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This essay aims to investigate the role that the representation of urban spaces plays in the paintings of Jacopo Tintoretto and the use of perspective adopted by the painter in their configuration. [1] The study conducted by the team made it possible to systematically examine Tintoretto's work for the first time, with particular focus on his use of space, architecture and perspective. This was also made possible by a research campaign aimed at restoring the

perspective of a selection of nine important paintings, using a method never before adopted in such an extensive way for Tintoretto's works. In this essay, in particular, we shall focus on a specific type of space, i.e. the urban space, which the painter adopts in a few of his paintings, but always in a significant manner, especially regarding the role it plays in the narrative, and the relationship with the model represented by the architectural theory of Sebastiano Serlio.

Keywords: Perspective restitution; Jacopo Tintoretto; Sebastiano Serlio.



TINTORETTO AND THE URBAN SPACE: STORY AND BACKGROUND (G. Guidarelli)



Fig. 1 - Venezia, Piazza San Marco.

Architectural representation is one of the main themes of Venetian painting between the 15th and 16th centuries. Giovanni e Jacopo Bellini and Vittore Carpaccio, in particular, demonstrate a passionate attention to the spatial and ideological possibilities that Venetian architecture - renewed by the generation of Mauro Codussi and Pietro Lombardo can express in the pictorial narrative. This is especially true with Paris Bordon and the oil-on-canvas painting Consegna dell'anello al Doge (Venezia, Gallerie dell'Accademia) created for the Brotherhood of San Marco in 1534. Here, the painter inserts the narrative in an urban space conceived as a collage of medieval Venetian architecture (the bell tower) and Byzantine architecture (the quincunx space where the doge governs) alongside very modern ancient buildings. It is an effective testimony to the dynamics that in those years helped to revolutionise the Venetian imago urbis, particularly under the rule of the doge of Gritti. The renovatio urbis entrusted to Jacopo Sansovino by the Doge led to profound transformations in the Marciana piazza, i.e. the political and institutional centre of Venice, with the construction of the Zecca (Mint), the Loggetta and Marciana Library (fig. 1). [2] The appearance of "Roman-style" architectural fragments in an urban context of medieval origin – as

early signs of a linguistic revolution continually awaiting to be carried out throughout the city – can be read as one of the themes of the two urban views that Sebastiano Serlio published in 1545 in the Secondo Libro dell'Architettura. [3] In fact, the Scena Tragica (Tragic Scene) and Scena Comica (Comic Scene) seemed to depict a visual metaphor – in the form of an ideal city - of Venice in the early sixteenth century, where the ideology of a rational order (imposed from above) is realised in the fabric of the city only at the cost of countless compromises and adaptations. The result is a mosaic of fragments of antiquity associated with medieval buildings and spaces that Serlio proposes as a theatrical backdrop. This is the political and cultural context faced by the

ADVANCED TECHNOLOGIES FOR HISTORICAL CITIES VISUALIZATION

young Tintoretto. The beginning of his activity can be chronologically placed in a period between the end of the fourth and the beginning of the fifth decade of the sixteenth century. [4] In a recent critical review of the painter's beginnings and training, in fact, paintings such as Prado's Adorazione dei Magi, Washington's Conversione di San Paolo and, above all, the sixteen paintings on the ceiling of Palazzo Pisani were identified as important steps to understanding the genesis of his language and the formation of the client. In these first trials, Tintoretto immediately showed a great interest in architecture which, however, is still confined to acting as the background of the narrative. In fact, we had to wait until the second half of the 1540s to see a painter who began to exploit the architectural space as an essential part of the narrative in paintings such as Disputa di Gesù nel Tempio (1545-1546, Milano, Museo del Duomo) and, above all, Cristo e l'adultera (Roma, Gallerie Nazionali di Arte Antica, Palazzo Barberini) whose dating and patronage are still in doubt but nevertheless fundamental for our purposes due to the composition of groups of characters distributed between the naves, marked by rows of iconic columns. On the other hand. investigations conducted by scholars such as Sergio Marinelli, Erasmus Weddigen, Cecil Gould, Erik Forssman e Martina Frank, [5] showed with increasing certainty how much Tintoretto's use of architectural space is based on a careful knowledge of constructed architecture, but, especially in this first phase, on the models (mainly Roman) illustrated by Serlio, who

began to publish his Libri dell'Architettura in 1537. In fact, Tintoretto replicates Serlio's models in many of his early paintings such as the church in the background of Sant'Agostino risana gli sciancati (1549 ca, Vicenza, Museo Civico di Palazzo Chiericati) or the Bramante-style temple in the Trafugamento del corpo di San Marco (1547 ca, Bruxelles, Musees Royaux des Beaux-Arts de Belgique) (fig. 2), but they are always architectural fragments pieced together to form urban environments. This is not the case with the "Cassoni" (marriage chest) paintings depicting the Predizione a David and L'incontro di Salomone con la regina di Saba. preserved in Vienna (Kunsthistorisches Museum) and dated 1542-1543, where Tintoretto establishes rational spatial relationships between the interior and exterior, painting realistic urban scenes not resulting from a sum of buildings. This effort at synthesis seems to have been dictated not only by a greater linguistic maturity, but also by a more refined conception of painted space obtained through the use of papiermâché models. According to Carlo Ridolfi's late testimony, Tintoretto placed wax statuettes to verify the position of characters and illuminated them with candles to simulate the different points of light that he would adopt in the painting. [6] The use of a typical stagecraft technique shows how much interest Tintoretto had in the theatre, also thanks to his friendship and constant acquaintance with Pietro Aretino and Andrea Calmo. [7]

This expedient also allowed the painter to control the painted space in a safer way and to experience the perspective deformations that would play a significant role in his later works, especially in the composition of very long paintings, where the multiplication of escape points requires a dynamic vision by the observer. Works such as Miracolo dello Schiavo (1548) and the Trafugamento del corpo di San Marco (1562-1566) (fig. 3) created for the Scuola Grande di San Marco and today preserved in the Gallerie dell'Accademia in Venice can be read only the light of these observations. In both cases, the narrative takes place in the context of piazzas, defined by buildings that constitute just as many references to minor constructions coming from the treatise or reality: Venetian, in the first case (the Loggia of Sansovino), and Paduan in the second (the Clocktower and Loggia of Piazza dei Signori). In these



ISSN 1828-5961

paintings, Tintoretto uses the piazza as the best type of space to effectively place the characters (individually or in groups) and to depict their complex reciprocal relationships based on his narrative intent, just like on a theatre stage.

In Tintoretto's painting, however, there is a progressive transition from an urban space conceived as the backdrop of the narrative (and designed as a sum of buildings) to a piazza designed organically as a place of pictorial staging. One of the most significant paintings of this evolution by Tintoretto is certainly the Lavanda dei Piedi preserved in Prado. The painting was commissioned by the School of the SS. Sacramento of the San Marcuola Church in 1547 to be placed most likely on a side wall of the right aisle. [8] The necessarily close-up view required Tintoretto, as we shall see in the third paragraph, to adopt a series of perspective solutions that he developed further in his more mature works. In the painting, the washing



Fig. 2 - Trafugamento del corpo di San Marco by Jacopo Tintoretto (1562-1566) - Venezia, Gallerie dell'Accademia.

Fig. 3 - San Marco libera lo schiavo by Jacopo Tintoretto (1548) -Venezia, Gallerie dell'Accademia.

of the feet described in the New Testament is in reality only an episode of the narration that ends with the Last Supper, which in turn is divided into several scenes. The coexistence of all these narrative planes in a single representation is underlined by the close-up view that forces the observer to continuously change focus: but is made possible, above all, by the architectural space that houses the different links of the narrative chain. In fact, Tintoretto stages the architecture of the evangelical cenacle as a sumptuous "old-fashioned" setting, where the germination of deep spaces allows arranging the different acts of the story. Beyond a double screen of columns, the inside hall comes into contact with an airy urban scenario, which in turn is immersed in a natural landscape. This urban view was modelled on the Scena Tragica published by Serlio only two years earlier, with the only significant variation being the replacement of a city piazza with a stretch of water crossed by a gondola. [9] This definitely

ADVANCED TECHNOLOGIES FOR HISTORICAL CITIES VISUALIZATION



completes the superimposition, as suggested by Serlio in the form of an analogy, of an ideal city with the real city, populated by people and immersed in the territory. Venice, which was reduced to being an "old" city by the renovation and restoration of the Gritti Palace, can thus become the scenario of the Gospel narrative, which in turn is renewed in the Sacrament of the Eucharist and in the rites of Holy Thursday. In this game of symbolic and ritual references, the painting following the (visual and ideological) model provided by Serlio – requires the observer's direct involvement, triggering a spatial experience where reality and painting correspond to each other.

LAVANDA DEI PIEDI BY TINTORETTO: ANALYSIS AND RECONFIGURATION OF THE URBAN SPACE (G. Liva)

The Lavanda dei piedi (1548-1549) oil painting in the Prado Spanish museum depicts an episode of the New Testament when Jesus humbly washes the feet of Saint Peter just before the Last Supper. The composition is wide and balanced. It depicts several events distributed not only in precise spatial positions but also significant temporal moments. The biblical story starts from the right where Jesus sits on his knees, in the foreground, and washes the feet of the apostle Peter, while another young disciple helps by holding a pitcher to fill the tub. In the middle is a dog, symbol of fidelity, facing Jesus and a wooden table with a white tablecloth around which sit some apostles, who are talking, watching or getting dressed. Moving to the left, other disciples are preparing to have their feet washed, and the scene is balanced by the figure taking off his sandals in the far left foreground, symmetrically opposing Jesus.

In the right background of the painting is a sketch of the Last Supper being celebrated in a room illuminated by a beam of zenithal light, which fits perfectly into the main narration of the story (fig. 4). [10]

The canvas belongs to the family of "quadri bislunghi" (according to a well-known expression by Giorgio Vasari), namely to those sacred historical paintings with an oblong shape that were usually placed on the side walls of chapels [11] or, in this case, probably on the outer wall of one of the aisles. Since there are no



ISSN 1828-5961 The "ideal" city and the "real" city painted by Tintoretto







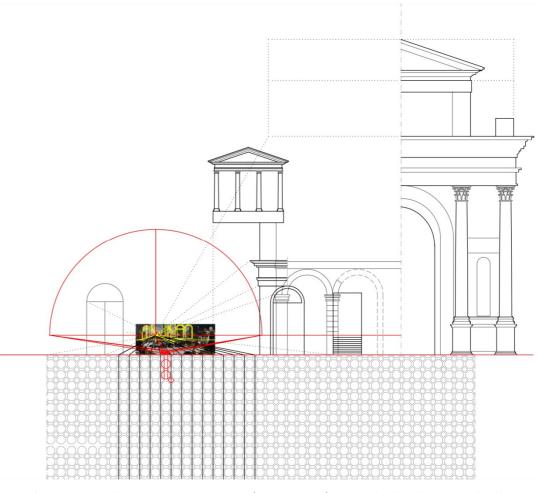


Fig. 4 - Jacopo Tintoretto, *La lavanda dei piedi*, 1548-1549, oil on canvas 210 x 553 cm, Museo Nacional del Prado, Madrid. In the middle and below render of 3d digital model, helpful to analisys and the comprehension of dipicted space. (Digital processing by G. Liva).

Fig. 5 - The perspective restitution of some depicted elements. (Digital processing by G. Liva).

written documents articulating the exact location of the canvas and its use, digital tools become important resources to study and investigate the deep meaning of the painting, intended as a "place" that must not only be observed, but also understood and broken down into its visual compositional elements, in a significant dialectic with the surrounding space. Starting from a high-resolution orthophoto, a perspective restitution was carried out within a CAD environment to reflect on the meaning of the representative technique, on the urban view that frames this famous *Gospel* scene and on the relationship between the painted space and the physical space (fig. 5). The sacred figures are inserted





Fig. 6 - X-ray of the painting: the image show that Tintoretto painted characters the architectural space and that he traced some perspectival construction lines. (Digital processing by G. Liva).

retrospectively (fig. 6) in a linear perspective and the method of analysis allowed identifying a square element, corresponding in this case to an octagonal paving stone, inscribable in a square, of the polychrome floor in the centre of the painting. The octagonal celestial shapes, much larger and more precise than the adjacent pink ones, allowed drawing the circle of distances and the fundamental line obtaining, through a homological process, the respective orthogonal projections of many elements (fig. 7). The plan is very extensive, and as occurs in "Serliana" architecture, to which Tintoretto's canvas has been compared due to its extreme similarity, the painted architectures are very expanded in depth to improve their visibility. Having the dimensional data, the buildings were modelled in a CAD environment and the virtual clones of the architecture were useful for verifying the position of the main point and the consequent possible use by the observer within a hypothetical real space, the similarity of the painted space with respect to Serlio's Scena Tragica, the coherence and correctness of the lights and shadows of the entire scene [12] (fig. 8).

The narrative composition, unbalanced towards the right and dictated not only by a central observation of the canvas, undergoes an optical shift to the left due to the construction of the perspective that leads towards the back arch and towards the articulated urban view. As in the case of other works, it is fair to assume a dynamic use of the observer justified by several compositional elements distributed in the painting: from close up, the observer can see Jesus washing the disciples feet in the foreground and immediately after, the meeting of some apostles around the table fleeing towards the Evangelical Jerusalem. In the background, the narration finally ends with the seated figure of an apostle or perhaps of Christ himself in prayer (direction announced by the apostle in the foreground on the extreme left). Alternating precious close-up visions with the traditional frontal view, the observer is subjected to a continuous visual and physical movement in an attempt to grasp not only the compositional complexity, due to the numerous characters, but also

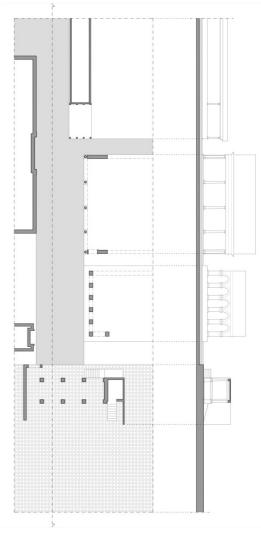
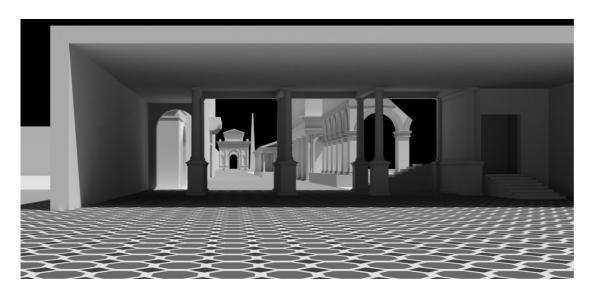
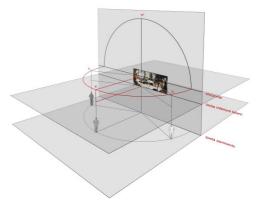


Fig. 7 - Orthogonal projection: plan and longitudinal section obtained using the inverse perspective. (Digital processing by G. Liva).



The "ideal" city and the "real" city painted by Tintoretto









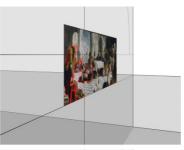








Fig. 8 - Render of the 3d digital model; softwares: Autocad 2D/ 3D e 3ds Max. (Digital processing by G. Liva).

- Fig. 9 Perspective scheme that highlights the position of the vanishing point (red lines), the observer's movement and his probable position if you consider the height of the canvas on the wall. (Digital processing by G. Liva).
- Fig. 10 Sequence of three ideal observer positions (one in the central position, at vanishing viewpoint and two in the side position) considering the alignment of the lower limit of the canvas with the floor and the three real observer positions. In red color the depicted scene details that justify the phisical observer's movement. (Digital processing by G. Liva).





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ISSN 1828-5961

chronological moments (the washing, the Last Supper, the preparation, and prayer).

volume 11/ n. 21 - december 2018

This physical and visual kinematic motion perfectly matches the urban interpretation of the painting. The portion of the city, whose noble buildings in perfect Renaissance style are a copy of those present in Serlio's Scena Tragica [13], recalls the theme of ideal cities, whose tradition prescribes how earthly perfection is ensured by the geometry and rationality of perspective. The precise and balanced urban setting, inscribable in a model of an abstract and timeless city, a symbol also of a social perfection supported by a rigorous ethical and hierarchical model is interpreted by Tintoretto as a place of life marked by human activities. He rejects the model of the ideal and perfect city, and casts doubt on a static observer attributable to a disembodied eye that maintains a fixed and immutable position. The characters live in space, animating it by telling the story of several events inserted in very different contexts (closed environments, porticoes, outdoor views) and referable to the real context. The painted figures that animate the perspective setting share an urban view where the observer's gaze can roam freely. Their body movement allows them to perceive more details and to share the space represented, becoming a participant in the narration itself. As a result, the main vanishing point, a fundamental element of famous perspectives painted in the 15th and 16th centuries, is conceptually weakened because Tintoretto did not place it in a privileged position. In addition to the clear perception of a dynamic observation, the height of the main point inside the canvas, 132 centimetres, is completely unreachable in consideration of the actual height of the painting in the probable hosting wall (the 132 centimetres takes into account the height from the floor to the lower edge of the painting) [14]. Considering that the painting will be viewed from the bottom to the top, that the visitor will never be able to position themselves in the optimal viewing point because the observer's horizon does not coincide with the horizon represented and that a dynamic viewing is required, an implicit abandonment of the strict rules of the linear perspective is evident to build a new idea of a more realistic dynamic space, anchored to reality (figg. 9-10). The sacred context, unchanged and



Fig. 11 - Scena Tragica by Sebastiano Serlio, 1542.

perfect, opens up to the simplicity of everyday life, at times degraded, and the classic image of the construction blends with the Venetian reality of canals. boats, taverns and porticoes in a temporal continuum that unites all eras.

Serlio's Scena Tragica [15], recaptured in its typological elements, the palazzo with arches supported by ashlar pillars and surmounted by Doric capitals, the building with Doric columns, the Greek prostyle temple, the obelisk, the arch, and the patrician homes with terrace are all a pretext to shatter the perfect image of the city and to affirm a new vision of the city close to everyday life, in line with the emerging Baroque settings that will look for new definitions or urban spaces in irregularity and morphological complexity.

THE SEBASTIANO SERLIO'S SCENA TRAGICA: ANALYSIS OF URBAN SCHENOGRAPHY (I. Friso)

In the Secondo Libro dell'Architettura (1542), Serlio dedicates an entire section to describing the theatrical apparatus suitable for hosting comic, satirical and tragic scenes. In this regard, he introduced the graphic project created for the Scena Tragica (fig. 11) through a perspective engraving – a vertical square (plane). The scenic composition is supported by some reflections

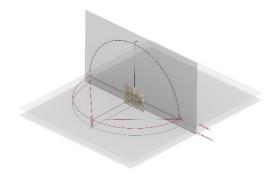
from this author who observed that "[...] gli accidenti amorosi, morti violente, e crudeli, (per quanto si legge nelle tragedie antiche, e anco nelle moderne) sono sempre intervenute dentro le case de Signori, Duchi, ò gran Principi, anzi di Re, e però [...] in cotali apparati non si farà edificio che non abbia del nobile." [16]

The engraving of this study, although designed to be contained in a theatre or broken down into different suitably shaped canvases, [17] constitutes an index map of each of them. Designed to be the backdrop of a stage wing, the index map is static and inanimate because it does not represent an object or person. Therefore, the actors, during the staging of the performance, will be the ones to give life and dynamism to the scene. The index map is however useful to study the geometric and stylistic layout of the architecture and the "ideal" urban space represented in it.

The composition of the spaces and the succession of buildings is in line with the Renaissance representations of Città Ideali built in a rigorous frontal perspective, where the role of architecture is by no means secondary. In fact, it does not have the value of a parametric backdrop that accommodates the scene but, on the contrary, becomes the real protagonist, giving the volumes and urban space represented therein an imposing and solemn character. [18] Serlio pays homage to the urban void: the protagonist is the street emphasised by the architecture, "un'antologia di tipi architettonici" [19] that give the central space a majestic and solemn character. [21] Although the drawing has some graphic inaccuracies that make the execution less effective, it is also true that the method of perspective seems to be applied rigorously. In fact, Serlio uses some graphic licenses that, while removing information by omitting some details from the representation, also allow creating a clearer and cleaner drawing that is easy to read and understand, without however altering the perception of the represented spaces. This emerges in an emblematic way from the planimetric restitution of the pavement: supposedly made up of a combination of square elements, which are repeated in depth along the entire length of the street. The large square - the generator of the pavement – whose prospective counterpart is



The "ideal" city and the "real" city painted by Tintoretto



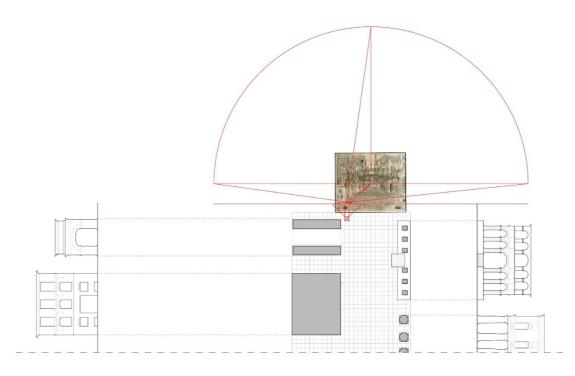


Fig. 12 - Assonometrical view of the perspective system and the real position of the eye of the observer. (Digital processing by I. Friso).

Fig. 13 - Inverse perspective. Perspective system. (Digital processing by I. Friso).

Fig. 14 - Plan and elevations of urban space and architectures. (Digital processing by I. Friso).

Fig. 15 - Plan and elevation of the two buildings on the right of the street. (Digital processing by I. Friso).

Fig. 16 - Plan and elevation of the three buildings on the left of the street. (Digital processing by I. Friso).

deformed into a quadrilateral with two of its sides parallel to the line of the earth and the other two converging at one point, is the formal element of departure that allows recognising the internal orientation of the perspective implemented by Serlio: assuming that the fundamental straight line coincides with the walking level of the street, and taking on the notions of *Descriptive Geometry* – in this specific case those where straight lines parallel to the iconic plane remain parallel even in their perspective image, and straight lines orthogonal to the painting have their escape in the projection of the observer's eye on the plane, V_0 , and those at a 45° angle converge at the points of distance D_1 and D_2 – it was not at all difficult

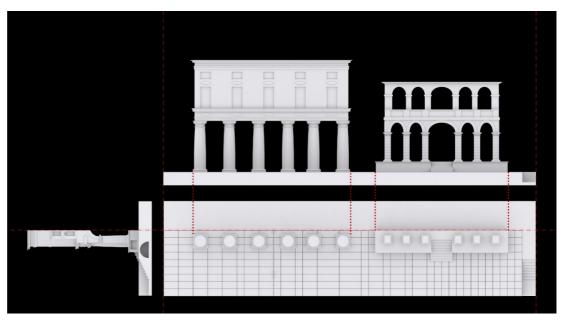
to trace the entire perspective reference by identifying the straight line of the horizon at half the height of the drawing, about a quarter of the height of the portal, the observer's projection on the plane in axis with the centre of the portal's arch and the main distance equal to the radius of the circle of the distances of diameter D_1 and D_2 and centre V_0 (fig. 12).

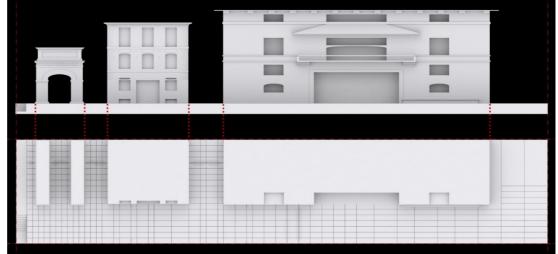
The urban space obtained by the perspective restitution (fig. 13) is outlined as a long street bordered by a succession of imposing buildings, different from each other in both architectural style and size (figg. 14-18). Unfortunately, this method only allows the virtual reconstruction of the elements where it is possible to recognise the attachment to the ground and not of



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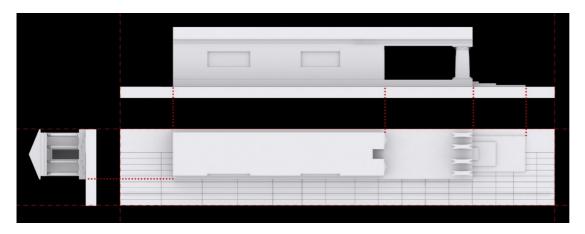






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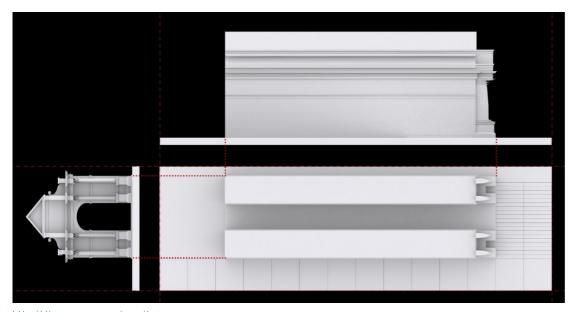


Fig. 17 - Plan and elevations of the greek temple. (Digital processing by I. Friso).

Fig. 18 - Plan and elevation of the portal that close the street. (Digital processing by I. Friso).





Fig. 19 - Render of 3D digital model. (Digital processing by I. Friso).

those elements where its vision is denied. Consequently, the digital reconstruction carried out takes into account all the buildings facing the street on the left side, the large entrance portal that imposes a change of direction at the street, of one of the two tall obelisks that rise up beyond the portal. The buildings that border the calle on the right, instead, seem to have more critical points: while on the one hand, it was possible to accurately restore the palazzo from the portico with large arches supported by ashlar pillars, the next one, which has high Doric columns on the ground floor and the small temple, clear evocation of the Greek temples, the same cannot be said for all the other noble buildings, positioned in a secondary level of the representation, whose attachment to the ground is hidden and does not allow identifying the precise planimetric location.

However, the prospective restitution [22] has revealed an anomaly in the composition. In fact, while the elements closer to the iconic plane are consistent with their representation, the further away you get from it, the more the tiles seem to expand proportionally in a longitudinal direction. In reality, it does not involve a real expansion of the dimensions of the elements. which would transition from the original square shape to the rectangular one; on the contrary, the stratagem implemented by Serlio involved omitting from the prospective representation some of the gaps in the pavement parallel to the plane. In this way, he avoided crowding the engraving with an excessive number of horizontal lines, which would produce a smear of colour, distracting the observer's attention and creating only confusion. On the other hand, the omission of these elements does not detract from the coherence of the perspective image obtained. A similar solution was adopted for the perspective construction of the buildings along the street. In fact, bringing the palazzos back to a position closer to the plane is geometrically and proportionally more correct, but as we move further away from the painting, instead, the buildings undergo a planimetric deformation, giving rise to a sort of anamorphism that finds its formal consistency only if viewed from the optimal point chosen as the centre of projection of the representation: the 3D virtual clone (fig. 19), therefore, presents buildings with columns arranged in





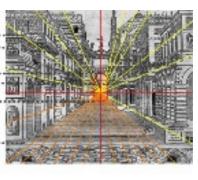


Fig. 20 - Comparizon between *Lavanda der piedi* by Tintoretto and *Scena Tragica* by Serlio. (Digital processing by G. Liva and I. Friso).

an elliptical layout rather than a circular one, and the very elongated volumes are examples of this Greekstyle temple and the portal that defines the border of the space.

The typically Renaissance characteristic of 'rethinking' the urban environment through painted architecture in ideal cities is interpreted by Tintoretto by contextualising the events in the real world. In fact, Tintoretto redesigns theatrical stages inspired by ancient architecture, inserting them into typically Venetian settings "within reach" of the author: architecture is not only used to frame the episode narrated with scenic environments, but becomes above all the pretext for adding prestige and fame to places where the artist works, and for receiving praise from the client.

CONCLUSIONS

The Lavanda dei piedi conserved in the Museum of Prado represents a configurative analogon of Serlio's Scena Tragica with some substantial differences. In addition to evoking the one used in the Città Ideali better known as the Tavola di Baltimora where the piazza, with the entrance in the background, is framed by a tripartite colonnade system, the perspective restitution of the "bislungo" painting highlights how

the street proposed in the *Scena Tragica* was replaced here by a navigable canal overlooked by similar buildings, and in the same succession, to those reproduced by Serlio. In fact, on the right, even though the two buildings disappear and their attachment to the ground cannot be identified, it was possible to identify the building with five arches supported by square pillars resting on a high base, the one characterised by Doric columns and the same Greek temple, to the left, the noble palazzos and, finally, the same portal flanked however by only one obelisk – and not two – close the urban space, heralding the change in the direction of the river.

ADVANCED TECHNOLOGIES FOR HISTORICAL CITIES VISUALIZATION

The internal orientation obtained in Tintoretto's painting restores the position of the observer to the left of the median axis of the painting and no longer the front, as was the case with Serlio's engraving, but still in line with the arch of the portal. And although the straight horizon line in Tintoretto's painting is higher than half that of the painting, it is also true that it is positioned at about a quarter of the height of the perspective image of the portal, the same distance assumed by Serlio in his *Scena Tragica*.

A comparison of the two restitutions, therefore, presents many compositional similarities and common points, which show how Serlio was certainly one of the sources of inspiration for the Venetian painter aimed

at giving lustre to the Venetian urban context in which he worked, trying to elevate his architecture to an almost ideal level (fig. 20).

In the light of these analyses, we have tried to demonstrate how the canvas of the Lavanda dei piedi, partially facing the space present in the Scena Tragica of Serlio, faces the theme of urban representation in a complex and articulated way, inserting on the historical-social context of the time. Today's digital visualization technologies have allowed us to reason critically on depicted architecture by weaving together historical information and data derived from 3d models, useful to reconstruct a hypothesis of urban space that involves the painted characters and especially the observer. In particular, the visual and physical cinematicism of the observer as regards to the multiple narration staged by Tintoretto has allowed us to understand the correctness and meaning of the perspective technique adopted in close connection with the environment that host the canvas.

On the basis of these first reflections, we have dwell upon the architectonic space painted that, with its sumptuous "old-fashioned" side, is not merely restricted to frame the narrated episode but it dialogues with the Venetian context, often present on canvases that they represent sacred topics, projecting it into a timeless dimension.



NOTES

[1] In the monograph Tintoretto e l'architettura (Marsilio, Venice 2018), the authors Marsel Grosso and Gianmario Guidarelli publish the results of the research founded Arciconfraternita Scuola Grande di San Rocco (Venice).

[2] Tafuri, M. (1984). "Renovatio urbis Venetiarum": il problema storiografico.In M. Tafuri (Ed.). "Renovatio urbis". Venezia nell'età di Andrea Gritti (1523-1538).Rome: Officina. pp. 9-55: Morresi, M. (2000). Sansovino, MilanItaly: Electa: Howard, D. (2016). L'architettura. Trionfalismo e reticenza. In D. Battilotti, G. Beltramini, E. Demo & Pancera, W. (Ed.), Storia dell'architettura nel Veneto. Il Cinquecento. Venice: Marsilio. pp. 38-67.

[3] On this topic, see Thones, C. (1987). Prolusione. Serlio e la trattatistica. In C. Thones (Ed.), Sebastiano Serlio, vi Seminario internazionale di storia dell'architettura (Vicenza, 31 agosto-4 settembre 1987), Milan: Electa, pp. 9-18; Frommel, S. (1998). Sebastiano Serlio architetto, Milan: Electa; Serlio, S. (2001) L'architettura: i libri i-vii e Extraordinario nelle prime edizioni, F.P. Fiore (Ed.), Milan: Il Polifilo, in part. pp. 11-54; Deswarte-Rosa, S. (Ed.) (2004), Sebastiano Serlio à Architecture Lyon. et imprimerie, i. Le Traité

d'Architecture de Sebastiano Serlio. Une grande entreprise éditoriale au xvie siècle, Lyon: Memoire Active.

volume 11/ n. 21 - december 2018

[4] See Battaglia, R., Marini, P. & Romani, P. (Eds.) (2018). // giovane Tintoretto. Venice, Italy: Marsilio: Krischnel, Hochmann, M. and Maisonneuve, C. (Ed.)(2017, 2018), *Le jeun* Tintoret. Naissance d'un génie, Munchen(2017) - Paris (2018).

[5] Gould, C. (1962), Sebastiano Serlio and Venetian Painting. Journal of the Warburg and Courtauld Institutes. xxv. 1962. pp. 55-62, Marinelli, S. (1980). La costruzione dello spazio nelle opere di Jacopo Tintoretto, in M. Dalai Emiliani (Ed.) La prospettiva rinascimentale. Codificazioni e trasgressioni, atti del conveano (Milano, Castello Sforzesco, Civiche Raccolte d'Arte di Milano, 11-15 ottobre 1977).. Florence: Centro Di, pp. 319-331; Frank, M. (1996). Architetture nelle opere di Jacopo Tintoretto.In P. Rossi & L. Puppi (Eds.), Jacopo Tintoretto nel quarto centenario della morte, atti del convegno internazionale (Venezia, 24-26 novembre 1994), Padua: II Poligrafo, pp. 235-239; Weddigen, E. (2000). Jacomo Tentor F., Myzelien zur Tintoretto-Forschung: Peripherie, Interpretation und

Rekonstruktion,

Scaneg Verlag.

Munchen:

[6] Ridolfi, C. (1648- ed. 1914-1924). In D.F. von Hadeln (Ed.). Le maraviglie dell'arte [1648], 2 voll., Berlin, II, p. 15.

[7] De Vecchi, P. (1972), Invenzioni sceniche iconografia del miracolo nella pittura di Jacopo Tintoretto. L'Arte, 17, 1972, pp. 101-132.

[8] Matile, M. (1996) "Quadri

laterali" ovvero consequenze di una collocazione ingrata: sui dipinti di storie sacre nell'opera di Jacopo Tintoretto. In «Venezia Cinquecento», 6, 12, 1996 (1997), pp. 151-206, in part. p. 154; Falomir, M. (Ed.) (2000). Una obra maestra restaurada. El Lavatorio de Jacopo Tintoretto, exhibition catalogue. Madrid: Museo Nacional del Prado.

[9] Tintoretto in this period (1547-1548) quotes la Scena Tragica also in the painting Betsabea alla fonte in Wallraf-Rishartz Museum of Koln.

[10] The pairing of the Washing of the Feet and the Last Supper in a painting was a recurring theme. which commissioned mainly by the Scuole del Santissimo Sacramento, and the church of San Marcuola itself has a wonderful Last Supper (1547), also by Tintoretto.

[11] Matile, M. (1966), "Quadri laterali", cit.

[12] The study of lights and shadows is interesting, both follow a compositional logic that has been verified inside the 3ds Max software, using Scanline as a rendering engine. Once the materials - deliberately in grey scale to highlight a chromatic difference from the original tones of the painting - and the painter's point of view were set up, the lighting fixtures were then inserted, adopting the advanced lighting technique. See Grosso, Guidarelli, Tintoretto e l'architettura, cit.

[13] The theatrical spaces have been masterfully constructed to merge the real place of the hall and the place of the scene, and the porticoes in perspective, building models, designs of floors with geometric squares and above all the determination of the observer's point of view become themes reproposed by Tintoretto, where the ideal aspect blends with the real one.

[14] To calculate the total height, the canvas of the Last Supper at the San Giorgio Maggiore in Venice was used as a guide, which is still in its original location. The lower edge is 10 steps from the floor, i.e. 347 centimetres.

[15] Taking as a reference two examples of theatrical scenes, one by Serlio and one by Peruzzi, the main point of the converging straight lines is central and positioned on the lower part of the representation, while the focal point, i.e. the washing of the feet, is offcentre, it presents a high horizontal line and, using the arch in the background as an element of comparison, the size of the architectures of the Washing painting are much larger than those of Serlio, which is dimensionally more in line with those of Peruzzi.

[16] Serlio. S. (1545) Libro Secondo, Parigi, p. 46.

[17] In the pages of the Treatise, Serlio describes in great detail the procedure to implemented for reconstructing the stage of a theatre. pp. 46-

[19] Sgrosso, A. (2001), Rinascimento e Barocco, Turin: UTET, pp. 100-109.

Guidarelli, [20] Grosso, Tintoretto e l'Architettura cit., p.

[21] Krautheimer, R. (1994), Le tavole di Urbino, Berlino e Baltimora riesaminate.In H. Millon & V. Lampugnani (Eds.) Rinascimento da Brunelleschi a Michelangelo: la rappresentazione dell'architettura., Milan: Bompiani, pp. 233-257.

[22] Prospective restitution is a methodological procedure that allows obtaining plans and elevations of buildings starting from their image on the iconic

plane and applying, with an inverse process, the rules of linear conical perspective. For more information, see Sgrosso. A. (1979). Note fotogrammetria applicata all'Architettura. Naples: Lithorapid.

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