



# Imagination and Image in Renaissance Wooden Inlays

Marco Fasolo<sup>(✉)</sup> and Flavia Camagni

Department of History, Representation and Restoration of Architecture, Sapienza  
University of Roma, Piazza Borghese 9, 00186 Rome, Italy  
{marco.fasolo, flavia.camagni}@uniroma1.it

**Abstract.** It is in the vivid imagination of the authors of Renaissance wooden inlays that lies the marvelous attraction for these works of art. Imagination that comes and develops in the mental model of both draftsman and carvers.

The image that is the product of this intellectual operation should not be considered only as the final and final result of this activity, but is configured as the key to open the door of another world suspended between reality and illusion, a world that comes to life in imagination of the one who looks at the work.

To favour this illusion, the architects of the inlays resort to the principal tool used to create this illusion: perspective. Many of the leading artists who have characterized the Renaissance have lent their work in the conception of inlays.

The perspectives of urban scenes present in many tablets have been the subject of various interpretations: from simple perspective exercises to ideas for theatrical sets but perhaps the most effective explanation is to recognize in these inlays the desire to “build” urban views in a dreamer vision of a imaginary world.

To apply these considerations, some inlays in the choir of the Basilica of San Domenico in Bologna were analysed.

**Keywords:** Wood inlays · Perspective · Imagination · Image · Choir of San Domenico

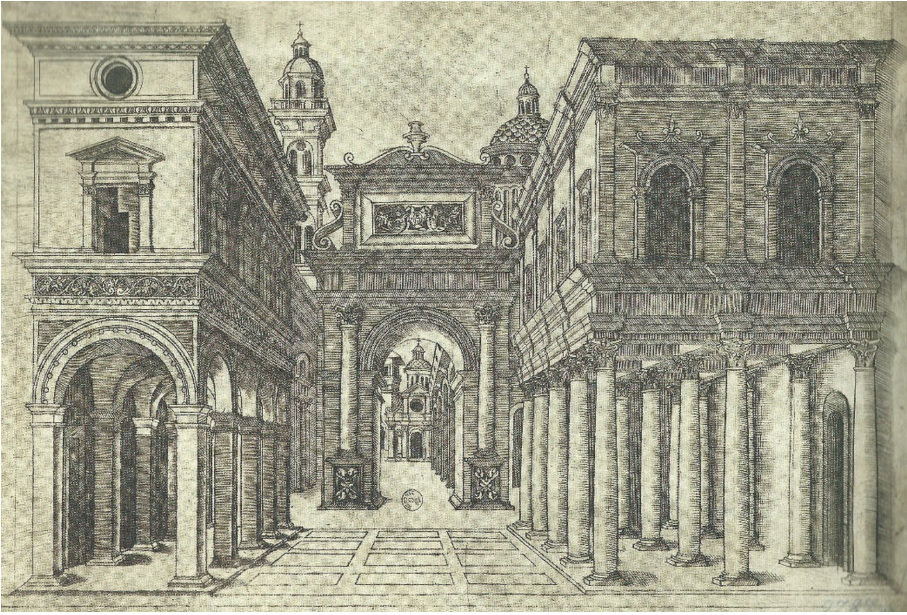
## 1 Introduction

The definition that sees the imagination as the ability to represent things not present in the act of sensation may seem too reductive, but we consider it effective to introduce our necessarily concise contribution and for the purpose of the study presented here.

First of all, it should be point on that imagination is different from fantasy because, as Benedetto Croce suggested in the early twentieth century, the former is extra-artistic while the second is artistic, in the sense, says Croce, that fantasy is “the creative power of poetry, that is the ability to convert the feeling into a plastic phantom, or intuition” while the imagination is a “different and inferior capacity that has a merely combinatorial character” (Croce 1949, p. 117). This ability, therefore, of the imagination, inside in man, is realized through the accumulation of perceptive experiences and is expressed in seeing mentally figures or compositions of objects not simultaneously perceivable through sensations.

When a subject composes a new and original structuring such as an artistic creation, one speaks of creative imagination and the related mental images can manifest themselves in works such as poems, music, sculptures, paintings, drawings (Fig. 1).

Drawings declined in all their manifestations including among these the Renaissance wooden inlays.



**Fig. 1.** Donato Bramante, Perspective Scene, 1475 ca. Firenze Gabinetto Disegni e Stampe degli Uffizi, 9787 st. sc.

## 2 Image and Imagination

What inspired draftsman and wood-masters to try their hand at this art, what did these artists want to represent in the inlaid tablets?

An unequivocal answer is not possible to provide it, in fact it is necessary to identify in their vast productive panorama, which includes geometric solids, still lifes, allegorical statues, landscapes, architectures, urban views. A possible classification like the one suggested by Chastel (1987) that identifies three decorative types based on the subjects represented: the false closet that, half-open, discovers a “still life”, the false niche that shows the location of a statue of saint or allegorical figure, the illusory window that frames an urban perspective view (Fig. 2).



**Fig. 2.** The three categories of inlays: the false closet (left); the false niche (center); the illusory window (right)

Now, while for the first two categories we agree with those who recognize in them sublime perspective exercises demonstrating the great skill acquired on the construction of perspective, the latter deserves more reflection.

By illusory window we mean that framing of an urban glimpse, of a piece of the city realized through perspective.

The perspective is the basis of all the categories of wood inlays that find their greatest period of splendour between 1470 and 1520, the *perspectiva artificialis* was now theorized and widespread among the artists for its ability to evoke three-dimensional space. Above all in the Tuscan area there is a great ferment and practice of this projective process, Florence and its surroundings are in fact recognized as the cradle of inlay. Many great architects such as Francesco di Giorgio Martini, Donato Bramante, Sebastiano Serlio, Baldassare Peruzzi, Vignola, have dedicated to the realization of drawings in which many direct or indirect references can be found to the preparatory drawing used by the carvers to carry out their works. So great painters, such as Piero della Francesca, Sandro Botticelli, Bramantino, Lorenzo Lotto, have provided their work to the *magister prospectivae*. The names listed are just examples of the many artists who have provided their work to this wooden art.

These great artists together with the master carvers, who tried themselves in the realization of cartoons or revisitations of other drawings, aimed to pour into these inlays both their perspective capacity and that desire to “build” urban views, consisting of architectural compositions that let their taste and their Renaissance culture be transmitted in a dreaming vision of an imaginary world.

It is precisely this will, this need to build on paper or wood a contemporary vision of fragments of the city that most likely pushed the architects of these works, *arte*

*factus*, to “read”, to “see” in their imagination what will constitute then the imprint, the image of their vision.

This image the artist reads it in the book that is constituted by his mental model that is from that system of connected elements that unknowingly lead the reasoning.

Andrea Casale on the subject of the artist’s own imagination emphasizes: “It is undeniable that the artist has imaginative elements in his mind that are an integral part of the process that will lead him to determine even the most particular and intimate characteristics of his work” (Casale 2018, p. 19).

The draftsman of the inlays therefore has a mental model from which he draws, more or less, unconsciously his own idea which then expresses and materializes in the inlaid tablet.

Imagination, an abstract entity, becomes concrete in the work of art and recalling the words of Paul Klee: “Art does not reproduce what is visible, but makes visible what is not always” (Klee 1959, p. 76) we can argue that the artist or even if he paints or draws verisimilar scenes, he does not reproduce the visible world in an imitative way, but reinterprets it, revisits it according to his personal vision.

The draftsman, “reading” in his ideal model, formulates a new and original expression of what is already inside him and through imagination creates what does not exist, sometimes mixing real episodes with unreal facts. An emblematic example of this combination is found in some perspective inlays in which, in ideal places, known elements can be recognized.



**Fig. 3.** The Choir of San Domenico in Bologna

About this dialogue between known elements and ideal elements Massimo Ferretti writes: “it is then necessary to clarify, in these images of the city, the relationship between generic moments and recognizable moments. The presence of real elements, in a single inlay as in the entire sequence of stalls has the primary function of soliciting the prospective verisimilitude, of reflecting this plausibility on the whole field of urban planning” (Ferretti 1982, p. 563).

The finality of these works of art in their expressions of urban views can be sought and connected to the imaginative vision urban glimpse, of real/unreal pieces of the city, of utopian views of urban scenes, of prefiguration of ideal cities that the authors they derived from their mental model.



**Fig. 4.** The Dossal of San Domenico in Bologna

The product of this immaterial operation it takes shape in the image. The product of this immaterial operation it takes shape in the image. When the idea has been focused through the continuous exchange of information between hand and brain, the draftsman reaches the final result of this work. But we must observe that the image should not be considered only as the outcome of the artist’s work, but the image produced is also the object on which the imagination of the percipient opens.

The spectator, seeing these works, finds in the image composed of wooden laminae the starting point for his imagination to travel and as Paolo Spinicci observes for a painting, but this can also apply to the inlays: “A painting can take our imagination and knows how to lead it wherever it wants, allowing us on one hand to fantasize in a vivid and coherent way around a defined subject and, on the other, to have clearly seen

before the eyes the rules of the game that we propose to play and the objects and people that populate the imaginative world in which we are allowed to penetrate” (Spinicci 2018, p. 192). Therefore the viewer opens the book of his mental model and, leafing through it, opens his imagination to the journey that the draftsman has invited him to undertake in these ideal places.

The use of perspective has just this purpose of guiding, of introducing the viewer into this world and its characteristic of simulating three-dimensional space leads the observer to imagine seeing an urban glimpse. If then in these images he recognizes real architectural elements his attention will be more captured and he will be able to enjoy the perceived image with all his ease, these known elements thus play the function of mnemonic points of the perspective structure, making use of these elements “creates his most effective illusions when he can count on certain inveterate expectations and assumptions on the part of the observer” (Gombrich 1965, p. 289).

The perspective defined by Panofsky (1966) as the art of seeing through the painting simulating the depth of space is the basis of Renaissance painting but as it claims Pierre Francastel does not invoke the natural vision of man and we cannot speak of realism for it and while “for the Alberti the purpose of the painting is only the representation of the visible” thus opens a conflict that two centuries later Abraham Bosse resumed claiming “that the purpose of the perspective was to represent things «not what the eye sees or believes to see them, but what the laws of perspective impose on them»” (Francastel 1960, pp. 49, 50).

The laws of perspective and its rules are used by draftsman and masters of wood to deceive the viewer of the inlays of living this world suspended between reality and illusion.

To focus on a case of application analysis of the images proposed in the inlays we pay attention to those present in the Choir of San Domenico in Bologna (Fig. 3).



Fig. 5. Examples of urban inlays present in the Choir

### 3 The Image in the Inlays of the San Domenico Choir in Bologna

In the fifteenth century were realized several inlays, with greater concentration in the center and north of Italy, characterized by a definite taste and geometric layout.

One of the masterpieces that testifies to the respect of these artistic canons is the choir of the abbey of Monteoliveto Maggiore, built in 1503 by Friar Giovanni da Verona.

The work of Gianfrancesco di Capodiferro marked, in 1520, the abandonment of the style that, until then, had dominated the artistic panorama and began to apply a pictorial formula. This is precisely the character of the work of Friar Damiano da Bergamo, author of wood inlays at San Domenico in Bologna.

San Domenico is one of the last cases, after which there was a decadence of the phenomenon, probably because its author had gone so far as to a level of detail, which made the work hardly sustainable at the level of time and costs.

It is therefore possible to say that the case of the inlays of San Domenico is to be considered the apex and the end of this artistic phenomenon (Trevisan 2011).

Friar Damiano Zambelli, after significant experiences at Santo Stefano in Bergamo, was called to Bologna where he left his mark in the Basilica of San Domenico in the inlays that decorate the church (Venturino 2002).

The first work in which he is challenged is the Dossal (1528–1530), originally placed on the right wall of the presbytery, in front of the high altar, and later transferred to the bottom of the new choir (Fig. 4).

The seven inlays that comprise it include decorative themes: personal memories, acts of gratitude, great themes of sacred history and history of the Dominican Order, figures, still lives and landscapes.

Subsequently, the espalier (1530–1535) of the chapel of the ark of San Domenico was realized, in which nine memorable facts of the life of the founder and in 1662 are represented, deployed as branches of two cupboards in the sacristy.

In 1537 the construction of the large lectern was begun, and in 1538 the work of the choir was made, originally arranged in the center of the nave. The inlaid part consists of 56 paintings, 28 per section, depicting stories from the Old Testament on the right and stories from the New Testament on the left.

It is possible to subdivide the inlays belonging to the category that Chastel defines illusory windows, in three orders: architectural, in which there is only one predominant architectural volume; urban, representations of urban environments; landscapes, representations of nature and glimpses of villages in the distance (Fasolo 2015).

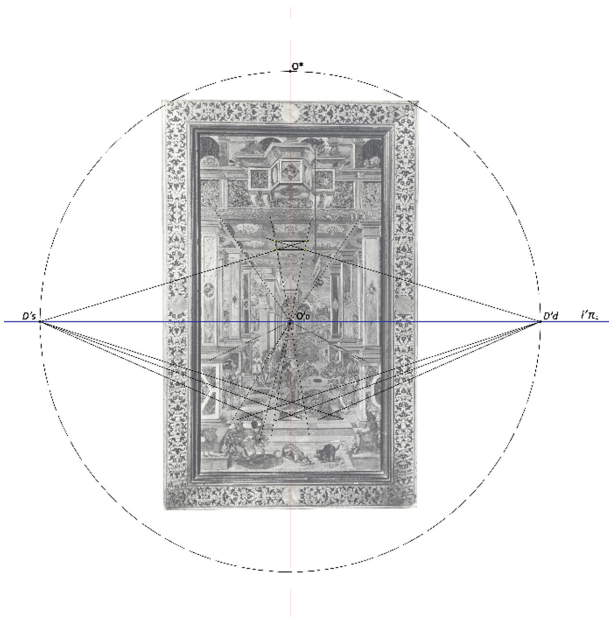
It is of particular interest, for the purposes of the study of the image, present in the inlays to examine the urban and architectural ones present in the dossal, in the espalier and in the choir (Fig. 5).

This analysis will take into consideration both the geometrical and the perceptual aspects at the same time, since it is not possible to separate these two components because the former participates with the latter in order to light the spectator's imagination.

The geometric structure, with its rigid perspective framing, leads the observer to perceive an illusory vision of an urban glimpse.

The perspective structure that constitutes “The geometric armor”, as Chastel emphasizes, “is made evident thanks to the horizontal plane of the chessboard, which effortlessly produces a magnificent paving, the orthogonal guides mechanically guide the eye towards the vanishing point, which almost always it coincides with a central building or an important encumbrance on a target building” (Chastel 1987, p. 79).

To conduct out our analysis on the images we have turned our attention to two of the inlays in the dossal, although some considerations come from the study of the other inlays of the basilica.



**Fig. 6.** Perspective study of inlay A

This choice was dictated by two motivations: one linked to the necessary synthesis of the contribution, another linked to the high artistic quality recognized to these two inlays, which are *inter alia* placed side by side in their position on the dossal.

The first inlaid analysis (inlay A), whose attribution is uncertain between Bramante and Bramantino, presents the main scene that takes place in the foreground, where different figures populate an area covered by a coffered ceiling supported by pillars. In the background, the eye of the observer is led, with the presence of some ruins, to an open space that ends with a domed religious building (Fig. 6).

In the proscenium some steps lead to a lower level populated by figures and animals, while in the upper part there is a gallery, completed by a balcony with a polygonal

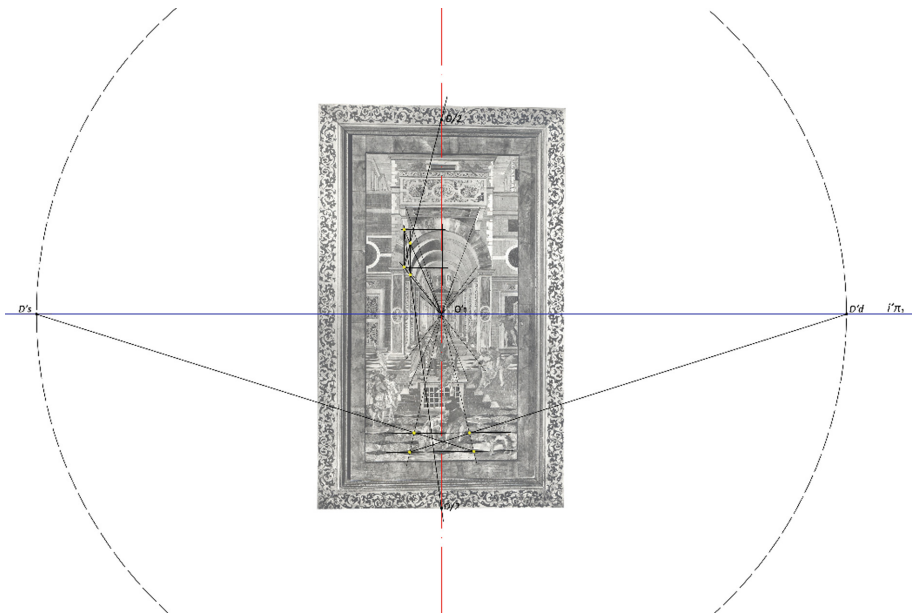


profile; one of these drops a plate with the date MDXXVIII marked on it, the year in which the dossal works began.

Excluding the proscenium, the perspective gap, where most of the visual narration takes place, occupies about two-thirds of the height of the inlaid tablet and the whole width.

The light comes, as it is convention, from above and from the left. This can be determined by the chiaroscuro effects on the characters that populate the perspective scene and the shadows generated by them. Even the application of the shadows, albeit hinted at, helps to provoke the sense of illusion of the urban landscape in the viewer.

The inlay B, whose design is attributed to Serlio, whose presence on the construction site is documented, presents the main scene that takes place in the proscenium, behind which are set up, a few steps, a series of buildings (Fig. 7).



**Fig. 7.** Perspective study of inlay B

The one that appears immediately after the proscenium, arranged in a parallel orientation to the picture plane, invites the viewer to continue looking through a gallery with cross vaults. The gaze is guided in the background by two buildings, which act as urban wings. Finally, in the background, a temple surmounted by a tympanum closes the space.

Even in this inlay the light comes from the left, but it is as if the sun were lower. This is deductible, not so much from the shadows brought, as from the proper shadows on the clothes of the characters. The chiaroscuro adds a further suggestion to the observer who observes it: the scene has a temporal as well as a spatial atmosphere.

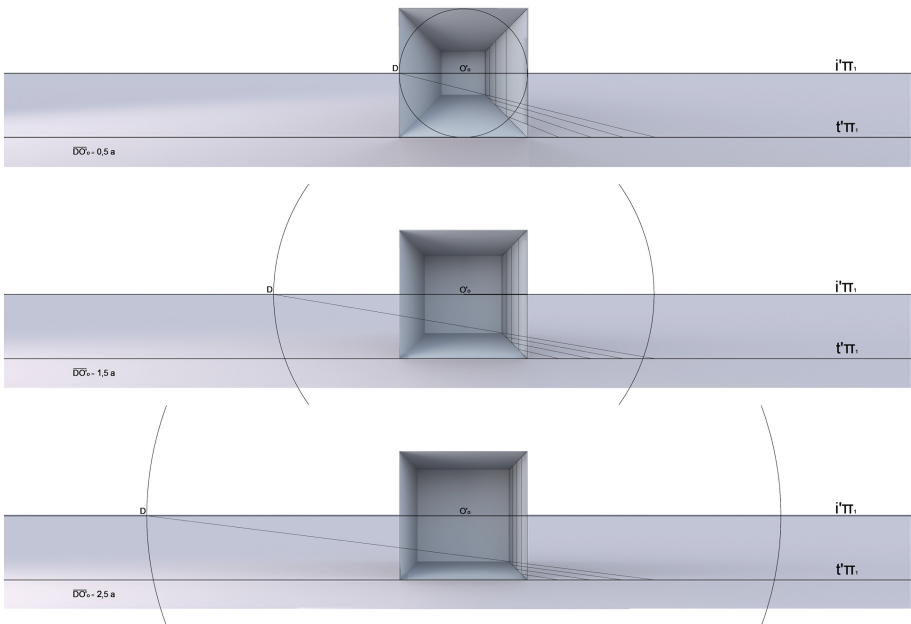
Recursively, the horizon is positioned so as to pass through the eyes of a character animating the scene or, as is more plausible, one of the figures is positioned so that his eyes are at the same height as the horizon.

This is because, as often happens, the perspective system and characters belong to two distinct creative moments, and often also to different authors; often the drawing of the figures follows the perspective setting.

Both inlays have the vertical axis, which passes through the main point, thus presenting an architectural symmetry that is not present in all the other inlays.

In fact some have the main point moved slightly to the right or slightly to the left from the center, the position of the axis in this way determines an asymmetric perspective scheme, where an urban fifth, shows more than the other, which is more shortened; others have the main point, and therefore vertical axis, which is located on an extreme or even out of the perspective image.

The two inlays analyzed have the focal length of about 70 cm respectively of the first and of 130 cm of the second. The focal length geometrically determines the position of the projection center with respect to the frame plane.



**Fig. 8.** Image transformation as the focal length changes

The identification of this data took place through the search for possible squares with vertical and/or horizontal position and considering their respective diagonals.

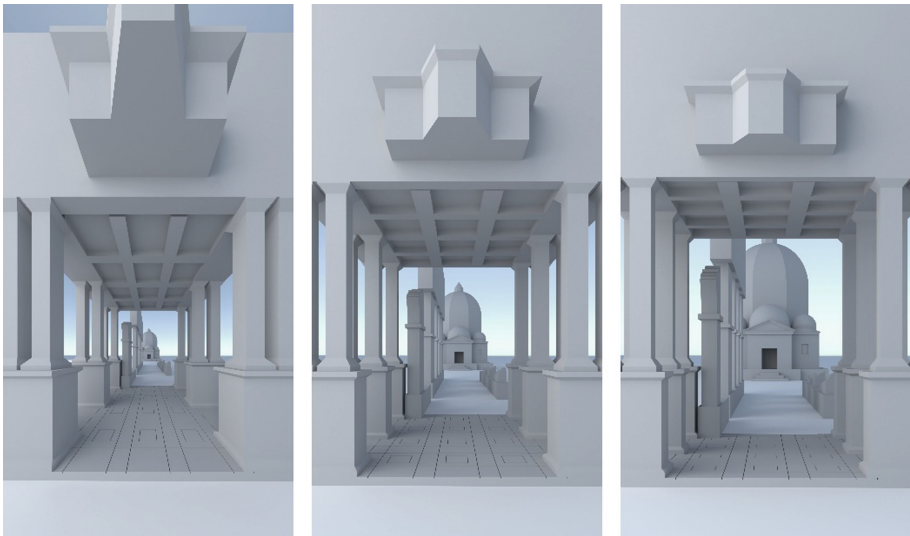
It should be noted that the focal length of the inlay A is congruent not only with the morphological structure of the choir, it is in fact possible to benefit from the

perspectives along the corridor formed by the two benches placed at different levels. This distance allows the spectator to be able to enjoy all the refined details and to push his imagination into the scene that lies before him.

The focal length, together with the dimensions of the image, allows to measure the value of the field of view involved in the vision of the single inlay.

This compares with the width of the human view, commonly identified around  $60^\circ$ , is lower. It thus emerges that only a portion of the view is interested in the vision of inlay, it is therefore possible to perceive more inlays completely.

The spectator who, looking down the corridor, turns his gaze to an inlay is invited to continue the path that stimulates his imagination.



**Fig. 9.** Image of the digital model of the inlay A as the ratio of the focal length to the tablet width varies. On the left the value 0.5, in the center 1.5 (the one used in the inlay), on the right 2.5.

This allows that, observing an inlay, one always has the perception of the adjacent inlays, maintaining the perspective illusion and pushing the viewer to continue his observation within these imaginary scenarios created by Friar Damiano Zambelli.

Another interesting observation can be traced to the numerical relationship between the image width and the focal length.

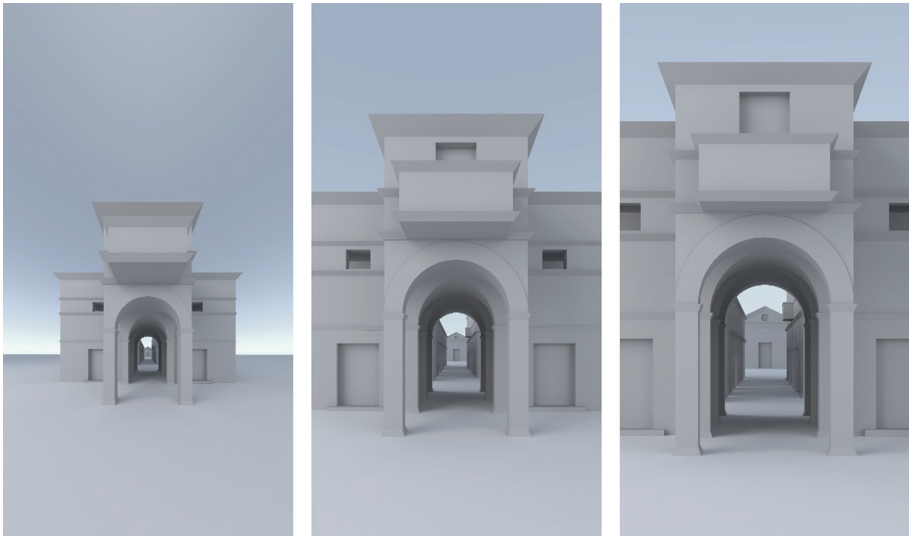
The analysis of this report can provide interesting insights on the designer's choice to opt for one value rather than another.

As John White observed, "a fairly close perspective has a number of advantages, since the orthogonal, or the lines that run deep, acquire the greatest possible extension, and consequently they are able to create sensations of extraordinary depth, preserving the same time surface properties, and also give a maximum of clarity to the surfaces in perspective, whether they are ceilings, walls, or, more especially, floors or floors of the

ground. Every element is clearly visible, while analogous clarity acquires the arrangement of figures or objects placed on such floors or ground floors” (White et al. 1971, p. 259).

Starting from the considerations of White, which identifies three exemplary relationships between the focal length and the width of the perspective image, it is possible to make some considerations on how this relationship alters the perspective image and the choice made by the draftsman (Fig. 8).

The inlay A, has a relation that White identifies as the ideal, 1.5 in which the perspective view gives the architectural space the right space to be built and to host the animated scene. By altering the focal length in the digital model, it is possible to check how the various perspective scenes and changes in effectiveness (Fig. 9).



**Fig. 10.** Image of the digital model of the inlay B as the ratio of the focal length to the tablet width varies. On the left the value 0.5, in the center 1.5, on the right 2.5 (the one used in the inlay).

In the inlay B, the focal length is 2.5 times the width of the perspective mirror. This causes the depth of the whole scene to contract. The scene that takes place in the foreground takes place in a space free from architectural structures allowing characters to animate science without constraints. What takes place in the background presents the right balance between spatial depth and material space to realize the physical elements of inlay. If this relationship is altered, the architectural scene dilates in depth, making what is represented at the bottom too small (Fig. 10).

The focal length cannot be reduced to less than half the width of the perspective otherwise there would be a strong perspective deformation in which the ceiling and floor would be inclined and the elements in the foreground would be deformed.

## 4 Conclusions

The inlays of Damiano Zambelli in the Dominican Basilica of Bologna probably mark the highest point in the production of perspective inlays, from this period onwards there will be other representative forms that will involve parts of real or ideal cities, the engravers, the vedutisti, the cartographers will become the specialists aimed at meeting this need.

The inlays pushed towards the limits of painting tends to overcome them, distorting and thus losing those artistic qualities that had characterized the magnificent works of Friar Giovanni da Verona, one of the greatest masters of inlays.

But we must not regret if the most splendid period of the inlays lasted only a hundred years, the production is rich and varied and constitutes a huge and precious cultural heritage that must be preserved, protected, valued and divulge.

A wish addressed to the researchers of these works should be directed towards a wider reading of these inlays not only for what has been their history, their technique, the aims of what has been represented but to turn the attention towards the meaning imaginative of their authors, their viewers and investigate in depth the meaning of the image produced.

In fact, the observations that can be made on an image materialized by signs of graphite, ink, incision or pixels can be extended to those formed by immaterial signs arising from the skilful combination of wood strips as it manifests itself in the inlays.

About the role of the image Andrea Casale writes: “The image thus assumes a colloquial role, first between the artist and the progress of the action, then between it and the user, to then turning into a system of transmission between mind and mind that finds in its physicality the integral part and the essential means by which it is realized” (Casale 2018, p. 19).

A virtuous cycle is therefore realized which, starting from the draftsman’s imagination, takes the form of an image that, in turn, observed by a spectator, provokes in him another imagination aimed at creating a feeling, a sensation proper to his being and his know.

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