetically pleasant manner. They kept the memory of the building and gave it both new life and historic continuity. But above all they gave a *future* to the building.

The methodology and insistence in the necessity of a comprehensive record of the buildings and the intervention were unique and scarcely surpassed. Most of all, they wanted to conserve the building as document of an original historical human manifestation and as such it had to be conserved in all its authenticity.

This method (of critical judgement of the building before the intervention) was too innovative in his time to be understood. Boni knew how to read a historic building and how to integrate the specialist knowledge into a single project. He brought to light the history of the building and made it functional for its new use. He was a modern and cultivated architect, who created new architecture with respect for the existing one, in an integrated way.

Looking at the way he uncovered the different layers of the building and brought the building back to life (**fig. 15**), we can recognise a precedent in the work of Carlo Scarpa, in particular in the method of composition and light games, but also in the treatment of materials and the textures created. The similarity of the breccia stone used here in new masonry with concrete also precedes future developments by Scarpa with concrete. It is the understanding of history and traditional construction techniques that Boni, Cirilli and Scarpa shared and the capacity of passionately living the history and making it present and future.

Boni left a world-class legacy for the history of archaeology, architecture and conservation. His embracement of fascism in Mussolinian Italy should be seen in context, and not to prejudice this immense contribution. His rigour and meticulous intervention needs to be properly appreciated and conserved.

In a period like ours, with many regulations, charters and philosophies we should call for a better formation of the architects, able to undertake a project where there are existing buildings to understand and interpret before a specific intervention is proposed. Often the history and the importance of the historic buildings and techniques are not evaluated sufficiently.

This building is not only important for the history of architecture, but also the history of conservation, construction, and, above all, as an example of humanity. There will be soon the

celebration of the 100 years of the completion of the *Museo Forense* and that would be a great occasion to open it again to the public and to show this exemplar project of conservation.



Figure 15. Details of the new breccia stone wall to the west side of the cloister, at ground floor level (author)

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