

Enrico Cicalò *Editor*

Proceedings of the 2nd International and Interdisciplinary Conference on Image and Imagination

IMG 2019

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Ephemeral Graphics_ Illusionism and Representation in Baroque Machines

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Abstract. The paper examines the forms of graphic expression related to the representation put in place by the ephemeral machines of the Baroque period. It investigates through images and narrations the atmosphere generated by equipment set up, designed and staged for civil and religious occasions, destined to last the timeframe of the event. The artificial and illusory pomposity of these works of ancient origins finds its maximum expression and symbolic value between the seventeenth and eighteenth centuries, when they spread to celebrate recurrences or important events. The stage machines, built with perishable materials such as wood, metal and papier-mache' were often designed by famous architects and represented a means to transform the architectural and urban context into an engaging collective stage to which the people witnessed. The temporality does not diminish the value of these works designed to communicate sacred and profane values, to generate amazement and wonder, designed to be transformed with ingenious mechanisms triggered during the show. The testimonies of such events are often documented by images and narratives, reports to the ceremonies that describe the theatrical event and the ephemeral machines made for the show, depicted in preparatory drawings, engravings and paintings that describe the episodes. The sources show names of artistic personalities such as Bernini, Pietro da Cortona, Girolamo and Carlo Rainaldi, Domenico Fontana, Andrea Pozzo indicated among the designers of important installations that took the pretext to experiment with forms and scenic perceptions of urban space, some translated into final works. In summary, from the extensive research conducted on the subject, some prototypes reconstructed with digital models were analyzed and selected in order to simulate the appearance of the machine and the theatricality staged by the ephemeral representation.

Keywords: Representation · Ephemeral · Scenography · Perspective · Illusionism · Baroque

1 Introduction

The need to involve the community in the participation of civil or religious events is at the heart of the social ceremony, the collective feast to which the various types of ephemeral apparatuses converge. In order to trace the common thread that unites the events from which the graphical, perspective and illusory experiments performed to elaborate the complex stage machines are derived, it is necessary to understand the semiotic and anthropological meaning from which they originated.

The festival associates celebratory and propaganda ritual expressions that may concern civil occasions such as the birth, election or death of a sovereign, the reception of distinguished guests and similarly accompany religious celebrations such as the pope's settlement, processions, rites of quadrants opposed to laical carnival.

One of the recurring ceremonies was the "horseback ride" which, starting from St. Peter's with a long procession, ran emblematic routes to communicate the beginning of the pontificate. The ephemeral structures set up on this occasion were mainly triumphal arches; one of them as usual was erected on the Capitoline stairs to symbolize the salutation of civil power to the religious one.

The rides of *Trionfo papale* find a clear secular correlation with those of the Roman leaders who came after the conquests, crossing the city streets and crossing the arches of triumph. The passage of sovereigns could be similarly celebrated with triumphal arches and marches that, sometimes, involved urban transformations to enhance their perception.

Settlement ceremonies are reiterated at the time of the Pope's death or of illustrious figures, characterized by the *Castrum doloris* to which the funeral catafalques correspond. The ephemeral structures associated with this type of events find inspiration in classical architecture; the truly combined elements could be mausoleums, temples, pyramids, obelisks. An extensive documentation testifies to this type of commemoration, referring to narrations and incisions that show the forms of the majestic catafalques and the ritual that accompanied the transposition of the funeral.

The catafalques and the numerous subjects proposed in ephemeral machines, constituted a rich field of experimentation favored by the use of economic materials that allowed greater expressive freedom, determining a phenomenon that interested the architecture on several levels.

The realization of such apparatuses establishes a profitable link with the urbanistic-compositional intentions of the Baroque that adopts the stage theatricality to examine with temporary works, with models on an urban or architectural scale, elements to make eventually permanent. The urban context could thus be transformed, molded and verified with temporary structures, with the addition of architectural wings and scenography that masked existing structures making it take on a new aspect that, if appreciated, could lead to the definitive realization of the project. It is no coincidence that two famous Bernini works derive from the metamorphosis generated by celebratory events: the Fontana dei Fiumi and the Elephant of the Minevra that reused the same iconographic schemes proposed in the respective ephemeral machines from which they took inspiration to become stable sculptures.

The representative urban spaces of the main cities such as the Largo del Palazzo Reale of Napoli, Piazza Duomo in Milan, The Parco ducale in Parma, Castel Sant'Angelo, Piazza Navona, Piazza di Spagna, the Trinita' dei Monti stairway and other Roman outskirts, were subject of numerous installations and metamorphoses realized with ephemeral architecturally complex apparatuses that transformed scenographically the context, day and night, with special effects culminated in fireworks that, at the end of the festival, set fire to the artificial machines.

The different types of events, corresponding ephemeral apparatuses that had to be destroyed or could be dismantled and reused, involved different interpreters and places, depending on the case. By examining analytically the phenomenon that involves representation in many respects, from the graphic, scenic, perceptive and theatrical

ones staging the figuration of an apparent and transient reality, it appeared appropriate to synthesize in a synoptic scheme the main events in which the protagonists are divided, the sacred and profane occasions, and the resulting machines. From examples, case studies were extrapolated to deepen the semantic and reconditioned meanings, analyzing projects and graphics associated with some ephemeral events (Figs. 1 and 2).

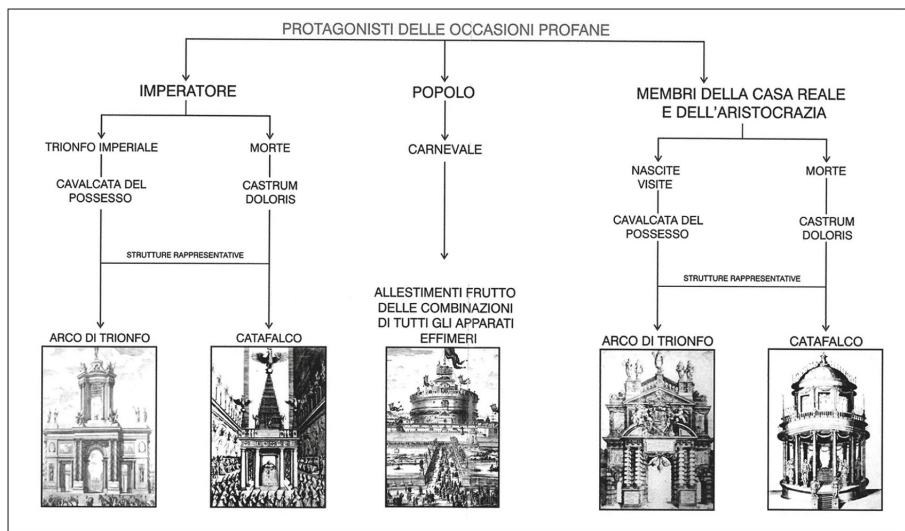


Fig. 1. Scheme of the types of ephemeral devices for profane events.

2 Carnival and Forty Hours

In the context of the popular demonstrations, Carnival stands in its reciprocity of secular feast linked to the Catholic tradition, the interval that introduces to Lent, celebrated annually in the week that foretells the withdrawal period and fasting that has started, in the Roman rite, from Ash Wednesday. It symbolically represents the moment in which everything is permitted, food in abundance, jokes, sneers and disguises are used satirically to turn over rules and hierarchies, to mock the governing authorities. The ephemeral machines were generally set up by the citizens that adopted caricatural elements made of papier-mâché, exhibited in pedestrian parades or on wagons which left poor testimonies for their material deterioration, on the contrary, the tradition of this feast is repeated and still alive with various customs in different nationalities. The stage, assigned solely to the fantasy of the people, provided some exception represented by solemn carriages drawn by artists on the control of the rulers for propagandist purposes. The courts accompanied the decorated wagons while driving in the main streets and ended in the fulcrum of the feast, in the representative place of the city.

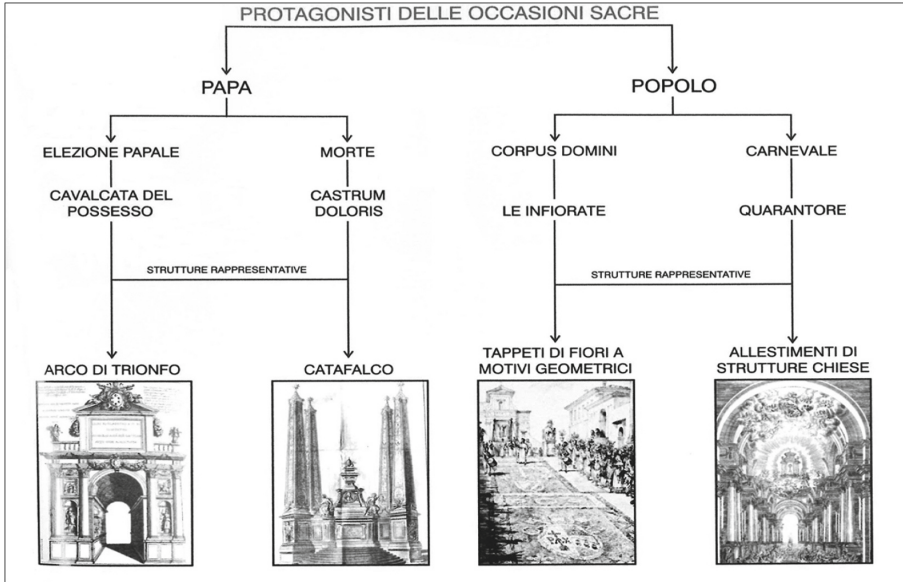


Fig. 2. Scheme of the types of ephemeral devices for sacred events.

In the Largo del Palazzo Reale of Naples, a privileged stage of the city center, the effacer scenery was set up together with the wagons, for Carnival it was proposed the “cuccagne” that were striking as the protagonists of the urban scene. These scenic architectural machines, full of food, represented the host of the sovereign to the people, the utopian illusion of a world in the overthrow, where abundance was able to satisfy the needs of the dispossessed.

The Neapolitan carnival circumscribed an important period defined by a range of festivities, subversion of the daily roles that began on January 17, and recurrence of Sant’Antonio Abate, with the purifier fires in which old things were burnt in light of renewal and ended on the day of the ashes. In the last 4 weeks, the cuccagna machine was exposed and placed in the middle of an ephemeral setting that involved all the urban space. The whole square was redesigned for the occasion as the paintings depicting different episodes like the one immortalized by Tommaso Ruiz, of the extraordinary cuccagna in 1740 with the setting made by Ferdinando San Felice.

The intensity of the feast was celebrated in the last two days, Monday and Mardi gras, in which in parallel the church celebrated the religious rite of the 40 h in which the sacrament was exposed and the sacred theaters were performed.

2.1 Forty Hours

The prosaic lapel of the carnival feasts corresponds to the religious spirituality of the 40 h celebration, a devotional practice that consisted in the exposition, within the chosen churches, of host consecrated for 40 h in the last days of carnival. The Catholic church introduces this manifestation in antithesis to the secular feast that alienated people from religious practices.

The machines were delivered as theatrical scenography, built with sought-after effects of perspective illusionism that directed the observer towards the heart of the representation, making the attention converge with painted backdrops. The effects were amplified by sound, drapery lights and self-propelled panels.

The narratives returned the spectacularity of the sequences given by the moving devices, strengthening the comprehension of the images that could represent only a few moments.

The exhibition on the theatre for the 40 h set up in 1640 by Nicolo' Meneghini, a Bernini's disciple, in the Church of Gesù of Rome allows to understand the construction of the perspective plant, of the scenography made with fifth architectural backdrops positioned so to transform the space, perceiving the emphasis of the representation capable of generating sensations of amazement and wonder in the faithful audience.

"...Stendevasi una gran tela di taffettani rossi e gialli dalla sommità della volta fino a terra, che copriva tutta la prospettiva ... e cominciasi poco a poco a calare, essendosi in quell'istante oscurate tutte le finestre, con gran gusto de' riguardanti compare il bel prospetto, tutto colorito di varie, e ben disegnate, e maestrevolmente compartite figure, che diverse storie rappresentano, con esser' il Teatro illuminato da più di quattromila lumi, de' quali né pur uno à gli occhi de' riguardanti si manifestava, ma tutta la luce veniva dal riverbero, al cui lume risplendeva la gran Chiesa..."

The author continues commenting on more technical aspects revealing the secrets behind the architectonic structure, the placement of the scenes, the stages from which the movements of the ingenious Baroque machine managed by many operators were activated (Fagiolo and Madonna 1985).

"E se fusse stato possibile far veder' a ciascuno l'interno, non minore meraviglia gli haveria recato, che l'esterno, poiché vedevansi con architettura, e simmetria straordinaria diversi palchi, salti, risalti, distanze di tavole ben collocate, e scale, per le quali con bell'ordine, e sicurezza nell'immensità della vasta macchina più di quaranta persone stavano distribuite illuminando, e facendo la sentinella al suo posto acciò non seguisse danno alcuno, e niuno di questi fu mai veduto dagli spettatori"

The representation staged for the 40 h succeeds in bringing together in an astonishing spectacle the architecture, the artistic and theatrical apparatus. To attract more believers, the religious event was assimilated to a real theatrical spectacle, as the written and iconographical sources relate: *"... la navata della chiesa rimaneva durante tutta la cerimonia nella penombra crepuscolare, oltre alle prediche dei sermoni, si sentivano musiche vocali e strumentali. Al principio dell'ufficio il vano era chiuso da un grande sipario che poi, al momento opportuno calava: era il momento della meraviglia, della sorpresa. Tutta la profondità del coro era trasformata in un palcoscenico sopraelevato con quinte a scaglione dipinte con storie sacre, angeli o statue allegoriche. Il tutto era splendidamente illuminato da lumi nascosti, schermati dalle quinte. Al centro della scena (nella maggior parte dei casi apparentemente sospesa in aria) appariva il Santissimo nel suo ostensorio, quasi sempre coronato da un grande alone sfolgorante in una gloria di nuvole e angeli. Era insomma una spettacolare apparizione, una anticipazione del paradiso. A differenza della scena teatrale, lo spazio del palco generalmente non era destinato ad ospitare "attori", cioè la parte del clero officiante. Si trattava dunque di un quadro scenico immutevole, suggestivo però*

nella sua immobilità solenne, non destinato ad una azione in movimento, ma solamente percepibile con la vista a distanza; esso appariva al pubblico in sala in uno spazio lontano e nello stesso tempo psicologicamente vicino a causa dell'eloquente forza immaginativa dell'illusione."

These descriptions help in the first place to relive the event making it possible to imagine it, then allow to understand the operation of complex machines that required a great ability of the designer who had to consider the constructive and perceptive aspects, also those related to the practical organization for the realization of the engaging show.

The research, carried out by crossing the information deduced from texts and images, made it possible to examine with greater awareness some projects with the aim to reconstruct and explore them with digital models.

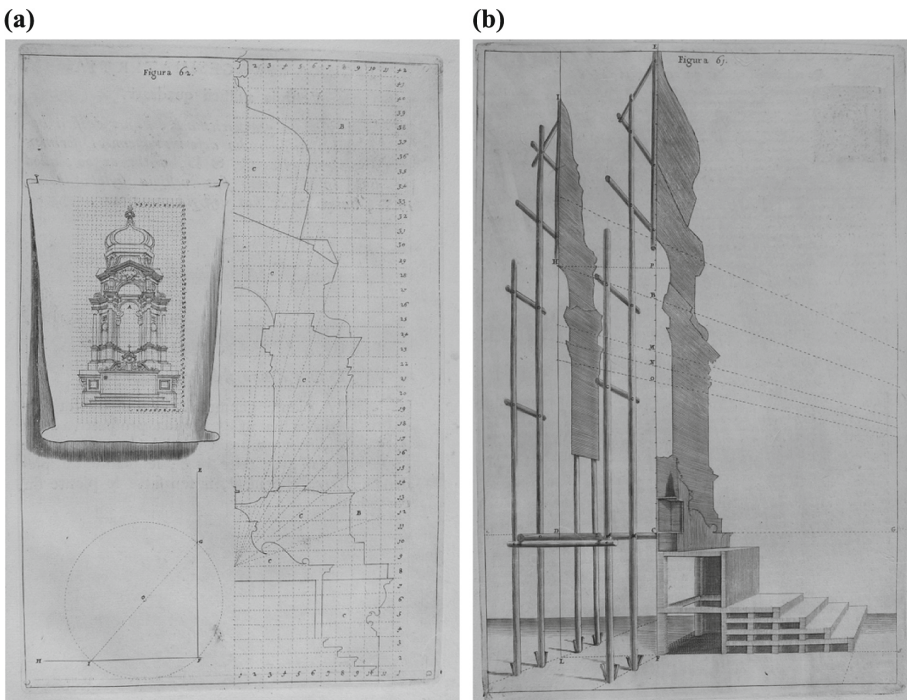


Fig. 3. (a) Ways to draw and build the machines. (b) Plates from the treatise.

3 The Ephemeral Machines of Andrea Pozzo

Andrea Pozzo was one of the most imaginative makers of machines for the 40 h in which he expressed at best the ingenuity of the use of the prospect at the service of his religious Order, the Jesuits, who were among the promoters of this liturgical ceremony.

The theatre stimulated by the ecclesiastics of the Compagnia del Gesu' was based on the principle of "docere et delectare" the fun was then used to bring the people

closer to the sacred representations. The church assumed the role of scenic space to attract attention and spread the word of Jesus directly with astonishing allegorical references, with figurations involving the whole of the churches, transformed for the occasion, with illusory settings (De Feo and Martinelli 1996).

The *Trattato di Perspectiva Pictorum* highlights the mastery of the intelligence of Pozzo who collects knowledge in perspective and optics, acquired in Jesuit colleges and through the studies of scientists and mathematicians such as those of Atanasio Kircher that then puts into practice. The texts of the work accompanied by numerous explanatory figures describe the passages to design and realize the ephemeral machines. In particular, in the part concerning the *Teatri sacri e profani* the author relates the experience gained in the field, the application of his practical talent, as besides theoretical, to quickly construct with simple materials, machines composed of panels placed in perspective in order to give, through pictorial fictions, spectacular effects (Fig. 3a, b).

His system to “graticolare teleri” is based on the choice of using the central vanishing point, contrary to the practice followed by quadraturism that provided for the adoption of more points of view to get a better visibility of the scene from several points. The preference of a single point of observation, motivated spiritually by the message of making all the lines converge towards an idealized eye point as centers of the “divine glory”, actually simplified by the construction and increased the perceptual effects obtained from the chosen position, excelling the perspective deformations placed at the margin of the representation (Fig. 4).

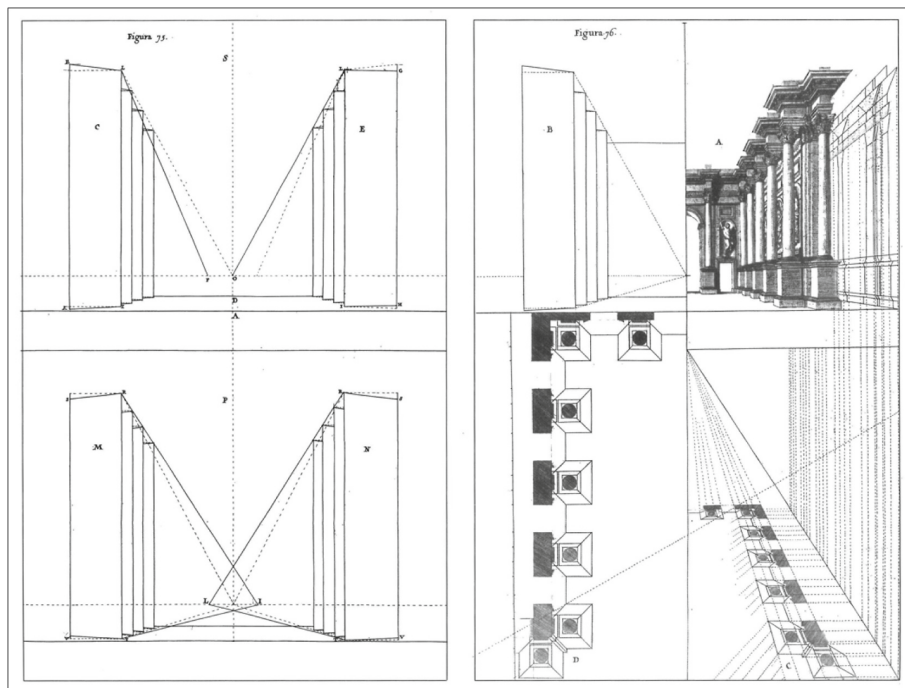


Fig. 4. Perspective constructions and methods for scene elevation. Plates of the Treatise.

The aim of the skilled Jesuit scriptwriter was to put in perspective the simulated architecture in a rapid way obtaining the perception of deceptive spaces. In this regard, he provides architectural models in various forms, simple and complex, to be included in the sacred scenes: square, octagonal, rounded shapes indicating the way to “degrade” them in perspective. The ephemeral prototypes simulated buildings, tabernacles, altars to be placed in the house as perspective wings that in some cases were so appreciated that they generated stable structures.

The explanations given by the figures describe the invention of various machines put in scene in the Church of Jesus, among these the impressive *Teatro delle Nozze di Cana* set up for 40 h in 1685 in Rome that reproduces a monumental architecture set on a sequence of arched passageways on high pedestals, crowned by balustrades with steps placed in axis to increase the depth of the ending scene, in the highest part, by a hemicycle. A similar approach is *Il Miracolo della guarigione dello storpio*, that, through a series of semicircular staircases, directs the spectator into the raised plateaus of the circular temple where the scene takes place. A similar scheme can be found in *Teatro tutto intero e ombreggiato*, figure number forty-seventh of the treatise, with a central fountain inspired by water as the origin of life, *Sitientes venite ad aquas*, commissioned by the Congregation of Nobles of the Nobili della Beatissima Vergine set up in 1695 in the Church of Jesus in Rome.

The engravings generally show a multitude of characters, small figures that populate the images to increase their dynamism and make the reproduction of the show perceived, embellished with decorations, silhouettes of fake statues, backdrops, lights and sound effects.

The creative inspiration leads the Jesuit father to the success demonstrated in the creation of many ephemeral apparatuses and pictorial works that have as common denominator the use of perspective as a tool to create architectural illusions, systematically adopted to obtain spectacular effects, as in the decoration of Sant’Ignazio in Rome in which he painted a fake dome to increase the spatiality of the church.

Andrea Pozzo carries out an intensive artistic activity, leaving from Trento, his birthplace, moves to Milan where he becomes the great man he was and in 1665 he enters the Compagnia del Gesù who welcome him, instead of the Carmelitan order who doesn’t. He will tenaciously work in the Compagnia del Gesù and leaves precious testimony in different Italian churches. The theme of ephemeral machines is particularly congenial to him and he is well associated with the cultural language of the Baroque as reported by the sources, and descriptions of him exist in the few examples that have survived to this day. Rare exceptions make it possible to observe the originals of the machines, kept as stable altars, such as those kept in the church of San Francesco Saverio di Mondavi, of Sant’Ignazio di Loyola in Rome and of Franziskanerkirche in Vienna. In these episodes, it is possible to have a direct response on the graphic expedients used to obtain the perspective effects painted on canvases sustained by wooden panels.

4 Digital Reconstruction of an Ephemeral Machine

On the basis of the synthetically referenced research, a case study was selected, reconstructed through a three-dimensional model which recreates the phases of elaboration and construction of an ephemeral machine.

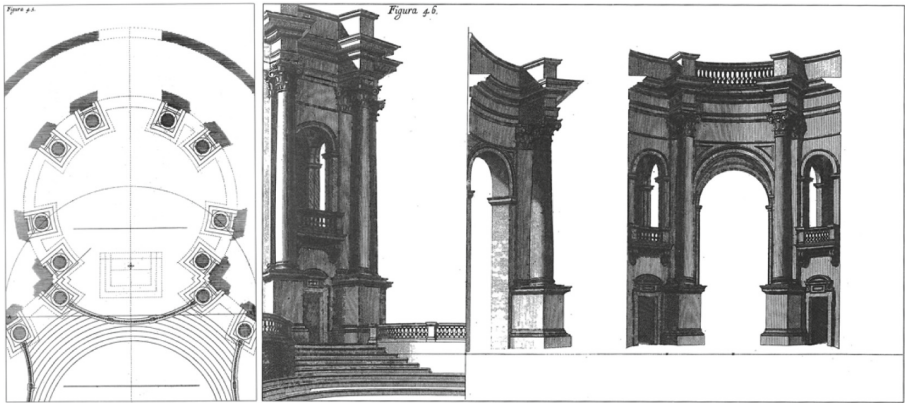


Fig. 5. Sacred theater made in Rome, plant and elevation. Plates of the Treatise.

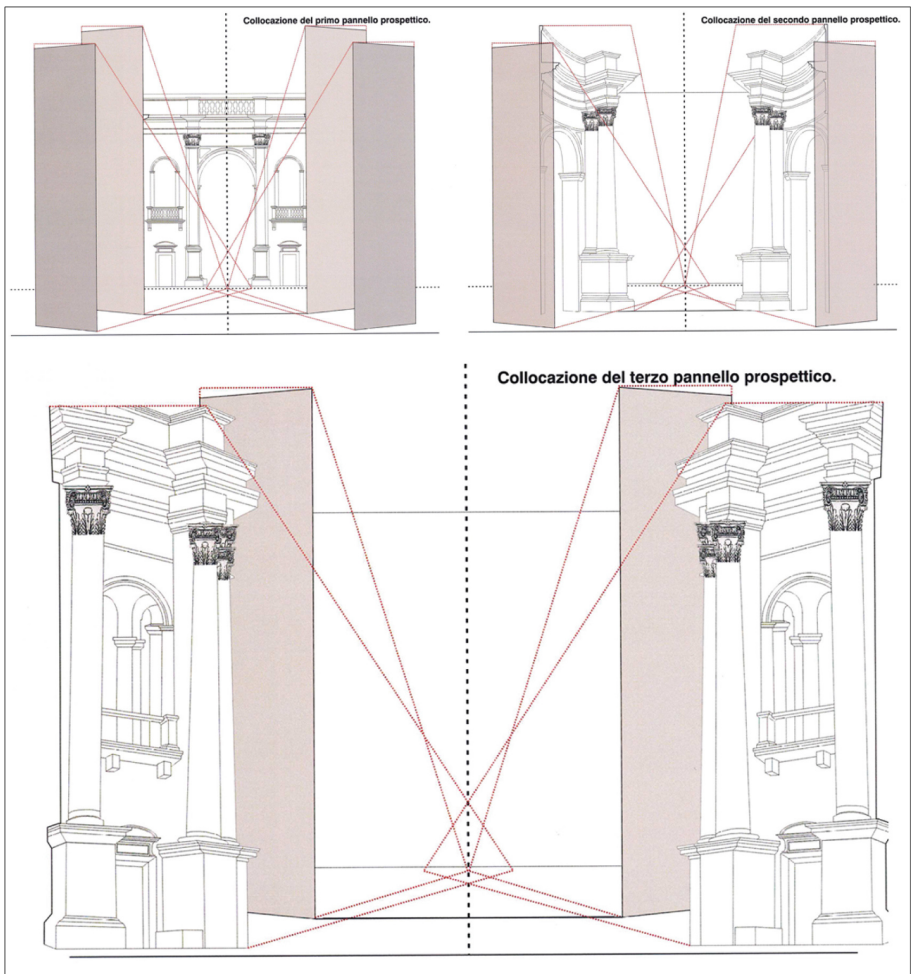


Fig. 6. Reconstruction of the sacred theater made in Rome, panel layout sequence.

Starting from one of the drawings presented by Andrea Pozzo entitled *Pianta di Teatro sacro fatto in Roma*, the perspective layout was recreated for the positioning of the panels that delimited the theatre scene, re-elaborated through the explanations presented in the treatise (Figs. 5 and 6).

The reconstructions show the progressions on the floors in which symmetrical wings represented portions of architectures designed in two dimensions, aimed to simulate the transformation of the aisle of the church. In this regard, a setting was envisaged to virtually simulate the construction apparatus and the scenic effect that derives from it. A movie, set inside the Church of Jesus, (Fig. 7) allows you to explore the machine in a reduced way, perceiving the front view and the wooden scaffolding system on the back, used to support the panels that marked the stage in which the sacred representation took place. The sequence of attached images documents the steps and the reconstructive hypothesis obtained following the indications given by the writer.



Fig. 7. Hypothesis of setting of sacred theater inside the Church of Jesus in Rome

5 Conclusions

The theme of ephemeral apparatuses of the Baroque period offers interesting hints of research from the point of view of representation involving it on several levels. The research presents an essay of aspects related to the graphics that intersect different topics proposed by the conference: the narration, the iconographic images that depict the machines through incisions, paintings and new graphical processes that generate other images allowing you to perceive the illusions produced by the ingenious scenic apparatuses. The survey has allowed us to analyze and graphically communicate these evocative forms of illusory architectural expression, in which visual impressions blend between science and art with the semiotic and anthropological meanings staged, as in the example proposed for a representation of 40 h. In conclusion, the research exposes a method of digital reading, analysis and reprocessing useful for graphic communication on the theme of the ephemeral in architecture.

Acknowledgements. The research was carried out with the collaboration of the architects Sabrina Timei and Giusy Defilippis.

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