

## ACTING ON THE LIVING WORK

### Awareness and knowledge to understand the peculiarities of architectural restoration

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Ruins, in particular those from the great lost architectures, have always led to reflections on themes such as history, the impermanent nature of life, the spiritual dimension of man and the passage of time, thus becoming a source of literary, artistic and architectural inspiration. Imbued with their memories, disintegrated by the centuries, immersed in the natural environment, violated by nature to the point of taking possession of them, ruins were the prime motivation and an attractive metaphor that prompted world travellers to visit Italy on their Grand Tour.

In the ethics of contemporary society, architectural archaeology provides food for thought, in particular, to outline a coherent path of philological recovery that sees it in a new light, beyond the limits of conservative restoration.

The systemic approach of a building fallen into disrepair, as in the case of the archaeological site of the Fountain of Hercules, inevitably triggers a series of considerations of different nature, based on the principles of contemporary historical awareness pervaded by the coexistence of multiple historical and cultural values as well as new influencing factors.

The concepts of vulnerability and conservation of the unearthed sites, consequently, introduce the need for the restorer architect to be aware that he or she has to make essential, one-way decisions – at times, courageous ones, yet indispensable. It is about **acting on a living work** in order to contain degenerative processes that would otherwise be irrecoverable and that would lead to the total loss of the vestiges.

*The future vision of the place, that is, how it will look like after the works, becomes sustainable only when it is supported by the belief that **the restoration to be carried out embodies the vision of thought-out and balanced historical awareness**, derived from one's cultural and technological "travel experience" that stretches beyond a specific place. The final result is a distillation of mental and spiritual experience formed as a sort of mosaic where the individual tiles of knowledge and awareness gradually come together to give shape to an idea – almost a mental painting – of the place enlivened by its history.*

Conservation procedures and interrelated research methods have helped to focus on the cultural approach of restoration and to define the formal language of the "architectural graft" performed on the ruin so that both are in mutual interaction and lead towards an outcome in accordance with the principles of protection and enhancement.

The conclusion of the archaeological excavation brought to light the last elements that had remained undetermined for the full understanding of the architectural and functional "mechanism" of the fountain, demolished in the 18<sup>th</sup> century. These elements are the discovery of the base of the *Hercules Colossus* statue, the underlying structures of the perimeter of the surrounding basin, the different uses of the internal rooms with traces of the ancient hydraulic channels and the precise base structure of the stairways and corner pavilions.

An in-depth study revealed a fairly clear picture of how the architectural complex could look around 1671-1672, that is, at the end of its construction and decoration.

*At the end of the "**knowledge yard**", the first phase of the restoration work, the features of a "mental painting" had become quite clear, allowing us, blind to the history that came*

*before, to glimpse the main characteristics of the ancient architectural scene and to identify with it in order to understand it. Then, we could rely on the possibility of describing a new scene, one that would not be a mimesis of the previous one, now lost, but rather one that could recall it in contemporary forms, contextual with the acquired ruins.*

To describe the methodological approach used in the architectural project, one can think of a sort of representation of knowledge, *according to the computer language, as a method in which different schemes are combined in a data structure containing all the relevant entities and their relationships in a single domain that includes the many fundamental aspects from which the technological and aesthetic solutions can then arise.*

This dynamic is not intended to be intellectual, but rather concerns the orientation centre of the emotional sphere. **Architecture is made up of physical spaces, light, colours, materials and perceptions that are primarily manifestations of emotions.**

**There are two main goals to aim for:** *the need to protect the ruins from the elements and the possibility of leveraging this need to outline forms that can evoke, as far as possible, the original lost space.*

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**And 4 main objectives to achieve:**

#### **A. The conservative restoration of the ruins and decorations**

The tumbledown structures have been restored with an archaeological approach, keeping their morphological aspect substantially unchanged, with the walls directly showing the construction apparatus with large portions of the wall surfaces, characterising their dull opacity resulting from centuries of burial.

Inside the "caves" of the nymphaeum, the mosaics made with hundreds of shells have been restored using part of the original material found in the excavations and, partly, by means of casts obtained from the shells still present on the site.

The most important parts of the nymphaeum from an architectural point of view have been reintegrated with watercolour by recomposing the lost decorations in subdued colours where the traces and residues allowed for understanding the lost design.

#### **B. The steel works**

The architectural remains of the two hemicycles containing the monumental stairways with the underlying caves suggested the solution of developing flat steel cladding that followed their sinusoidal shape. The radial arrangement of the steel pillars allows their overall dimensions to be significantly lower than any other technological solution, thus lightening the structural impact. The depth and rhythm of each step, with curvilinear sectors equal to each other in both the flights of stairs, match the sequence of steps and landings that characterised the two seventeenth-century staircases.

Steel made it possible to solve decisive structural and, above all, formal problems: avoiding the use of concrete, which is hardly compatible with archaeological findings; quick construction times thanks to elements pre-assembled in the workshop; lightness and, therefore, structural slenderness; speed of execution; total reversibility. Where possible, the foundations of the pillars do not affect the walls of the ruins which are free from any structural constraint and added loads.

#### **C. The vaults with wooden centring**

The vaults with wooden centring of the nymphaeum (made of okumè wood, which is particularly durable, light and slightly fibrous) were restored with a decidedly innovative

approach that preserves the same philological principle while reflecting the forms of the ancient brick vaults, now lost.

**The reconstruction of the vaults with contemporary abstraction made it possible to give back the place a "heroic" dimension typical of its origin and to reconfigure a lost architectural space without neglecting the historical and, consequently, figurative individuality of the ruin, which remained independent and duly restored.**

Given their different shape, the supporting beams required to be individually designed and laser-cut based on steel guide templates. Successively, they were handcrafted in a carpentry shop and assembled on-site using exclusively panel joinery and wood pegs, creating over 400 arches and curvilinear bands that required over 24 cubic metres of wood.

#### **D. The casts of the "telamons" and the facade of the nymphaeum**

The large main facade of the nymphaeum was a unique architectural work for its time. Entirely made of white Frabosa marble, it had three large openings with architraves, concluded by a mighty entablature supported by four "telamons" (also known as Atlantes, figures who supported the pillars of the sky in Greek mythology).

The gigantic statues were created by sculptors Giovanni Battista Casella and Carlo Pagano between 1669 and 1670. Removed in the eighteenth century during the demolition of the fountain, they were given by Victor Amadeus III of Sardinia to the Count of Govone who modified them and used them as supports to the external staircase of his castle where they are today together with many other marbles and statues from Venaria.

With an innovative approach to restoration, the original design of the facade was reconstructed starting from the iconographic documents of the time. Thanks to a complex technical work which made use of life-size moulds and a 3D reconstruction, it was possible to create handcrafted matrices from which to derive the individual parts and slabs that give shape to the sector shown here.

True-scale copies of the four statues have been made. Matrices were then obtained from the silicone rubber moulds traced on the originals from which the copies installed here were made, using a special mixture based on acrylic resin and calcium sulphate. The two sea horses placed in the central cave at the foot of the statue of Neptune were obtained with the same technique. The original statues of the *hippocampi* are kept at the Costa Canalis castle in Cumiana. The big shell at the Govone castle

The two statues by Bernardo Falconi representing Neptune and Aeolus come from the Racconigi castle.

#### **Some numbers:**

**First historical project of the fountain, commissioned by Christine of France around 1650-1654**

**Second definitive project, at the behest of Charles Emmanuel II: 1666-1668**

**Designer: architect Amedeo di Castellamonte with the collaboration of Michelangelo Garove**  
**Historic construction site: 1669-1672**

**Statues and sculptures made: 54 statues on the balustrades, about 32 in the caves as well as hundreds of architectural elements in marble.**

**Seashells purchased along the Ligurian and French coasts: 65,000 ca., in 67 cases**

**Calcite concretions ("mursi") excavated in Foresto and Chianocco for the artificial caves: 29 wagons (equal to about 16 tons).**

**Statue of the Hercules colossus: 3.24 metres high, sculpted in a single block of Frabosa marble, weighing 3.4 tons ca.; erected on its pedestal, now lost, on 30 April 1670; transported from Turin to Venaria in 3 days using 12 pairs of oxen.**

**Dismantling of the fountain: first, after 1693; then, after the siege of 1706; lastly, continuing on several occasions until 1751-1753.**

**Demolition of the walls in 1703 using 10 explosive charges.**

**First archaeological excavation: 2005-2007; second excavation campaign 2016-2020**

**Restoration project: 2015-2016**

**Construction site in two contracts: 1<sup>st</sup> contract 2016-2017; second contract 2018-2022**

**Construction companies: 1<sup>st</sup> contract CO.GE.FA S.p.A. Turin – 2<sup>nd</sup> contract Costruzioni Generali Gilardi S.p.A.**

**Restoration of sculptures: La Venaria Reale Conservation and Restoration Centre Foundation.**

**Hydraulic and fountain works: Piero Bianchi, Turin**

**Reproduction of the statues and construction of the entablature of the nymphaeum:**

**Mondazzi Paolo plaster cast gallery, Turin**

**Artistic restorations of masonry and mosaics: De La Ville Cooperative – Aosta**

**Volume of water moved by the fountains: 860 cubic metres**

**Underground water storage tank and pumping station with 13 electronically-controlled pumps**

**Restored fountains and water jokes: 62**

**Restoration project and construction supervision: Architect Gianfranco Gritella & Associati Studio with architects Stefania Giulio and Vincenzo Scuderi.**