

The digital reconstruction of the Minims' Convent in Place Royale and its optical-perspective games

The Parisian Convent of the Minims at Place Royale (today's Place des Vosges) has always attracted the curiosity of architectural historians and scholars of representation, having been almost completely destroyed between the end of the 19th century and the beginning of the 20th century. Its story begins in 1609, when the religious Order managed to buy 7500 square meters of former Hotel des Tournelles' land. Even if already in possession of other two Convents in the rural areas of Nigeon and Vincennes, the Minims aspired to have their own institutional headquarters in city center, to better spread their apostolic work and to expand their researches between art and science. Starting from the faint traces survived to the present day, an unprecedented digital reconstruction of the entire Convent have been attempted. The intersection of archival sources was laborious and not without exegetical risks implicit in the choices made to

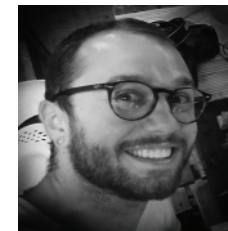
produce a model compatible with the material collected and with the urban limits identified in the historical layout of the city. The main focus of this work of anastylosis, however, was the reconstruction of the lost optical-perspective marvels there contained, praised for their virtuosity and technical-expressive mastery. These, depicting *St. John the Evangelist* and the *Penitent Magdalene*, were executed in the first half of the 17th century by Jean François Nicéron, and completed by Emmanuel Maignan. This essay is dedicated to the reconstruction of these and other projective, catoptrical and astrolabic *tour de forces*, offering scholars an unprecedented and surprising journey into one of the most mysterious places of the baroque Paris.



Agostino De Rosa
He is an architect and Full Professor at University IUAV of Venezia. He co-ordinates the PhD program on *Surveying and Representing Architecture and the Environment* at the IUAV postgraduate school. He has written books and essays on the theme of representation, the history of images and land art. He is the Scientific Co-ordinator of the *Imago rerum* research group.



Alessio Bortot
He is architect and *Doctor Europaeus* since 2016 in Architecture, City and Design, with a specialization in Representation. He has been professor for the course of "Descriptive geometry", "Advanced technologies for representation" and "Digital 3D modelling" at the IUAV University of Venezia, at the University of Padova, at the IED of Venice and at the Ecole National Supérieure des Travaux Publics in Yaoundé.



Luca Ruggiero D'Elia
Graduated in 2020 at the University IUAV of Venice with a thesis about the digital reconstruction of Place Royale's Convent and Nicéron's paintings, Luca Ruggiero D'Elia has been working as a freelance both in the architecture and design field specializing in particular in the digital visualization sector.

Keywords:
digital reconstruction; anamorphosis; history of representation

1. AIMS OF THE ARTICLE

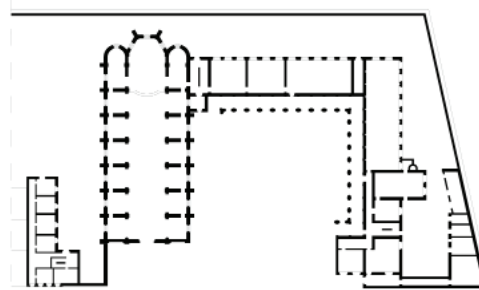
The aim of this article is to describe the digital reconstruction process of the Parisian Convent at Place Royale, home, in the XVII century, of the friars belonging to the Order of the Minims (fig. 1), founded by St. Francesco di Paola in the previous century. This study is part of a wider research in which various scholars of the University luav of Venice have participated in the drafting of scientific biographies of some of the main exponents of this religious brotherhood, in particular the fathers Jean François Nicéron and Emmanuel Maignan.

The Convent [1] (fig. 2) was founded by Maria de' Medici in 1605 and wasn't yet completed by the time of the events that we are about to discuss. It was located in the 3rd *arrondissement* in Paris, between *rue de Turenne* and *rue des Tournelles* and its construction was almost contemporary to the one of *Place Royale* (1607), today named *Place des Vosges*. Realized on part of the land of the previous *Maison Royale des Tournelles*, the religious complex included the church, the Convent developed around a cloister on the east side and the building with the infirmary on the west. His story was particularly troubled and barely covered a lifespan of 200 years, half of those spent just to complete the building (fig. 3). The costs of the construction were so massive that the friars were unable to commission some areas of the complex originally expected, like a library to contain their collection of over 20.000 volumes [2], one of the biggest at that time. By the end of 1700 they were so drowned in debt that they were forced to leave the place. After that the church was demolished between 1793 and 1798 while the Convent became propriety of the *gendarmerie* and lasted till the beginning of the XX century before being demolished as well. The only remains that survived until now are part of the west chapel of the church's façade and the infirmary building, now converted in

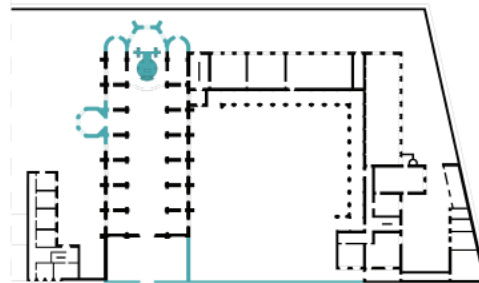


Fig. 1 - L. D'Elia, Minims' Convents in the XVII century.

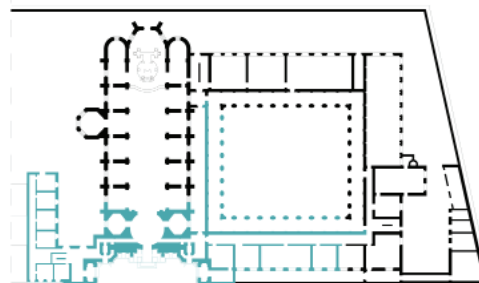
Fig. 2 - J. Marot, Convent of the Minims of Place Royale, exterior view before 1657, Paris 1739.



Development of the Convent in 1630 ca.



Development of the Convent in 1655 ca.



Development of the Convent in 1683 ca.

Fig. 3 - L. D'Elia, Stages of the Convent's development across the XVII century.

a private house.

The interest towards this Convent, however, is not just for architectural reasons: in fact even in its short life it was one of the most important places of cultural exchange, especially during the XVII century. Many philosophers, mathematicians and physicists like *René Descartes* (1596-1650), *Claude Mydorge* (1585-1647), *Claude Hardy* (1598-1678), *Etienne de Villebressieu* (?-1653) and *Florimond Debeaune* (1601-1652) have been guests of the Convent. Here, father Marin Mersenne [3] (1588-1648), *secrétaire de l'Europe savant*, used to organize meetings in his cell every Saturdays [4] with the scholars in visit. The topics of these meetings, as well as the correspondence he entertained with other philosophers from all around Europe, were about philosophical-mathematical subjects and were mostly on the implications that the idea of *mechanism* could have in the study of natural phenomenon. Indeed we can't forget that Mersenne was a patron of an anti-Thomistic idea of *mechanism* which was completely in contrast with the one canonically accepted by the Church sparking for this reason strong debates inside the Convent itself. The possibility to lead back the senses, the sight in particular, as well as all the other vital structures to simple mechanisms roused strong repercussions even in metaphysical context. In a similar ontological horizon there were the ones who saw the risk to reduce the human being to a mere part, a fragment of that *res extensa* to which Descartes dedicated so many of his speculations.

The researches and the work of the fathers Nicéron and Maignan in the fields of arts and sciences, developed between the Convent of Place Royale in Paris and the one of Trinità dei Monti in Rome, were an attempt to escape from this mechanist destiny and to identify "...a strategy to avoid the reduction of the appearances to the laws of the motionless matter, or better, to find a way thanks to which the aspects of the material bodies would have been understandable and addressed to the spirit, reflecting their otherness and their principle, not to be reduced to the dimensions of the *res extensa* and to the strict mechanist and special

model of *partes extra partes*" [5].

In the reconstruction of Place Royals complex, realized comparing the sources and the archival materials available nowadays, we tried a ideal reconstruction of the optical-perspective marvels realized there by the fathers Nicéron and Maignan, suggesting in this way an interesting hypothesis about their sources of inspiration and about their symbolical and spatial connections developed in relation to the religious beliefs of the Order of the Minims and to the French monarchy.

2. INTRODUCTION AND BACKGROUND

The reconstruction of the arrangement and the configuration of the spaces in the Convent of the Minims at Place Royale hasn't been an easy task, considering the shortage of documents, especially graphic representations, that survived till our days. The first and only image we can gather, dating back to the time of its construction, is called the *Plan of Valcarcel* (fig. 4). It consists of a pair of drawings dating back to the period of the beginning of Convent's construction (1611 ca.), displaying the plans of its ground and first floor. However these drawings present several inconsistencies and lack fundamental information like a proper dimensioning system or the incoherence of vertical structures' orders between the two plans. That's why there is a considerable chance that these two were simply a pair of typological plans, just showing the general disposition of Convent's various rooms, but not useful enough for a proper graphic reconstruction.

Other more recent representations made by architecture historians are equally insufficient being realized more as general schemes [6] than as proper architectonic drawings. For this reasons, the descriptions provided by articles and essays about the possible configuration of the Convent has been more useful in the beginning of the process of digital anastylosis.

Among these the ones of Odile Krakovitch [7] and Allan Braham with Peter Smith [8] stand out and in the latter we can also find the first proper architectural draw-

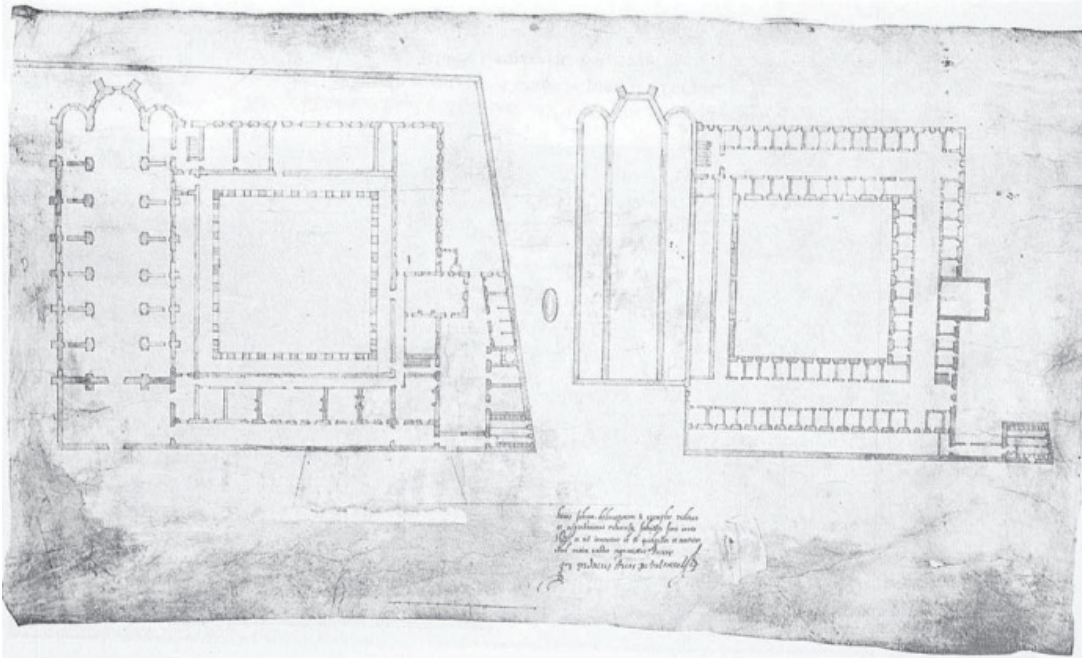


Fig. 4 - Convent of the Minims of Place Royale, handmade plans of the ground and first floor, approved by Valcarcel in 1611. Arch. Nat., Parigi, N III Seine 434.



Fig. 5 - Mariette, Convent of the Minims of Place Royale, elevation of the façade as built, Paris XVII century.



Fig. 6 - Convent of the Minims of Place Royale, reproduction of the transversal section of Mansart's project, Nationalmuseum, Stockholm, THC 8126.

ings, even if just of a small section of the complex. These are reproductions of the preliminary orthogonal projections realized by François Mansart (1598–1666) for his project of the new monumental façade of Place Royale's church (fig. 5), now kept in the *Nationalmuseum* of Stockholm [9]. The representation of a transversal section (fig. 6) of the church is probably one of most interesting of these drawings and it provides the first proper dimensional references for the digital reconstruction.

The most important graphic documentation about the Convent that it was possible to find consists of the project drawings for the conversion of the Convent in the *gendarmierie barracks*, realized by Charles Hubert Rohault de Fleury (1777–1846) in the XIX century and now kept by the CCA (fig. 7), [10].

The accuracy of these drawings not only made

possible to define the appearance of the Convent's exterior which was left quite untouched, but has also permitted to confirm the special arrangement suggested by the *Plan of Valcarcel* thanks to a comparison of the internal partitions between the two projects. However, it must be specified that despite all these information, the disposition of the rooms in the first floor still remains almost completely unknown. As a matter of fact, except for the positions of the hallways where the Nicéron's paintings were realized, there are no references about the disposition nor the use of the other spaces in any of the texts. Even Fleury's plan can't provide much information since the fact that the first floor is the one that paradoxically underwent the biggest changes. For this reason, and for philological sake, it was decided by us to adopt for this floor a rooms' arrangement very similar to the one below (fig. 8-11).

Only written description exists about other parts of the Convent and of the Church, often not enough detailed to grant enough information for a proper reconstruction. One example is the case of the high altar of which only partial descriptions were found. For example, we have the testimony of Luc-Vincent Thiéry (1734-1822), a visitor in the XVIII sec, who claims:

"[...] Le maître-autel de leur Eglise, dédiée en 1679 sous l'invocation de S. François de Paule, est orné de six colonnes corinthiennes de marbre de Dinan, & cannelées; le tableau qui le décore est une belle copie de celui de Daniel de Volterra [...]" [11]

From this few information we can deduce that, other than the presence of composite columns, the altarpiece must have been big enough to host a reproduction of Daniele da Volterra's famous painting titled *Descent from the Cross* (1545 ca.) known to be 3.60 m tall and 2.80 m wide [12].

In this situations, a more analogical method has been adopted, drawing constructive or decorative inspirations from elements similar to the ones to be reconstructed. Regarding the altar it was taken as reference the one from the Church of *Val-de-Grace*. This was in construction as well in those years in the *V arrondissement* of Paris and became major stylistic reference for this architect-

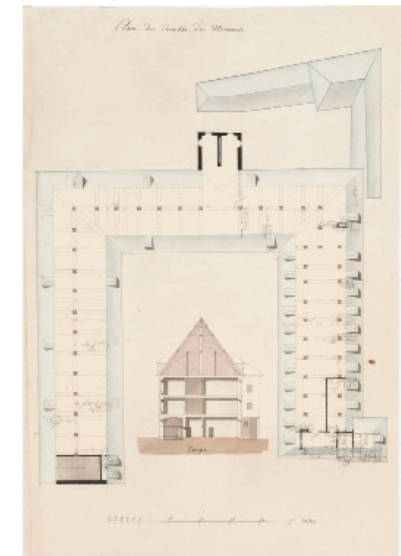
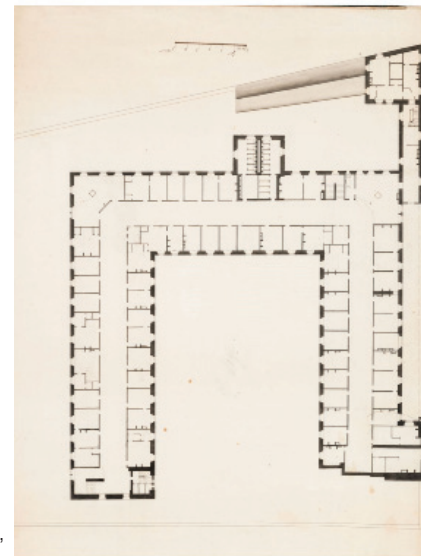
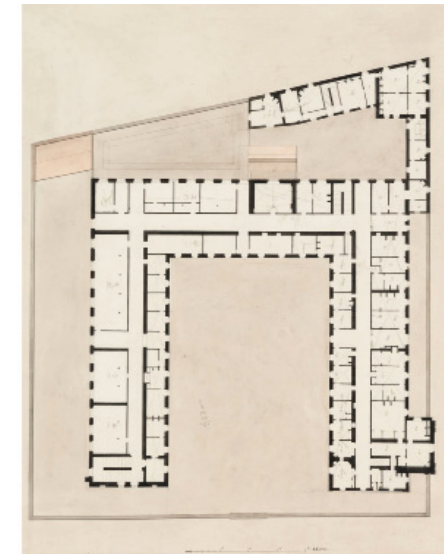
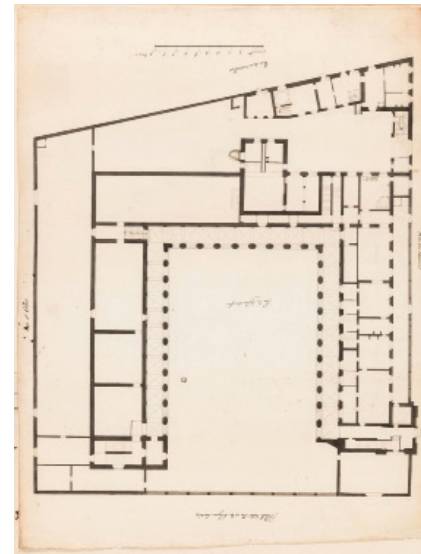


Fig. 7 - H. R. de Fleury, plan for the project of the Convent's redevelopment, Paris ca. 1823-1825.

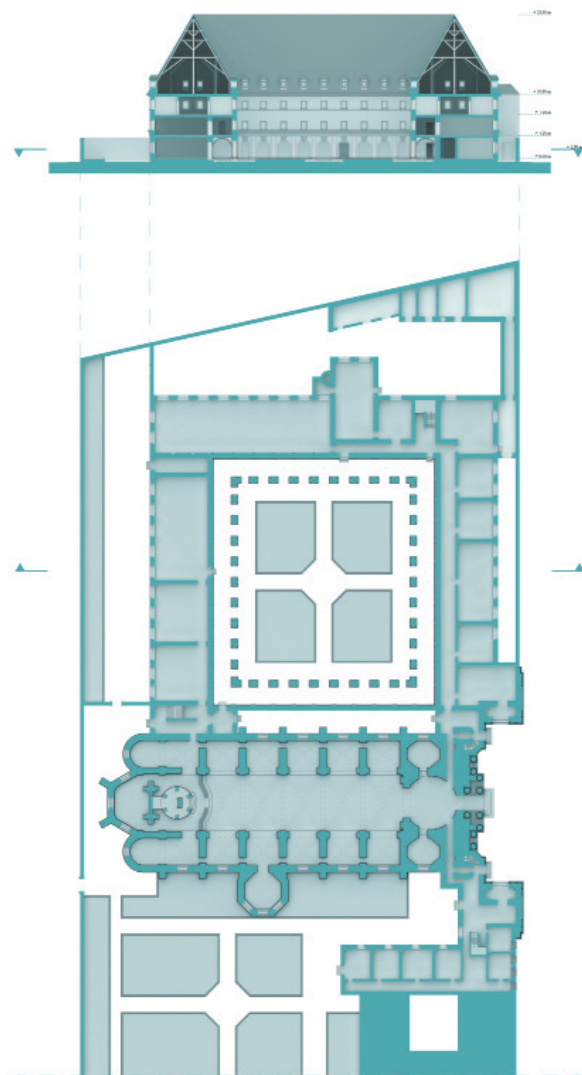


Fig. 8 - L. D'Elia, 3D model of the Convent, longitudinal section of the Convent and ground floor's plan.

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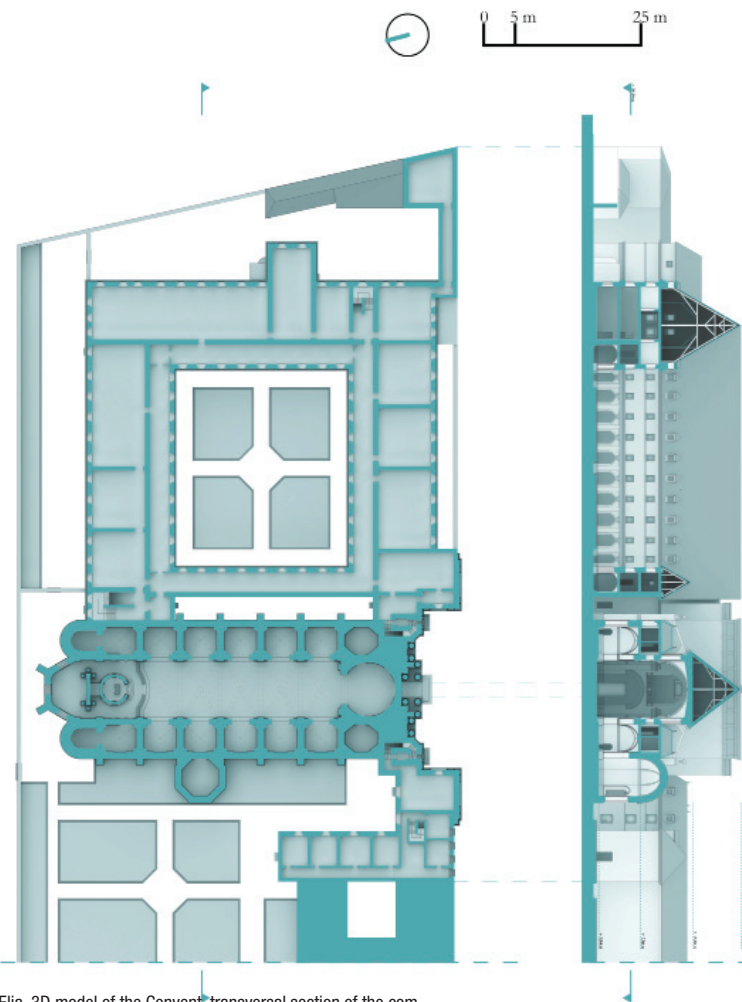


Fig. 9 - L. D'Elia, 3D model of the Convent, transversal section of the complex and first floor's plan.

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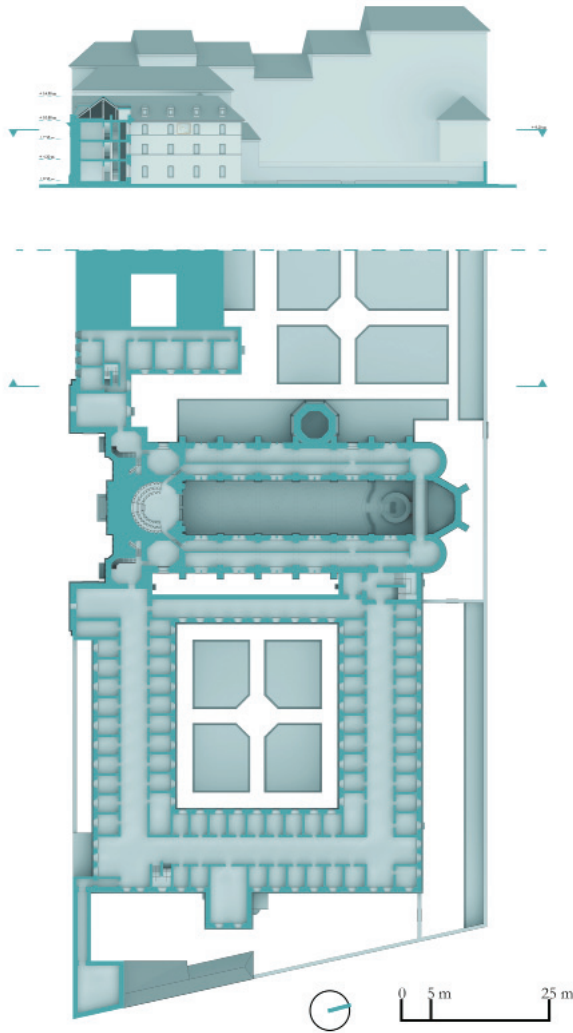


Fig. 10 - L. D'Elia, 3D model of the Convent, section of the infirmary's block and second floor's plan.

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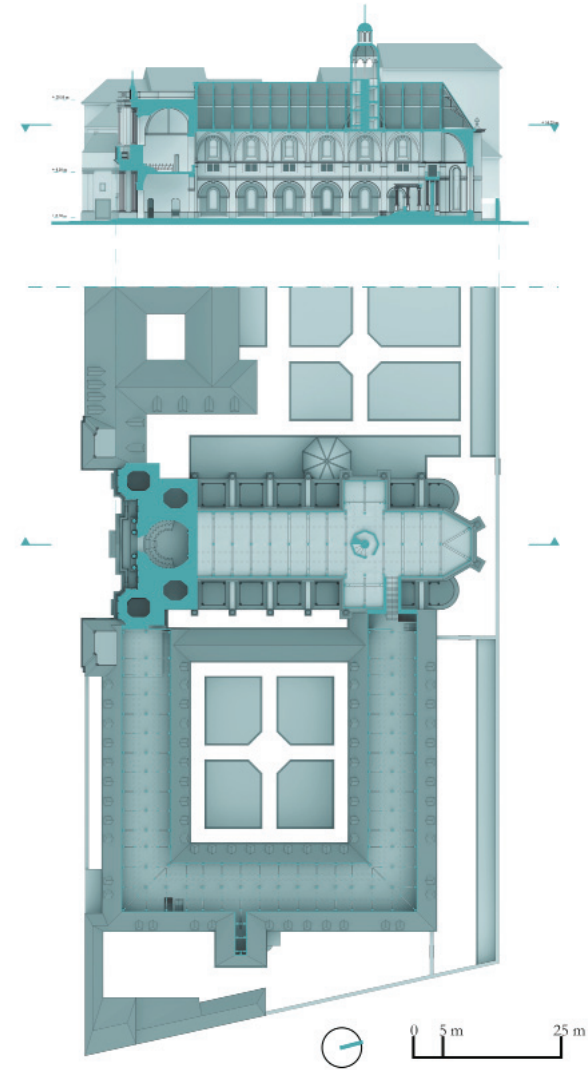


Fig. 11 - L. D'Elia, 3D model of the Convent, transversal section of the Convent and third floor's plan.

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ture's typology.

3. CASE STUDIES AND WORKFLOW

Here it's presented a concise list of the optical-perspective *marveilles* that were located in the Parisian Convent in the first half of the XVII century and that were digitally reconstructed [13] (fig.12).

- J.F. Nicéron, (undated) dioptric game, Convent's library;
- E. Maignan (undated, attributed to), sundial with gnomon, eastern façade of the infirmary;
- J.F. Nicéron (1644), anamorphic wall painting portraying *Saint Jean à l'île de Patmos*, Galerie de Saint Jean, northern hallway Convent's first floor;
- J.F. Nicéron (1645, primary drawings of), E. Maignan (1662, completed by), anamorphic wall painting portraying *Marie-Madeleine en contemplation dans la Saint Baume*, Galerie d'Aubervilliers, eastern hallway of Convent's first floor.

Every reconstruction followed the same process, starting from written and drawn documents from various French and Italian specialized libraries either public, private or Conventuals; especially Convent's Chapter Acts has been particularly helpful. Thanks to the richness of details and events described they were also useful to define the cultural and religious context in which the studied artefacts were conceived and realized. Other essential sources were the manuscripts written by the fathers Nicéron and Maignan which hide, both in their texts and graphics, several hints and suggestions about the physical configuration, the operation and above all the symbolic content of the studied artworks. In addition to the digital reconstruction of artworks, where possible, it has been realized a physical copy, simplified in its shape, but nonetheless strictly precise in its optical-perspective aspects regarding the sources. Every digital model has been realized always keeping in consideration the physical behaviour of its various components and using those software

that could grant the lowest approximation in the chromatic and lighting simulations of optical variables at stake.

4. RECONSTRUCTION HYPOTHESIS

4.1. THE SUNDIAL AND THE DIOPTRIC GAME

The gallery on church's first floor, facing the garden on western side, was one of complex's several places used as a library, specifically to store the books about science and theology. Here it was also located an optical artefact made by father Nicéron. It was a small table upon which it was mounted an object similar to a small telescope set on a rod. The telescope was pierced at one extremity and the other one was closed with a prismatic lens. It was oriented perpendicularly to a vertical plank with an image displaying the portraits of half busts of twelve Ottoman emperors. The peculiarity of this artefact was that if the image was seen through the telescope it would have been refracted by the prism, broken up in pieces and recomposed in the lens before the eye of the spectator in a new image: the portrait of Luigi XIII. (fig. 13) This epiphanic image was also further enriched by an anagram of Nicéron's name.

"Frater Ioannis Franciscus Nicceronus
Anagrammatius
Rarus Feriens Turcas, Annon Conficiens?" [14]

It wasn't possible to determine precisely when Nicéron built it, but it's right to presume that it happened before 1638, year in which he published his first treatise, *La Perspective Curieuse*, where not only he discusses about dioptric and the methods of polishing lenses and polygonal crystals in the *First Proposition of the IV Book*, but also about the illustrations and technical drawings of both instrument and the emperors' portraits [15] (fig. 14). This kind of object had also another version that was realized in 1642 under the indications and the supervision on Nicéron himself and it's now kept in the Museum Galileo of Florence. In this case the image presented shows five half busts of Turks

which, if observed through the lens (unfortunately lost during the 1966 flood), are recomposed in the portrait of Grand Duke of Tuscany, Ferdinando II de' Medici.

In his *Perspective Curieuse*, Nicéron displays in the following illustration (*Plance 25r*) another set of portraits, this times 14 popes disposed around the figure of Jesus Christ which can be rearranged in the bust of Urbano VIII.

A second artefact present in the Convent of Place Royale is a gnomonic sundial placed on the eastern/south-eastern side of infirmary block's second floor, between two windows (fig. 15). It has been realized probably by father Emmanuel Maignan, one of the biggest experts of gnomonic in that century. During his long stay at the Roman Convent of Santa Trinità dei Monti, in 1648 he printed his treatise about astrolabes titled *Perspectiva Horaria* and realized 3 different enormous catoptrics sundials, two in the Pinciano Convent [16] (1637) and one at Palazzo Spada (1644). In comparison to these, the sundial in the Parisian Convent looks much less complex consisting just in a plank of 2.20 by 1.70 meters where only eight hourly lines with the solstice and the equinoxial ones are traced. This sundial is possibly one of the few remains of the Convent survived until today, but when it has been subjected to a proper projective verification the results highlighted strong inconsistencies between the lines marked on it and the disposition that these should have if mathematically calculated (fig.16). This led to think that at some point of its existence the sundial may have been removed and replaced with a copy realized by less experienced hands.

4.2. THE TWO TWIN ANAMORPHOSIS

Concerning the process of digital anastylosis of the anamorphosis of Place Royale's Convent, the research doesn't have the presumption to have produced exact copies of the lost originals. This task would probably be impossible considering the lack of informations and that the ones we have derive mainly from the partial testimonies of passing guests of the Convent.

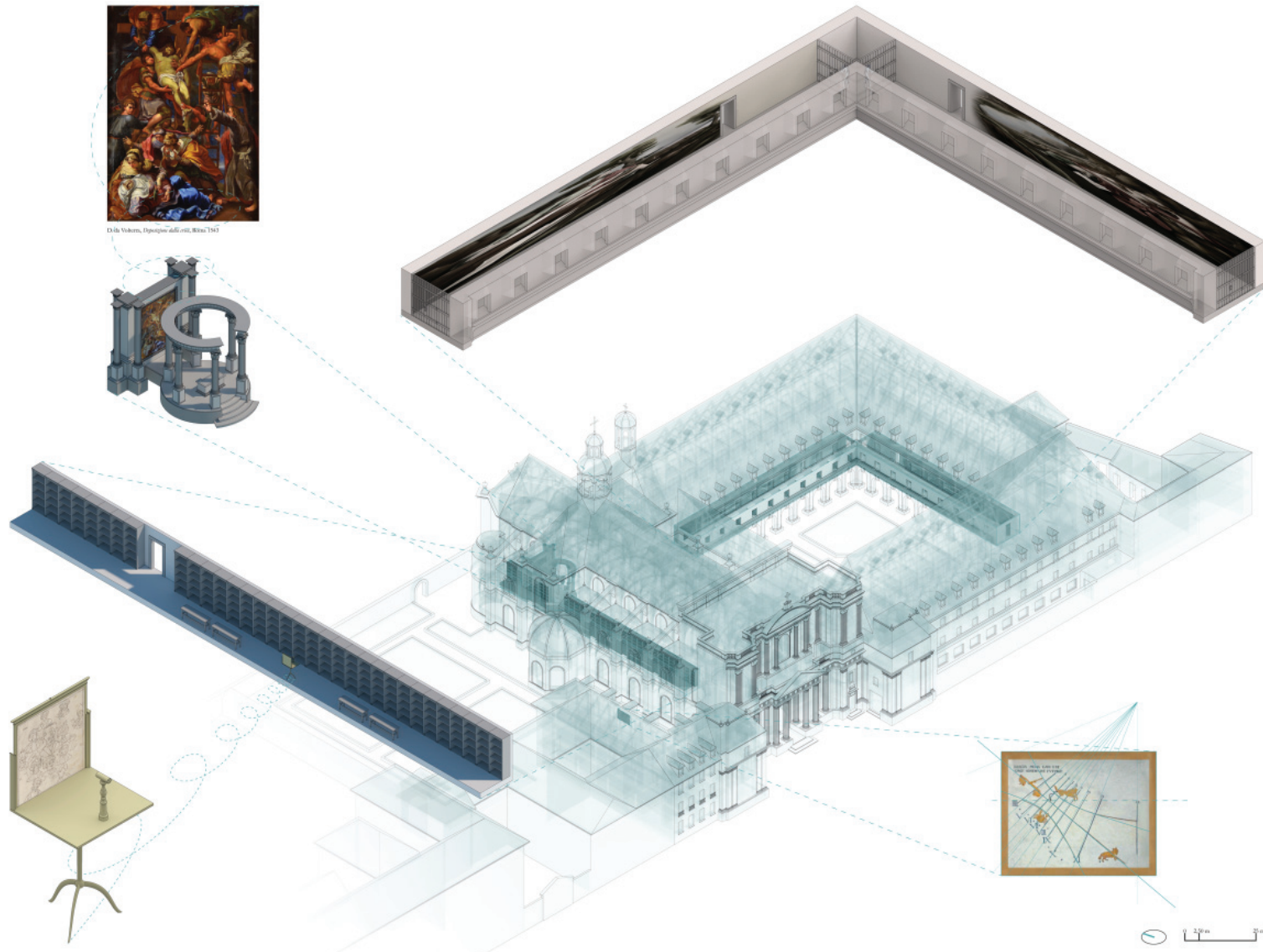


Fig. 12 - L. D'Elia, 3D model of the Convent, longitudinal section of the Church and attic's plan.



The first anamorphosis presented portrays St. John Evangelist, a character chosen probably because of his immanent symbolism and of scientific-philosophical nature of Cartesian and Keplerian derivation that's peculiar in Nicéron's works and for the symbolism of the apocalyptic text in which the sense of sight gets a predominant role [17]. In this exegetical context, the *Apocalypse* may have appeared to Nicéron as the representation of that *point of advantage* in which God places St. John letting him see the reality from God's point of view and having a glimpse of what it will always be eternally foreclosed to the human eye: the end of Times and the beginning of the New Reign [18].

An ideal *flâneur* visiting the complex of Place Royale would have arrived at the entrance of the northern hallway of the first floor, from the stairway located next to the right apse. Here, passed through a fir door, a huge mural painting would have been displayed on the wall on his/her left, showing an apparently chaotic scenery. While walking beside those nonsensical images, the spectator would have started to see, emerging from it, all of those grotesque scenes from the Apocalyptic text. However, only when arrived at the end of the hallway and turned back around, the true marvel of this place would have unravelled to his/her eyes. As a matter of fact, if the painting was to be observed through a hole on the door to the other end of the hallway, the spectator would have seen it from a certain perspective such that the image of St. John would have emerged from that chaos completely straightened.

Concerning the graphic reconstruction of this first anamorphosis, its process was the one that presented the lesser difficulties, at least for the characterization of the subject. Unlike the other one portraying Mary Magdalene and her life about which there are just information deriving from testimonies of some Convent's guests, most of the times very concise or in contradiction with one another, for the St. John's one it is possible to rely on information left by Nicéron himself. Indeed in the *Third Corollary* of the *Eleventh Proposition* of his treatise *Thaumaturgus Opticus* (a revised and

Fig. 13 - A. Bortot, digital reconstruction of optic game illustrated by J. F. Nicéron in the *Plance 23* of *La Perspective curieuse*, Paris 1638.

Fig. 14 - J. F. Nicéron, *La Perspective Curieuse*, Paris 1638. *Plance 24r*.

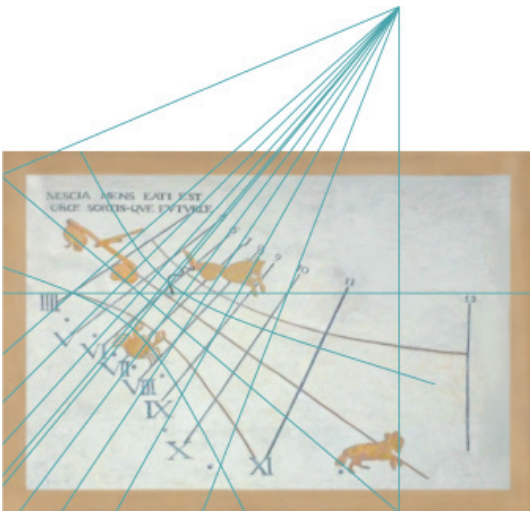


Fig. 15 - E. Maignan, sundial of the Convent of Place Royale, Paris XVII century.

Fig. 16 - A. Bortot, L. D'Elia, comparison between the photographed sundial and the one mathematically developed.

expanded version of his first treatise, published in Latin in 1646 after his death) he provides not only an enough detailed description of this painting but also in the *Plance 33* an illustration showing the projective method used for its realization. The first step was the extraction of the *ectype* from the panel by digitally line drawing it, fixing when necessary small proportional or anatomic errors and adding more details to the background just barely sketched, but geographically known to be the island of Pathmos. The image obtained was then transferred to a 3D modelling program to run the first projective experiments, not dissimilar to the ones Niceron described in his treatise, but in an eidomatic context. The tones of Saint's robes were chosen following the indication left by the father in his *Thaumaturgus Opticus*. It was decided by us also to implement the surrounding landscape in order to give it a more orographic presence, emphasizing some of its characteristics like the presence of water, which is a topical element in several representations of St. John, alluding to the insular connotation of his visionary experience. For the hidden elements inside the anamorphosis, and decryptable only from the *punctum oprimum*, references were taken from the already mentioned Niceron's treatise. These can be divided into two categories: the images deriving from the apocalyptic text of which we have more precise indications, and those which represents all sort of natural or artificial elements decorating the artwork and not belonging to the *Apocalypse* [fig 17-18]. The reconstruction of the anamorphosis portraying the Magdalene presented instead much more issues to overcome. Actually, we have no written or drawn testimony left by Niceron of this one, probably because he was only able to trace it in 1645 before dying the year after and in the same way we have no information left from father Maignan who finished the painting in 1662. Therefore, in order to outline its possible *ectype*, the only path was to analyse the information deriving from the descriptions left by important guests of the Convent. Unfortunately, many of these belong to indirect sources and describe the painting in an extremely confused and sometimes contradictory way. Even

the few direct sources don't seem to agree on the description of the anamorphosis which, in the years after its restoration, faced a progressive and inevitable decay. For this reason, only the description more contemporary with its execution were taken into consideration [19].

If the testimony of Dezallier d'Argenville [20] or the one of Jacques-René Hébert [21] were to be taken into account, for example, it would appear clear how the Niceron's *Magdalene* should have appeared in a contemplative pose with an ecstatic expression and with her face turned towards God. From these descriptions it's also possible to deduce the context in which she was portrayed: the cave of Saint Baume, place where the Magdalene, in accordance with the *Legenda Aurea*, lived as a hermit the last thirty years of her life. The witnesses report an advanced state of deterioration of the anamorphosis making it impossible to affirm with certainty if it has been realized in colours like the St. John's one or in *grisaille*, a technique with which Maignan was more familiar.

Its rectified view would have appeared, like the previous example, by looking through a pinhole placed on a door closing the hallway. Preceding with a strict analysis of the Magdalene's representations contemporary to its realization [22], combined with the few owned information, the realized *ectype* takes inspiration from Simon Vouets's (1590-1649) painting of the Magdalene since it's placed in the same historical-geographical milieu of Niceron and of Parisians Minims. The surrounding landscape derives instead from Charles Le Brun's (1619-1690) *La Madeleine allongée dans le desert* whereas for the chromaticism. Considering the uncertainty that surrounds the work, it was decided to use desaturated colours used by Niceron in his other anamorphosis in Paris and Rome and as it is suggested in the *Thaumaturgus Opticus*. For the allegoric scenes placed in the painting, it was decided to create two thematic groups similarly to the previous one. The first one represents natural elements not specifically connected to the image of the Saint, while the other portrays scenes taken from her life narrated in the *Gospels*, except for

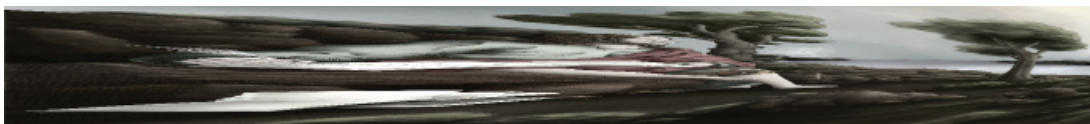


Fig. 17 – L. D'Elia, digital reproduction of the anamorphosis of St. John in the isle of Pathmos.

Fig. 18 - L. D'Elia, straightened ectype of anamorphosis of St. John in the isle of Pathmos.

the one showing Magdalene's arrival to the shores of Marseille deriving from the *Legenda Aurea* [23]. Considering the placing of the painting in the eastern hallway of the Convent, it's possible to guess the fruition of the anamorphosis by a spectator arriving from the stairway in the south-east corner. In this way the anamorphosis could be oriented so that at first the spectator would have seen its deformed image and then, once reached the end of the hallway, it would have been possible to see through a pinhole on another door similarly to the St. John's one (fig. 19-20).

The transition from deformed to rectified image would have created for the spectator a visual narrative cycle, displaying first the main events of Magdalene's life, from the canonical ones to the last that served as a pivotal point between the biblical narration and the subject represented in the rectified image.

5. CONCLUSIONS

Thanks to this complex work of reconstruction, it was possible to bring back to light, even if only digitally, that marvellous architectural complex and site-specific beautiful masterpieces created by fathers Niceron and Maignan. Until today their works in the Convent of Trinità dei Monti (now opened to the public) were almost the only ones known with very few information about the Parisians artworks. Now these are finally comprehensible, not only in their geometrical and decorative configuration, but mainly for their symbolical content. Both seem to want to summarise "...the dual nature of baroque perspective, whose purpose is to reveal the reality's truth, but also demon-

strate the power of man to modify it" [24]. We have to underline however once again the emblematic role of the work of Niceron and Maignan in the history of western artistic figuration. Indeed besides witnessing the tendency towards deceptive interests present in the scripts of past authors, it underlines the degree of knowledge and methodological deepening achieved from the beginning of the XVI century in the field of representation, so much to admit exceptions towards images which depart from the Renaissance aspiration of an immediate 'visual realism'. The decline of visual education connected with the didactic exercise that will lead the incipient illuminist society in the romantic age of the XIX sec. century, will inevitably mark the fate as well as the peripheral role that the history of arts will assign to these 'mathematical recreations' and 'philosophical games' starting from the '700 [25].





Fig. 19 - L. D'Elia, digital reproduction of anamorphosis of Mary Magdalene in Saint Baume's Cave.

Fig. 20 - L. D'Elia, straightened ectype of anamorphosis of Mary Magdalene in Saint Baume's Cave.

NOTE

[1] See Krakovitch, O. (1981). Le couvent des Minimes de la Place-Royale. In *Paris et Ile-de-France-Mémoires*, tome 30. Paris: Klincksieck; Krakovitch, O. (2010). L'architecture des trois couvents des Minimes de la Place-Royale. In Benoist, P., Vauchez, A. (Ed.), *Saint François de Paule et les Minimes en France de la fin du XVe au XVIIIe siècle* (pp. 229-248). Tours: Presses universitaires François-Rabelais; Christ, Y., Siguret, P., de Sacy, J. S. (Ed.) (1964). *Le Marais*. Paris: André Balland.

[2] See Franklin, A. (1870). *Les Anciennes bibliothèques de Paris* (pp. 323-335). Paris: Imprimerie impériale. From her analysis Odille Krakovitch concludes that thanks to the combined work of Mersenne and Niceron, the library of Place Royale contained 500 books about mathematics, 422 about geography and almost 700 volumes about medicine. Cf. Krakovitch, O. (1982). La vie intellectuelle dans les trois couvents minimes de la place Royale, de Nigeon et de Vincennes. *Bulletin de la Société de l'Histoire de Paris et de L'Ile de France*, 109, (p. 82). Paris: chez H. Champion.

[3] See De Coste, H. (1649). *La vie du R. P. Marin Mersenne, théologien, philosophe et mathématicien, de l'Ordre des Peres Minimes, par F. H. D. C. [Frère Hilarion de Coste], religieux du mesme Ordre*. Paris: chez Sebastien Cramoisy et Gabri-

el Cramoisy. See also: Maury, J.-P. (2003). À l'origine de la recherche scientifique: Marin Mersenne. Paris: Vuibert; Beaulieu, A. (1995). Mersenne: le grand minime. Paris: Diff. les Belles lettres; Beaulieu, A. (1992). Le group de Mersenne: Ce que l'Italie lui a donné, ce qu'il a donné à l'Italie. In Bucciantini, M., Torrini, M. (Ed.), *Geometria e Atomismo nella Scuola Galileiana* (pp. 17-34). Florence: Leo S. Olschki.

[4] Obviously Mersenne had to obtain a permit to study in his cell and receive foreigner guests to the Order. Cf. Krakovitch, O. (1982). La vie intellectuelle dans les trois couvents minimes de la place Royale, de Nigeon et de Vincennes (p. 56). Cit.

[5] Baitinger, F.-C. (2006). L'esprit du portrait ou le portrait de l'esprit/ Etude d'un portrait en anamorphose de Jacques d'Auzoles par le père J-F Niceron. *Lampe-tempête. Le silence de l'expérience*, n°1, w.i.p.

[6] Like the one realized by J. Ciprut to show the development of the Church during the XVII century. See Ciprut, J. (1955). Documents inédits sur l'ancienne église des Minimes de la place Royale. *Bulletin de la Société de l'histoire de l'art français* (p. 151-169). Paris : E. Champion.

[7] See Krakovitch, O. (1981). Le couvent des Minimes de la Place-Royale. Cit.; Krakovitch, O.

(1982). La vie intellectuelle dans les trois couvents minimes de la place Royale, de Nigeon et de Vincennes. Cit.; Krakovitch, O. (2010). L'architecture des trois couvents des Minimes de la Place-Royale. Cit.

[8] See Braham, A., Smith, P. (1965). Mansart Studies V: The Church of the Minimes. *The Burlington Magazine*, V. 107, 774. London: The Burlington Magazine Limited.

[9] See Nationalmuseum, Stockholm, THC 8126.

[10] See CCA Archive, DR1974:0002:016:001-070.

[11] See Thiery, L. V. (1787). *Guide des amateurs et des étrangers voyageurs à Paris ou description raisonnée de cette ville, de sa banlieue, & de tout ce qu'elles contiennent de remarquable* (Tome Premier) (p. 683). Paris : chez Arduin & Gattey.

[12] The original painting is now located in one of the side chapels in the Church of SS. Trinità dei Monti, Rome.

[13] Here are not shown, for obvious editorial limitations, the other architectural and decorative elements digitally reconstructed.

[14] See Niceron, J. F. (1638). *La Perspective Curieuse* (Tav. 24r). Paris: Pierre Billaine.

[15] For the procedures applied by Niceron to realize the optical game's project, its execution and its symbolical meanings see: Bortot, A. (2013). Dove lo sguardo si ricompone e s'acquieta. *Immaginario scientifico e contestualità storica nei giochi ottici di Jean François Niceron*. In De Rosa, A. (Ed.), *Jean-François Niceron, Prospettiva, catottrica e magia artificiale* (pp. 125-152). Rome: Aracne.

[16] See Bortot, A. (2019). Una prospettiva sul tempo post meridiano nel Convento della S.S. Trinità dei Monti a Roma. In De Rosa, A. (Ed.), *Roma anamorfica. Prospettiva e illusionismo in epoca barocca* (pp. 4-16). Rome: Aracne.

[17] See Trevisan, E. (2013). *In a land I never saw: ricostruzione digitale e interpretazione delle anamorfose niceroniane a Place Royale*. In De Rosa, A. (Ed.), *Jean-François Niceron, Prospettiva, catottrica e magia artificiale*. Cit.

[18] See Lupieri, E. (1999). *L'Apocalisse di Giovanni*. Milano-Roma: Mondadori.

[19] For art historian Jurgis Baltrušaitis an anamorphic painting always portraying the Magdalene, datable around 1662 and today exposed in the *Galerie Jean-Marie Le Fell* in Paris, would represent a copy of the painting in the Parisian Convent. See Baltrušaitis, J. (1990). *Anamorfofi, o Thaumaturgus opticus*. Milan: Adelphi.



[20] See Dezallier d'Argenville, A.-N. (1755). *Voyage pittoresque des environs de Paris ou description des maisons royales* (p. 167). Paris: chez Debure l'aîné.

[21] See Hébert, J.-R. (1772). *Almanach parisien en faveur des Étrangers* (p. 163). Paris: chez la veuve Duchesne.

[22] See Erhardt, M. A., Morris, A. M. (2012). *Mary Magdalene, Iconographic Studies from the Middle Ages to the Baroque*. Leiden: Brill.

[23] See Da Varazze, I., Agosti, G. (2007). *Legenda Aurea*. Florence: Sismel-Edizioni del Galluzzo.

[24] See Pérez-Gómez, A., Pelletier, L. (2000). *Architectural Representation and the Perspective Hinge* (p. 142). Cambridge (MA) and London: MIT Press.

[25] See Stafford, B. M. (1994). *Artful Science. Enlightenment Entertainment and the Eclipse of Visual Education*. Cambridge (Mass.) and London: MIT Press.

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