

Operational methodology for a historical, critical and virtual reconstruction of Baroque ephemeral apparatuses.

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Abstract – This paper aims to use Marcello Fagiolo and Maurizio Fagiolo dall’Arco’s research as a starting point for developing a methodology of study of Ephemeral artefacts that takes into consideration all the different aspects of the specific art form that is Ephemeral Baroque Architecture.

Through the study of the social and artistic characteristics of this art form, the analysis of a wide range of case studies will help defining some common and recurring features, especially regarding available data (engravings, paintings, manuscripts, ...). The main goal of the research will be to outline a methodology of approach to the single cases based on reconstruction from text and graphic data, with special attention reserved to the relationship between the ephemeral apparatus and the surrounding urban space.

I. INTRODUCTION

From a historical and artistic point of view the Baroque Ephemeral is the most complete example of artistic and social synthesis, that englobes not only visual arts, but also music, literature and contemporary technical-scientific advancements, in order to achieve a product that can be enjoyed by the public as well as by the aristocracy and intellectuals, and convey political and cultural messages at the same time.

The Baroque Ephemeral apparatus are not limited to the celebration but are part of a system of documents edited with a communicative purpose in order to disseminate and explain the event and its symbolic meaning. If on one hand this implies a certain wideness in the corpus of available sources, on the other hand opens an important question regarding their validity and objectivity in the representation of the events. Moreover, the concept of “ephemeral” itself, meaning existing for a limited time, poses issues of difficult solution in terms of conservation, mainly regarding the contraposition of ephemeral/permanent and reality/representation. These were the issues that started the present research, founded on the research of an experimental methodology for study, representation and communication of Baroque

Ephemeral artworks in their entirety: as artistic, architectonic, urban, social and political phenomena.

Without forgetting the pioneering excursions of Bragaglia[1], Kernodle[2] and Tintelnott[3], only in the second half of the last century there was an effective reawakening of interest around this line of Italian creativity in the wake of Povoledo[4], Viale Ferrero[5], Zorzi[6], Ricci[7], the Fagiolo dell’Arco brothers. Although failing to exhaust such a complex theme, they have defined its outlines and focused the main aspects, restoring dignity to an artistic expression long ignored, promoting publications and exhibitions: we find one in Naples in 1997[8], in Parma in 2018[9], and in Florence in 2019[10], which represent a focal moment of study around the theme.

But it is certainly Maurizio Fagiolo dall’Arco in the 70s and 80s to conduct the most exhaustive and systematic study of the Baroque Ephemeral published to date: among his publications we find *Bibliografia della festa barocca*[11], and a work edited with Silvia Carandini which represents the real cornerstone for studies on the theme, *L’effimero barocco: strutture della festa nella Roma del ‘600*[12], as well as numerous publications and articles on the subject.

Only in the recent years the theme of the reconstruction of Baroque Ephemeral gained the attention of various academics such as Paolo Belardi[13] and Paolo Lattuada[14] who conducted experiments on the representation of ephemeral apparatuses.

II. CHARACTERISTICS OF THE PHENOMENON

The study of the cultural phenomenon of the Ephemeral in the Baroque era highlights several characterizing and relevant aspects for the study of the individual artefacts: the literary and socio-political components were found to be fundamental.

Approaching the individual projects, some recurring features from the documentary point of view emerge. Analyzing a wide range of examples, it was clear that there are several basic structures which, if analyzed, can facilitate and simplify the study. In particular:

- each occasion presents recurring typologies and expedients, explained in specific treaties, i.e. catafalques for funerals;
- each artist uses a more or less homogeneous language, and given the short time dedicated to the design and construction of the apparatus, he often reuses the same pieces on different occasions;
- each occasion is documented by a written text and some official engravings, as well as paintings and other testimonies.

In this study, attention is paid mostly to the latter as the tool for the reconstruction of ephemeral apparatuses.

III. METHODOLOGICAL ISSUES

For temporary apparatuses, unlike what happens in the field of restoration and archeology, the reconstruction does not start from the study of the artefact to be integrated with iconographic sources, but proceeds in the opposite direction, using texts and images as a starting point to then be confronted with the built reality.

Some scholars attempted reconstructions of baroque ephemeral systems, achieving results that open the way to a series of interesting reflections and observations. On the one hand Paolo Lattuada reconstructs, in a virtual and physical environment, the celebratory machine designed by Ferdinando Sanfelice in 1740 for the birth of the Reale Infanta in Naples[14]. Even if he manages to interpret all the metric and space integration aspects, both the realization in wooden panels and the virtual restitution are lacking considering the figurative restitution of the desired atmosphere and the one obtained by the designer. On the other side, Paolo Belardi and Valeria Menchetelli deal with Giuseppe Piermarini's work by returning well-defined and metrically correct models, but completely ignoring the aspects of materiality, figuration and integration with the context[13].

The need for an operative methodology that would allow to obtain a historical, critical and virtual reconstruction of the Baroque Ephemeral architectures arose from the analysis of the two proposed examples and archival documents. The methodology presented aims to indicate a series of effective steps which, if followed and applied with a critical conscience on a case-by-case basis, return a historically reliable product that takes into account the transformations that happened in the places and in the urban fabric, and not an autonomous object.

The choice of the virtual environment as the main theater of restitution derives from a reasoning on the most appropriate means for communicating this form of intangible heritage. Two aspects have led to the exclusion of pure two-dimensional representation and the hypothesis of the construction of temporary constructions:

1. the virtual environment respects the idea of temporary set-up without producing fake and inevitably temporary artefacts, however allowing

to interact with the place and participate in a possible museum project; [15,16]

2. the virtual environment is the contemporary response to the baroque desire to expansion and manipulation of space.

In addition to these premises, the method was empirically deduced from the study of the sources of a series of cases, varied from the point of view of the occasions and the artists involved, which unfolds during the XVII and XVIII centuries in Rome.

The process is structured in four fundamental phases, which can be summarized in: study of the material, study of the artefact, analytical phase and restitution; while the first and the last clearly represent the initial and final moment of the work, the two intermediates can be considered complementary and represent the real critical moment of the study.

Once a project has been selected to be analyzed, the first step in the process is the collection and study of the sources relevant to the case study. In most cases it will be a written report and official engravings, which can be accompanied by commemorative paintings and period chronicles. Fagiolo dell'Arco and Carandini have already drawn up a catalog of ephemeral apparatuses realized in Rome, which lists each project according to year, occasion, artists, material produced, material available and transcription of textual sources. [16] This volume is extremely relevant and can constitute the beginning of a systematic study, but it is limited to a documentation without interpretation in any way of the collected data.

The second moment aims at the appropriation of the data in order to analyze it later: it is therefore a matter of transcribing the texts, often manuscripts or Seventeenth-century prints, and of redrawing the engravings collected. In this way it is possible to begin to discern the characteristic elements and the amount of information available regarding the specific case.

Afterwards, two courses of study open: on one side the study of the artefact, on the other the analytical phase. They will be presented one after the other, but there is a continuous exchange between the two.

As for the study of the artefact, it was highlighted how the place was a fundamental component of the Baroque festival and the design of the apparatus. For this reason, it is firstly planned to carry out the representation of the area concerned, in its current configuration and in a reconstructive hypothesis of the configuration at the date of the celebration. For this, we will apply both the methods of integrated surveying with massive acquisition for the survey of the current state, as well as the techniques of historical research through archival documents, historical maps, analysis of the walls, etc.

The operations described will result in a pointcloud and a timeline, which will be graphed in two-dimensional (drawings) and three-dimensional(models) restitutions of the current state of the place and of the

reconstructive hypothesis of the historical moment involved in the study. In this case it is not strictly necessary to study each building phase in-depth, but it is certainly important to have a clear vision of the evolution of the construction. In the same way, in the representation it is not necessary to reach a level of detail of the degradation and patina aspects, but for the decorative and ornamental ones: we remember that the aim of the study is the reconstruction of the celebratory apparatus that was made in the place, which in this sense becomes a sort of background for the scenography.

At the same time, it is possible to start the analytical phase, studying the cultural environment. Given the importance of the ideological and allegorical contents, attention will be paid to the figure of the client and the artists involved, as well as to the research for comparisons of similar cases. Considering the scarcity of iconographic material, in fact, the understanding of the artist's style can lead to valid interpretations of the data gaps, or to clarifications of unclear points.

At this point the actual analysis of the documents begins: firstly we will analyze the geometric-proportional aspects of the graphic data, interpreting the techniques and graphic choices used in the engravings and paintings, and applying the rules of reversed perspective and of the orthogonal projection. In this way, it will be possible to establish the reliability of the designs and their correspondence to reality, and to understand if visual effects have been sought. Knowing the geometry of the place, in fact, it will be sufficient to overlay the two representations to notice any deformations, technical tricks, or inaccuracies.

A similar approach will be applied to textual data, from which all possible information will be derived. Graphic and textual data will then be interpolated to develop a model as exhaustive as possible regarding elements, geometries, colors, settings, lighting, details, allegorical meanings, plastic solutions, etc.

We then proceed by working on classifications that synthesize the distinction between ephemeral and permanent elements [Fig. 1], the artistic techniques used, which range from painting to sculpture to pyrotechnic installations, but also music, to finally define an abacus of serial and special elements.

Note how these two phases are the most conditioned by the specificity of each case.

The last moment is the restitution. This can take different forms depending on the sensitivity of the operator, the specific case study, and the use that will be made of it, but it must necessarily be composed of a series of two-dimensional drawings regarding the appearance of the place during the celebration, and of the three-dimensional models that present the layout in its original setting and the integration of the layout in today's environment.

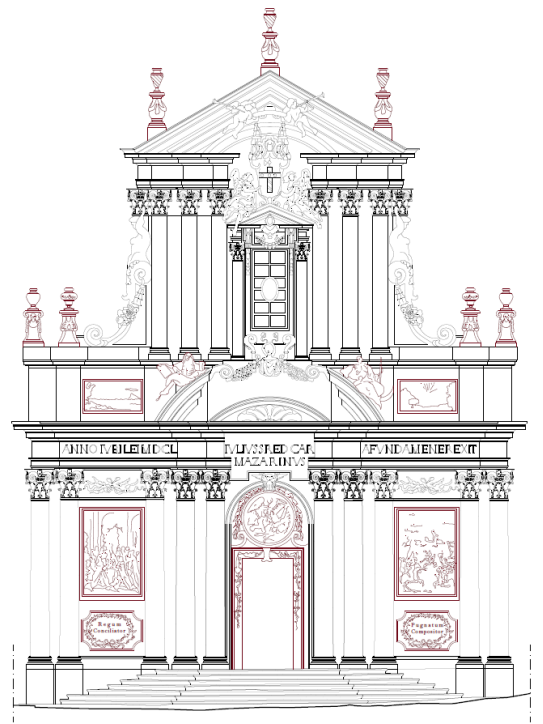


Fig. 1 Permanent and ephemeral elements on the façade of the Church of Saint Vincenzo and Anastasio.

IV. CASE STUDY

The chosen case study is the *Pompa Funebre nell'Esequie celebrate in Roma al Cardinal Mazarini nella Chiesa dei SS Vincenzo e Anastasio* that took place in 1661. The funeral report, written and published by Elpidio Benedetti [17], contains five engravings by Dominique Barrière which document the catafalque, the decorations for the facade, the counter-facade, the nave and the choir on one facade drawing, three views of the interior, one towards the choir, the second towards the main entrance and the third of the walls of the lateral nave, and of the catafalque. Barrière's name appears only in the engravings of the facade and the catafalque, while all the engravings bear the inscription Abbas Elpidius Benedictus Inven., and Grimaldi is referred to as Architect of the entire funeral apparatus, or artist responsible for its construction.

Following the previously described methodology, once the place and the general characteristics of the case study have been studied, the attention is focused on the iconographic sources of the apparatus. As for the funeral in question, no paintings or engravings other than those of the report were found.

First of all, it was necessary to deal with the problem of scale and deformation: the engravings in fact have no dimensional indication and are not all represented on the same scale, but rather designed to fit the same format. Therefore they have been divided into two groups, as two of them are drawn in orthogonal projection while

the other three in central perspective.

Analyzing those in orthogonal projection (the facade and the nave), at first it seemed sufficient to exploit the geometry of the church, that is to say trivially to superimpose the engraving on the reconstructive hypothesis advanced during the historical study of the place. However, the operation has been proved not sufficient, since the drawings are deformed in height, probably to obtain visually more captivating effects of grandeur and vertical development.

As for the counter-façade, the altar and the catafalque, they were divided into two further subgroups. The first includes the engravings of the counter-façade and the altar: in this case too the solution seemed simple, that is to apply the rules of descriptive geometry and of reverse perspective to obtain the real measurements, but a more detailed examination revealed that these two engravings present three central vanishing points and therefore are an assembly of three overlapping perspectives. Here too, as for the orthogonal projections, the goal of the engraver was to obtain a vertical expansion of the space of the drawing compared to the real space. The process was therefore to recognize the three perspectives with their vanishing points, horizons and landlines, and to recognize which parts of the drawing referred to the single system of projections, and then to apply the rules of inverse perspective. [Fig.2]

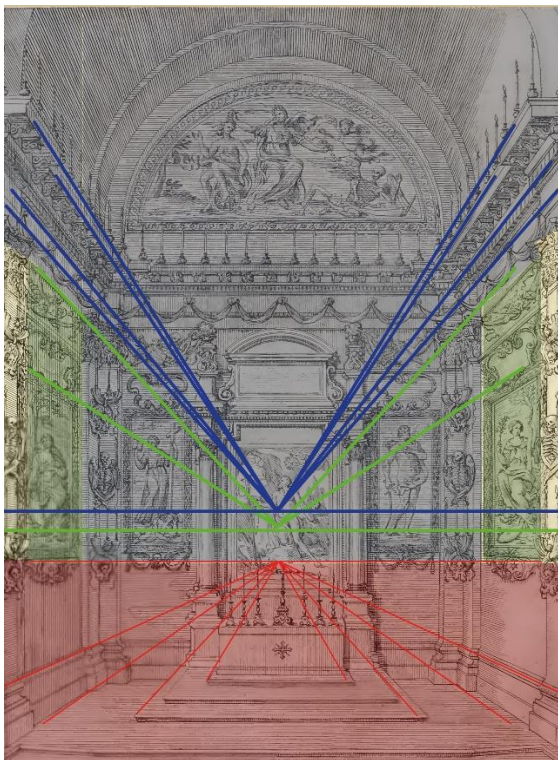


Fig. 2 Three overlapping perspective analysis on the altar engraving.

The last reasoning concerns the catafalque: as far

as the perspective study is concerned, it was much simpler here as the drawing is a central perspective with a single vanishing point. However, the engraving exclusively shows the catafalque, removed from the architectural context, so it was possible to reconstruct its geometry but not its dimensions and position. Thanks to the integration with the textual data and with the stylistic comparisons [18, 19], it was possible to know the position of the catafalque in the church and to notice how all the Grimaldi catafalques respond to the same dimensional relationships between the catafalque and the setting.

At this point it was possible to integrate the information deriving from the graphic data with the survey and reconstruction drawings previously produced, obtaining the nature, position and size of each element; at the same time it was possible to distinguish the elements of the ephemeral apparatus from those of the permanent architecture.

An interesting detail is the study of shadows in the engravings. These, in fact, have been designed with such detail as to allow to distinguish the painted elements from those in relief, and for the latter to determine their depth and position with respect to the background.

At the same time, the textual data was analyzed, first reading and transcribing the report carefully. The informative nature of the text was immediately evident, given the celebratory but at the same time simple language used by the author, and the absence of Latinisms.

The report consists of seventeen pages of text. The first two cite a praise of all those who were involved in the organization of the funeral and introduce the following five chapters, each of which accompanied by an engraving. The chapters follow the same structure: commendation of the deceased, description of a part of the apparatus and explanation of the allegorical meaning.

As mentioned above, the text played a crucial role in defining the position and size of the catafalque, but also provided a number of important information. First of all, the analysis of the text confirmed the distinction of the elements in ephemeral and permanent; subsequently, it allowed the characterization of the models with data regarding materials, colors, lighting and desired atmosphere, and finally a further characterization through the allegorical reading.

To obtain this result, the text has been reread several times, highlighting the different types of information and classifying them according to: element involved, chromatic, material, and symbolic data.

In the example below, the stylistic / allegorical information is marked in red and the technical / material information in orange:

«Nelle quattro facciate di questa base si vedevano quattro figure di basso rilievo parimente finte di metallo dorato, che rappresentavano la Christianità, Roma, Spagna, e Francia piangenti nelle loro maggiori speranze l'intempestiva perdita di chi haveva sparsi tanti sudori, e

sofferte tante penose vigilie per la publica tranquillità e felicità loro.»

These informations were interpolated with the result of the analysis of the graphic data, and generated an abacus of elements based on the artistic techniques used and the seriality or not of the artefact, which clarified all the characteristics of the apparatus and facilitated the modeling process. [Fig.1]

Symbology information was not easy to integrate with two-dimensional models, but can be added to the three-dimensional model as easy-to-understand interactive pop-ups.

The final result of the study consists of two-dimensional (1:50 scale) and three-dimensional (potentially in 1:1 scale) elaborations, born from the integration of survey, historical study, analysis of textual data and analysis of graphic data. [Fig.3]



Fig. 3 Example of 3D restitution of the Catafalque for Cardinal Mazarin designed by GF Grimaldi.

From a dissemination standpoint, if two-dimensional drawings can be more useful for communication at an academic level and are easily readable, the model is more versatile for dissemination and use in the context of museum display, while maintaining the same level of reliability and scientificity.

The models produced, moreover, not only want to return the reconstruction of the 1661 exhibition, but investigate the relationship that is created between the apparatus designed by Grimaldi with the current location, establishing a critical dialogue between past and present, between ephemeral and permanent, in which both become changeable and question the concept of real space and

space of representation. [Fig.4]

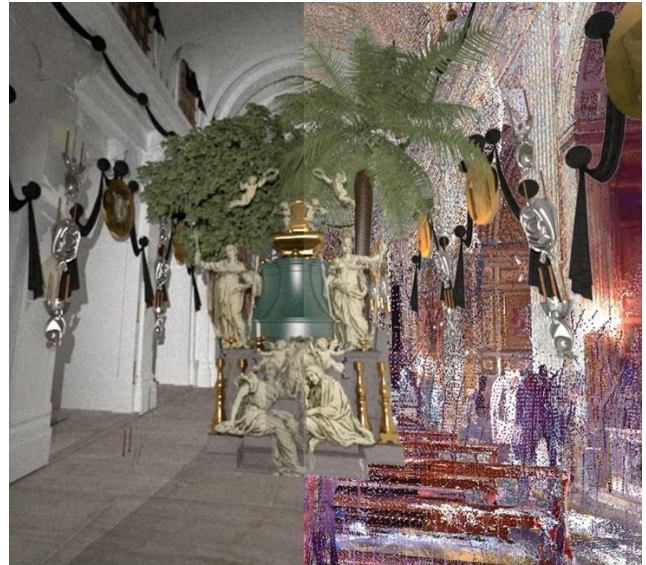


Fig. 4 Comparison between the reconstruction of the apparatus in its original location and on the pointcloud.

V. CONCLUSIONS

Overall, the presented methodology aims to be operational, historically reliable, critical of the transformations of places and to return the results in a virtual environment and is the result of an empirical approach.

Lacking previous research based on the specific topic, it was fundamental first to understand the phenomenon of the Baroque Ephemeral from an ethnographic point of view, to establish its importance and to better interpret the relationship between the apparatuses and the places, as well as the relationship between artists, power and the city.

Subsequently, by deepening the historical-artistic aspects, it became clear the fundamental role that the celebrations play in Baroque poetics, as the sum of its three fundamental aspects: the aim for wonder, experimentalism and the synthesis of the arts.

From the beginning of the research, the relevance of these projects was evident, as well as the recurring characteristics in the conduct of the celebrations and above all in their representation. Therefore, a study of a wide range of cases was considered necessary to confirm the hypothesis. Hence the need for a study method that would take into account both the specific features of each apparatus and their typicality, and which could open up the possibility of studying this artistic practice in a systematic way.

If applied systematically and correctly, i.e. with a critical sense, the methodology could lead to interesting results in several areas:

- the study of a fundamental cultural phenomenon for Baroque society;

- as seen previously, the design of the ephemeral apparatuses gave the possibility to the artists to create study models on a 1:1 scale of stable architectures that they would later build, therefore their knowledge could open new scenarios regarding the design process of Baroque architects;
- communication and museum display of artefacts that can facilitate users in understanding the society of Baroque Rome with immediate, easily available and low-cost means of management;
- conservation of the intangible heritage in the manner most appropriate to the specific characteristics of the phenomenon.

The methodology was tested on the case study of the Funeral apparatus for Cardinal Mazarin in Rome with satisfying results, that showed the validity of the methodology, the challenging aspects of the integration of text and image in the virtual domain and the further possibilities that this research holds.

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