WHAT DOES COPERNICUS' TELLURIUM OWE TO GALILEO AND HIS LEGACY?

Natacha Fabbri

University of Siena and Museo Galileo, Piazza dei Giudici 1, 50122 Firenze, Italy. E-mail: natacha.fabbri@unisi.it

Abstract: This paper delves into the origin and significance of Copernicus' tellurium. It will show that this astronomical model, which appeared in the Frontispiece of Galileo's *Dialogue* and turned out to become Copernicus' most representative symbol, resulted from Galileo's analysis of the arguments supporting heliocentrism. A particular version of the tellurium, closely associated with the Galilean Florentine context, is also depicted in a painting of the Uffizi Gallery and a canvas owned by a well-known eighteenth-century astronomer. These two portraits of Copernicus, which have been largely overlooked, are now being considered to underscore the deep connection between the emergence and recognition of this iconographical model of Copernicus and Galileo's work and legacy.

Keywords: Copernicus; Galileo; Tommaso Perelli; the tellurium; portraits.

1 INTRODUCTION

The representation of the tellurium played a significant role in the reception and spread of Copernicus' ideas, as evidenced by paintings, engravings, and astronomical treatises. This paper delves into the various versions of this simplified astronomical model, with a particular focus on the one featured on the Frontispiece of Galileo's *Dialogue on the Two Chief Systems of the World*. Another intriguing representation, deeply rooted in the Florentine context and emphasizing the Moon's presence, is also examined.

The iconography of Copernicus aroused the interest of scholars over the past two centuries. Recently, two pivotal works have shed new light on this subject: Gudula Metze's catalogue in the Biographia Copernicana (Metze, 2004b) and the Dossier Iconographique in the comprehensive three volumes of De Revolutionibus edited by Lerner et al. (2015). The present paper aims to complement the latter study by concentrating on a specific representation of the astronomer and its scientific significance. Copernicus has been portrayed in various ways, often with an assortment of objects and scientific instruments such as sectors, astrolabes, triquetra, globes, armillary spheres, pyramids, lily of the valley, books, diagrams, and even anachronistic telescopes. However, one object stands out as the unequivocal symbol of his astronomical system: the tellurium.

This paper will dwell on how the engraving made by Stefano Della Bella for Galileo's *Dialogue* transformed one of the diagrams illustrating the Copernican system into an astronomical model, thus providing visual consistency to the most significant elements characterizing heliocentrism. The paper will also cast more light on two largely neglected portraits of Copernicus, one housed in the collection of the Uffizi Gallery in Florence¹ and the other collected by

one of Galileo's most influential eighteenthcentury scholars. A closer examination of their history and a comparison with Galileo's *Dialogue* will reveal significant connections between this iconography and some eminent astronomers and scholars linked to Galileo's legacy in Florence.

2 GALILEO AND STEFANO DELLA BELLA: REPRESENTING THE MOVEMENT AND PHASES OF THE EARTH

Copernicus' tellurium, an astronomical model used to illustrate the movement of the Earth around the Sun, made its first appearance in the engraving created by Stefano Della Bella (1610–1664) in 1632 for the Frontispiece of Galileo's *Dialogue on the Two Main Systems*, marking a significant moment in the representation of the Copernican system.

As a versatile engraver at the Medici court, under the guidance of Vincenzo Viviani (1655: c. 16r) Stefano Della Bella also crafted a captivating composition for the opening page of Galileo's *Opere*, published in Bologna in 1656–1657. Even in this case, the composition was very sophisticated: Della Bella ingeniously concealed the representation of the heliocentric system within a symbolic depiction of the Medici family's coat of arms: Jupiter and his satellites formed the shape of a crown, while the other planets, including the Earth, orbited the Sun.

Della Bella's composition for the *Dialogue* features an elderly Copernicus holding neither an armillary sphere nor a representation of his cosmos but a much simpler object (Figures 1 and 2). Copernicus is portrayed as a wise man, a figure that appears in other Della Bella's etchings, such as the allegorical engraving of the Mountain of Virtues with some wise men of antiquity.² The object in the composition serves to illustrate the key elements of the Copernican system, emphasizing the Sun's centrality and



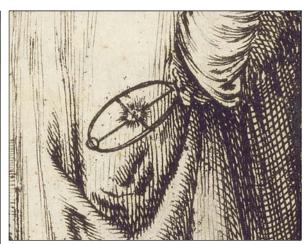
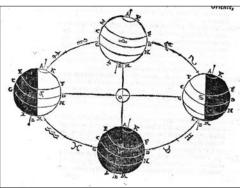


Figure 1 (left): Detail of the Frontispiece (after Galileo 1632).

Figure 2 (above): Detail of the tellurium.

the Earth's movement. It precisely replicates the diagrams published in the Fourth Day of the *Dialogue*. Two of them are reproduced below (Figures 3 and 4).

The diagram on page 384 (Figure 3), which shows a flattened and oblong representation of the circle traced by the Earth during its revolution around the Sun, is introduced with a simple description: "Very simple drawing, which represents the Copernican constitution and its consequences." (Galileo, 1632: 384). This straightforward depiction makes the complex concepts of the Earth's phases and mobility, as well as the Sun's centrality, more accessible to the reader.



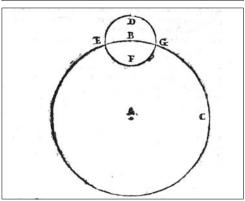


Figure 3 (left): Earth's phases (after: Galileo 1632).
Figure 4 (left, below): Earth's revolution (after: Galileo 1632).

The diagram on page 420 (Figure 4), also found on page 424, provides a detailed description of the Earth's twofold motion in the Copernican system: the Sun is positioned at A, while the circumference BC traces the Earth's annual revolution; the small circle DEFG instead represents the Earth's globe, which rotates daily on its axis and whose center is at B.

Della Bella's solution, unlike subsequent versions of the tellurium, does not comprehensively represent the Earth–Moon–Sun system; rather, it focuses on the Earth's movement and the Sun's centrality, key elements of Copernicanism.

The shape of the tellurium shown in the *Dialogue*'s Frontispiece can also be found in Martin Erik Gestrin's *Uraniae Libri IV* (1647), but it did not appear in other treatises that, like these works, depicted an astronomical model to illustrate the Copernican system, such as Nicolaus Mulerius' *Tabulae Frisicae* (1611), copied with some negligible differences in Philip Lansberg's *Tabulae Motuum Coelestium Perpetuae* (1632) and in Dirck Rembrantz van Nierop's *Nederduytsche Astronomia* (1658) (Metze, 2004a: 101–142).

In some subsequent works, modifications were made to Della Bella's Copernican artifact, altering its original meaning. These variations resulted from a misinterpretation of Della Bella's drawing or a reference to Copernicus' diagram of the cosmos published in *De Revolutionibus* (and reproduced, with some changes, in Galileo's *Dialogue*).

In the new version of the Frontispiece prepared by the engraver Jacob van der Heyden (1573–1645) for Matthias Bernegger's Latin translation of the *Dialogue*, published in Strasburg in 1635 under the title *Dialogus de Systemate Mundi*, the Earth's spherical body became a larger circle describing the Moon's movement, and the model took the conformation of a tellurium representing the interlaced movements of Earth and Moon around the Sun, to which the shape of a little crescent Moon was added (Galileo, 1635: title page). Additionally, the character of Copernicus shed the robes of a mature man to assume the facial features depicted in other coeval portraits (Figure 5).

Furthermore, the new shape of the instrument was assumed in the engraving (Figure 6) made for John Wilkins' A Discourse Concerning a New World and Another Planet (1640) and Pierre Gassendi's biography of Copernicus (Gassendi, 1654: 2), and later in other treatises, such as Andrea Cellarius' Harmonia Macrocosmica (1661) and Johannes Luyts' Astronomica Institutio (1692) (Bornus, 2022; Lerner et al., 2015: 725-729; Metze, 2004a: 113-124; Zittel, 2015: 268-277). The diagram of the heliocentric system published in Gassendi's life of Copernicus was not taken from De Revolutionibus but from the Dialogue-as evidenced by the presence of Jupiter's satellites—and testifies to the profound influence of Galileo's Dialogue on this publication (Galileo, 1632: 320).

The portrait included by Gassendi in his life of Copernicus derived from the well-known portrait crafted by Tobias Stimmer (1539-1584), published in Nicolaus Reusner's Icones sive Virorum literis illustrium (1587), which corresponded to the iconographic model depicted on the astronomical clock of Strasbourg. In Gassendi's volume, the engraver Jacob van Meurs also reproduced the same arm's position, but substituted the lily of the valley (symbol of medical knowledge) with the astronomical model (yet without the crescent Moon). This version achieved great popularity and underwent many slightly different variations, as testified by Scharffen's late seventeenth-century engraving housed at the National Museum in Krakow.



Figure 5: Detail of the Frontispiece (after Galilei, 1635).

3 FLORENCE: IN THE COLLECTIONS OF THE UFFIZI GALLERY

The oil painting of Copernicus with a tellurium (Figure 7) is currently housed in the Uffizi Gallery in Florence (Palatine Gallery and Royal Apartments, deposits, inv. 2512/1890). The



Figure 6: Portrait of Copernicus (after Gassendi, 1654).



Figure 7: An anonymous portrait of Copernicus with a tellurium; a 76.5 × 51.5 cm oil painting dating to the second half of the seventeenth century (courtesy: Uffizi Gallery, Florence).

portrait measures 76.5×51.5 cm and is believed to date back to the seventeenth century. It was initially displayed in the Vasari Corridor until 1954, and was later moved to the Uffizi Gallery's deposits (Uffizi Gallery, archive file n. 00641259).

The Uffizi portrait mirrors the engraving published in Gassendi's biography of Copernicus, with careful attention to detail in replicating the face and hair. However, it adapts the design of the tellurium, emphasizing the presence of the Moon with a delicate drawing of a crescent

Moon on the smallest circle. The tellurium corresponds to the one displayed in Bernegger's 1635 edition, while the details of Copernicus' dress (sleeves, fur collar, seams), face (shadows, wrinkles, light reflections in the eyes), and hair (length and style) are strikingly similar to Copernicus' portrait in Gassendi's work. The positioning of the left hand, which holds the instrument, deviates slightly, aligning more with the pose proposed in the Latin *Dialogus* and by Mulerius—and published again in Lansberger and Luyts' treatises.

It is therefore highly probable that this portrait was painted following the model proposed by Jacob van Meurs, and was therefore depicted after 1654. To put this into context, it is worth remembering that after Galileo's trial and abjuration in 1633, his *Dialogue* was included in the Index of prohibited books and his *Opera Omnia*, published in Bologna in 1656–1657, notably did not contain the *Dialogue*. Bernegger's Latin translation, instead, had such a wide reception that it went through some reprints.

The Historical Archive of the Uffizi Gallery documents the entrance of this painting in the Uffizi collection in 1881,³ but unfortunately earlier records are unavailable. However, the presence of other numbers (6222, 259, 328, 3966) on the back of the canvas hints at its passage through various collections before its arrival at the Uffizi.

The inventory of assets found in Ferdinando de Medici's apartment in the Pitti Palace, drawn up at his death in 1713, included a portrait of Copernicus. This inventory listed⁴ fifteen paintings on canvas, one braccio and 2 soldi high, and 5/6 large, with the half-bust portraits of Amerigo Vespucci, Francis Petrarch, Justus Lipsius, Nicholas of Cusa, Benedetto Castelli, Girolamo Savonarola, Nicolaus Copernicus, Lodovico Ariosto, Dante Alighieri, Michelangelo Buonarroti, Pierre Gassendi, Giovanni Della Casa, Evangelista Torricelli, René Descartes, Galileo Galilei, and Marsilius Ficinus. As one braccio fiorentino measured 58.36 cm. and two soldi measured 5.836 cm. those canvases had a 64 × 48.5 cm dimension.

The dimensions of Copernicus' portrait housed in the Uffizi Gallery's collections do not precisely correspond to those specified in Ferdinando's inventory, yet they match the proportions of other seventeenth-century portraits (of Amerigo Vespucci and Ludovico Ariosto, for instance) that ended up—and are still today stored—by the Medicean Villa of Poggio a Caiano. Another portrait of Copernicus—yet devoid of any object or instrument—is on display at the Uffizi Gallery (inv. 1890, n. 196). This other oil painting (60 × 47 cm), which aligns with

the dimensions of the canvas of Ferdinando's collection, was actually painted later: it was crafted by Carlo Ventura Sacconi and his workshop as part of the Jovian series and was delivered to the Medici Wardrobe on 1 June 1720 (Morelli, 2020: 251–252).

4 COLLECTING COPERNICUS' PORTRAIT IN FLORENCE

The history of this iconographical model and its connection with Galileo's legacy is further enriched by the appearance of an identical portrait of Copernicus in Florence in the second half of the eighteenth century, owned by astronomer Tommaso Perelli (1704–1783), who had close ties with Galileo's disciples.

As a Professor of Astronomy at the University of Pisa, following his tenure at the University of Bologna, he was the first to propose the establishment of an astronomical observatory on the Arcetri hill, where Galileo spent his last years after the trial of 1633, confined to his Villa II Gioiello.

Significantly, Perelli's connection to Galileo is further underscored by the verses he carved on the marble base of the urn containing Galileo's middle finger of the right hand. This finger was removed from Galileo's mortal remains by Anton Francesco Gori on 12 March 1737 on the occasion of the body's translation from the original burial site to the monumental tomb erected in the Church of Santa Croce. These verses stand as a testament to Perelli's deep respect and admiration for the Tuscan philosopher:

Spurn not the remains of the finger by which the right hand measured out paths of the sky, pointed to orbs never before seen by mortals; with the aid of a small pile of fragile glass first dared the deed to which Titania, in full vigor, on mountains heaped high, was once inadequate, having tried in vain to ascend into the loftiest heavens. (Translated in Suter, 1952: 232).

Perelli's interest in Galileo's legacy led him to delve into various fields and topics. He attempted to substantiate Galileo's precedence in applying the pendulum to the clock (Perelli, 1771) and carried out a comprehensive examination of the clock devised by Johann Philipp Treffler (1625–1698) drawing on this principle, which had been strategically positioned on the Arnolfo tower of Palazzo Vecchio in Florence.

Perelli also owned a rather extensive collection of portraits of men of science, which included not only Copernicus, but also disciples of Galileo such as Evangelista Torricelli, Lorenzo Magalotti, Alfonso Borelli, Filippo Salviati, in ad-

dition to other leading astronomers like Tycho Brahe and Johannes Kepler (Tognoni, 2023: 180). According to Giovan Battista Clemente Nelli (1725–1793), the esteemed biographer of Galileo who studied under Pinelli (Nelli 1793(2): 703), his Professor of Astronomy had purchased from Vincenzo Viviani's heirs some portraits of mathematicians and astronomers (Favaro, 1912-13: 1000) and from Francesco Pecci the remarkable bronze portrait of Galileo crafted by Giovanni Battista Foggini (Nelli, 1793(2): 763–764, 872, 917).

Perelli's collection was dispersed among his heirs, with Galileo's bronze portrait being acquired by the Florentine engineer Giuseppe Salvetti (1734–1801), and the portrait of Copernicus becoming a prized possession of the scholar Sebastiano Ciampi (1769–1847). Ciampi was an Italian priest, philologist, and Slavist who taught Greek and Latin at the University of Warsaw (1817–1822) and built strong ties with Polish scholars. His collection of publications and works on the history and culture of Poland is a testament to his dedication to Polish–Italian cultural relations.

According to Ciampi, this oil painting had been acquired by Perelli in Bologna many years earlier. Ciampi himself obtained the painting in 1824 or early 1825, a fact we know from a letter he wrote to the renowned Danish sculptor Bertel Thorwaldse (1770–1844) on 30 April 1825. Ciampi was so adamant about the importance of that painting that he proposed it as a model for the monumental statue of Copernicus Thorwaldse had been working on, which had to be placed in front of the Staszic Palace in Warsaw.

The lucky coincidence of having discovered and purchased an ancient portrait of Nicolaus Copernicus, already owned by the famous astronomer Perelli, gives me the honor of directing this to you to give you the news, if you ever believe it is appropriate to see it in the extreme rarity of portraits of this great man, and the event that, having to make the statue of him, one of full confidence was not yet presented to you.

I ask you to consider this thought of mine as an effect of the interest I take in something that, although Italian by birth, I make my own due to the gratitude and attachment I profess to a nation that I consider to be my adopted country.

Since I intend to publish this portrait in lithography, therefore, as soon as it is printed, I will make it my duty to send you a copy, should Your Excellency indicate that he is pleased to accept it.

In the meantime, I will take advantage of this opportunity to declare myself with the highest esteem and consideration. (Ciampi, 1825).

As to the origin of this painting, Ciampi clarified that

... the author [i.e., Ciampi himself] made it copied in the Litografia Salucci of Florence, and afterward sent the painting mentioned above to the University of Warsaw. The painted portrait is probably a beautiful copy of the Carracci's. (Ciampi, 1834: 59).8

However, Giovanni Colzi's lithography (Figure 8) is not a faithful copy of the canvas, as it adds a line of bottoms on the dress, a personified Moon, and a nevus on Copernicus' cheek—curiously similar to Galileo's.

It is worth noting that the Carracci are mentioned here for the first and only time, although even the Polish historian Leonard Borejko Chodźko—following Ciampi's words —provided dating information by noting down that Ciampi's painting dated back to the "... epoch in which Copernicus lived." (Chodźko, 1831: 123). This lithograph was widely known and even appeared in the Italian translation of the monograph *Di Niccolò Copernico Ragionamento* (1830) by Giovanni Sniadecki.

The resemblance between Perelli-Ciampi's painting and the one in the Uffizi is so striking that if we had only known about the return of this portrait to Florence instead of documents confirming its presence in Warsaw until the Second World War (Batowski, 1933: 82; Metze, 2004a: 137)—after which the painting was lost -we might have assumed that the portrait in the Uffizi Gallery is actually Ciampi's. Despite this not being the case, it is indisputable that these two paintings are likely copies of each other or share a common origin. Unfortunately, the dimension of Perelli-Ciampi's portrait, a crucial detail in understanding its origin, remains unknown, leaving unanswered questions about the relationship between that oil painting, the one mentioned in the inventory of Ferdinand de Medici, and the canvas lying in the Uffizi's collection.

5 THE BIRTH OF A SYMBOL

Undoubtedly, the Frontispiece of Galileo's *Dialogue* and its early various editions, the engraving published by Gassendi, and the painting collected by Ciampi have elevated the tellurium to a worldwide symbol of Copernicus. They also contributed to popularizing this iconographic model, frequently reproduced in different contexts and with slight variations, such as in the

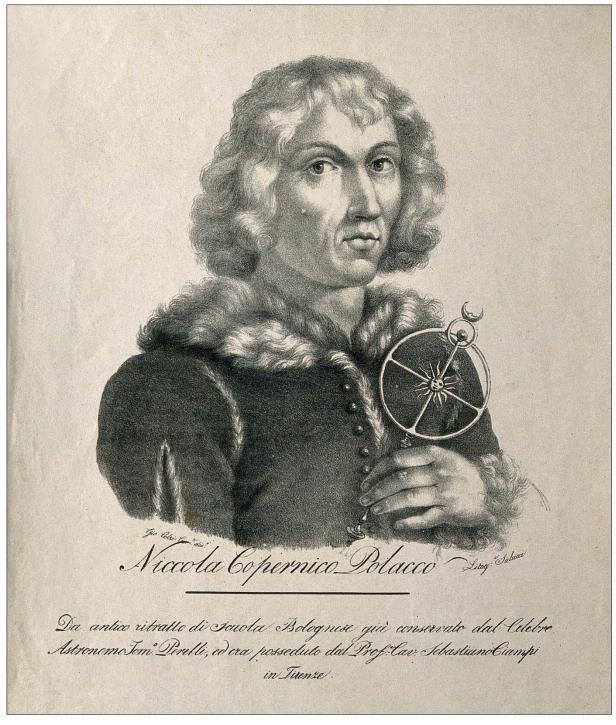


Figure 8: Giovanni Colzi, Portrait of Copernicus, lithography, 45 × 30 cm (after Colzi ca. 1825).

the Vatican commemorative postage stamp and in Polish and American philatelic productions celebrating the fifth centenary of Copernicus' birth in 1973.

In addition to those references, another interpretation of this portrait surfaced in the second half of the nineteenth century. This artwork was presented as one of Copernicus' exceedingly rare life portraits, which would have been realized in 1505 by the Florentine artist Ridolfo del Ghirlandaio (Figure 9).

The oil panel and this attribution appeared in the 1857 Art Treasures Exhibition in Manchester and was proposed by the owner of the portrait, Lord William Drury Lowe (1802–1877), without providing any information about the portrait's provenance. It is worth noting that William Drury Lowe spent some time in Florence, where his daughter, named Florence, was born in 1842. On the catalogue of the Art Treasures Exhibition, we read: "Portrait of Copernicus, holding a Planisphere in his right hand and a

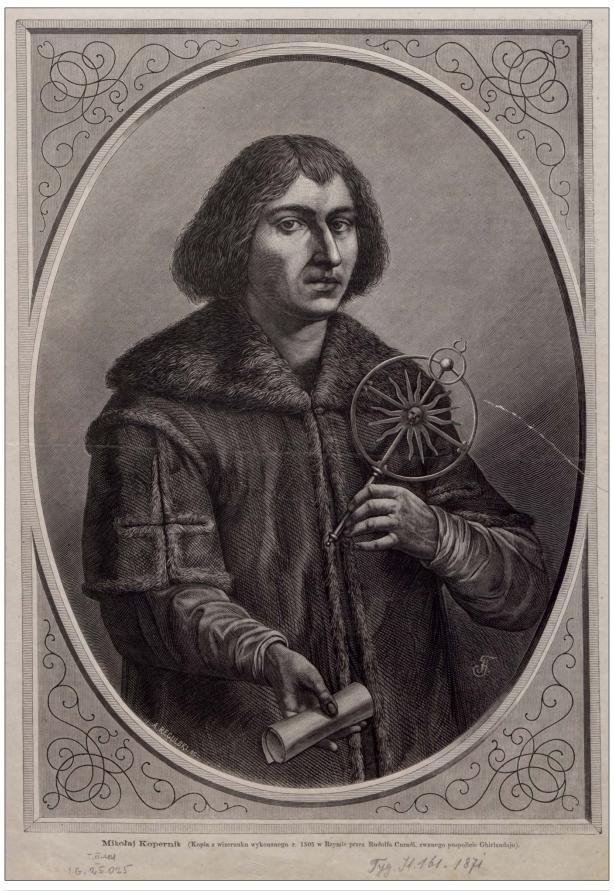


Figure 9: Franciszek Tegazzo, Portrait of Copernicus after Ridolfo del Ghirlandaio, 1870, engraving, 33 × 23 cm (courtesy: National Library of Poland). The caption clarifies: "copy from an image realized in 1505 in Rome by Rudolfo Curradi, commonly called Ghirlandajo".

scroll in the left, attributed to Ridolfo Ghirlandajo." (Catalogue, 1857: 24).10 The figure of this large wooden panel (181.5 × 79 cm) is very similar to the Uffizi and Perelli-Ciampi's portraits: it shows the same astronomical model, placed in the hand of a figure with identical posture, face, hair, and attire, although the composition is more refined. Copernicus looks vounger, the position of the right arm is entirely different, and the details of the cleric's dress and the color of the sleeve show some little variations. It is reminiscent of Philip Lansberg's engraving (1632) or, as Metze already pointed out, the title page of Luyts' Astronomica Institutio (1692) that is, in fact, the reference for the portrait depicted by Giacomo Ciesa in 1773 in the Sala delle Figure of the Specola in Padua. In the case of the alleged Ghirlandaio's panel, however, the position of the hands is reversed, precisely as we observe in the Uffizi painting and Ciampi's portrait: the left hand holding the instrument, and the right one showing a scroll.

In his report, George Scharf, Director of the National Portrait Gallery in London, took a cautious approach to the attribution, stating it as "... a portrait of Copernicus, by a contemporary of Raphael." (Scharf, 1858: 282). This work was also meticulously reproduced in Scharf's 1857 sketchbook (n. 47, p. 61r), and the Director pointed out the strong similarity with the portrait of Copernicus published in the *Histoire de France* by Velly, Villaret, and Garnier, which corresponded to the version printed in Gassendi's (1654) life of Copernicus.

Many scholars argued against the attribution to Ghirlandaio's entourage—considering it a derivation from Jacob van Meurs' version—to the point that it was even compared to the alleged portrait Marco Basaiti was said to have made in 1512—owned by Prince Heinrich Lubomirski in Przeworsk—which finally turned out to be only a clumsily painted piece of modern fantasy.¹¹

The portrait attributed to Ghirlandaio, which was part of Lord William Drury Lowe's collection, appeared in a 2004 Sotheby's auction, whose catalogue merely labeled it as sixteenth-century Italian schoolwork (*Catalogue of Sotheby's*, 2004: 123). This enigmatic panel was later showcased in a 2019 Florentine art exhibition (Figure 9), which presented it as an artwork of Ghirlandaio's school. However, there is still a lack of documentary evidence linking this portrait to Ghirlandaio's entourage, and the attribution entirely relies on formal and stylistic analysis. 12

6 CONCLUDING REMARKS

The discussion about the authenticity of Ghirlandaio's panel and the attribution of Perelli-

Ciampi's painting to Carracci artists would require an artistic analysis that is beyond the scope of this paper. Nonetheless, it is important to note that retracing the iconography of Copernicus holding the tellurium to Galileo's *Dialogue* clashes with the alleged sixteenth-century dating of those paintings, thus confirming the doubts raised by the aforementioned scholars of Copernicus' iconography.

Indeed, it is indisputable that the portrait of Copernicus holding the tellurium, particularly the one adorned with a crescent Moon, is either the result of a misreading of Della Bella's Frontispiece or a more effective and elaborate version of it. It has been shown (§2) that the source of the Frontispiece was the series of diagrams published in the Fourth Day of Galileo's *Dialogue* with the aim to visually illustrate the main elements of Copernicanism. The final version of the tellurium depicted in the Uffizi and Perelli-Ciampi portraits is deeply connected with Galileo, as it is associated with the reception of his works among the Florentine scholars who worked in the long shadow of Galileo's legacy.

7 NOTES

- * All translations are the author's except where otherwise noted.
- 1. This painting has been largely ignored until now: see the brief mentions in Metze, 2004a: 135 and Zinner, 1988: 468.
- See Dodd (1818: tables nn. 23–31, 83). On Della Bella's Frontispieces, see Zittel (2014). Some scholars believe Della Bella depicted Copernicus as resembling Galileo, as mentioned in Panofsky (1956) and Pantin (1993: 94–95).
- 3. Inventario Generale dei Dipinti di Magazzino della R. Galleria di Firenze, III categoria, 1880-1881, n. 822.
- 4. Inventario dei Mobili e Masserizie della Proprietà del Serenissimo Signor Principe Ferdinando di Gloriosa Ricordanza, c. 52v, also published in Chiarini (1975: 56).
- 5. The urn with the finger was originally show-cased in the Laurentian Library in Florence and later transferred to the Galileo Tribune at the Royal Museum of Physics and Natural History in 1841. In 1927, it was moved to the Museum of the History of Science and is currently preserved there (inv. 2432).
- 6. Nelli (1793(2): 885). The original Latin text reads: "Leipsana ne spernas digiti, quo dextera coeli/ Mensa vias, numquam visos mortalibus orbes/ Mostravit, parvo fragilis molimine vitri/ Ausa prior facinus, cui non Titania quondam/ Sufficit pubes congestis montibus altis/ Nequidquam superas conata ascendere in arces."

- Giovanni Battista Foggini was the author of the bust of Galileo that decorates the monumental sepulcher of the Tuscan astronomer in Santa Croce.
- 8. The inventory of Ferdinando de' Medici testifies the presence of a series of canvases by Carracci and his school (10v, 12v, 24r, 25v, 29v, 38v, 48r, 31r), whereas we cannot find any mention of Ghirlandaio's workshop.
- This strong resemblance misled the editors of the volume La Collezione Gioviana Degli Uffizi, who believed Ciampi's lithograph to be a copy of the Uffizi's deposit painting: see Simari and Barbolani Da Montauto (2023(2): 451).
- Catalogue of the Art Treasures of the United Kingdom: Collected at Manchester in 1857, n. 160, page 24. A small photographic reproduction of this painting is displayed at the Astronomical and Copernican Museum of the INAF Astronomical Observatory in Rome.
- 11. Doubts regarding the alleged portrait attributed to Ridolfo del Ghirlandaio's school were raised, among others, by Reicke and Wichert (1876: 70); see also Batowski (1933: 55); Hipler (1875: 96); Metze (2004a: 137).

12. The painting displayed in the Florentine art exhibition bears the red label of the 1857 Art Treasures Exhibition (Čarkina, 2019: 12–15). The position of the little crescent Moon in this portrait differs from Drury Lowe's panel, suggesting potential restoration or cleaning work that may have altered its original appearance. Gratitude goes to the curator and owner for allowing me to view the painting and for providing a formal and stylistic analysis of the panel.

8 ACKNOWLEDGEMENTS

I am grateful to the art historian Elisa Camporeale for her helpful suggestions, to the former Director of the Uffizi Gallery Eike Schmidt and to the curator Maria Russo for permitting me to examine the canvas in the Uffizi Gallery's collections. I also thank Massimo Boschi for his assistance during the research in the Uffizi Historical Archive, Federico Tognoni for sharing some bibliographical references, and Barbara Bienias for bringing to my attention the two nineteenth-century copies of the supposed Ghirlandaio painting and the contemporary reception of Copernicus' tellurium. Additionally, I would like to thank the referees for providing me with insightful suggestions.

9 REFERENCES

Batowski, Z., 1933. Wizerunki Kopernika. Toruń, Drukarnia Toruńska, Towarzystwo Bibljofilów im. Lelewela.

Bornus P.P., 2022. Die re-invention des weltgefüges. Stefano della Bellas frontispiz zu Galileo Galileis "Dialogo" und seine nordalpinen übersetzungen. In von Hammami, M., Pawlak, A., and Rüth, S. (eds.), (Re-)Invention. Die Neuauflage als Kreative Praxis in der Nordalpinen Druckgraphik der Frühen Neuzeit. Berlin, De Gruyter. Pp. 371–388.

Čarkina, V. (ed.), 2019. Volti Rinascimentali, Durer Arts Gallery. Signa, Masso delle Fate.

Catalogue of Sotheby's Old Master Paintings Part Two. 8 July 2004. London.

Catalogue of the Art Treasures of the United Kingdom: collected at Manchester in 1857. London, Bradbury and Evans.

Chiarini, M., 1975. I quadri della collezione del Principe Ferdinando di Toscana (III). *Paragone Arte*, 26(305), 57–98.

Chodzko, L., 1831. Relazione Storica, Politica, Geografica, Legislativa, Scientifica, Letteraria, ec. della Pollonia Antica e Moderna, it. trans., Volume 1. Livorno, Pozzolini.

Ciampi, S., 1825. Letter to B. Thorwaldse, dated 30 April. The Thorvaldsen's Museum (Archives, m10 1825, nr. 56).

Ciampi, S., 1834. Bibliografia Critica delle Antiche Reciproche Corrispondenze Politiche, Ecclesiastiche, etc, dell'Italia, colla Russia, colla Polonia ed Altre Parti Settentrionali. Florence, Allegrini e Mazzoni.

Colzi, G., ca. 1825. Niccola Copernico Polacco: da Antico Ritratto di Scuola Bolognese Già Conservato dal Celebre Astronomo Tom.o Perelli, ed Ora Posseduto dal Prof. Cav. Sebastiano Ciampi in Firenze. Florence, Lit. Salucci.

Dodd, T. (ed.), 1818. A Collection of Etchings, by that Inimitable Artist Stefanino Della Bella, Comprising in Number One Hundred and Eighty Pieces, and Consisting of Landscapes, Marine Views, Animals, Friezes, Ornaments, &c. to which is Prefixed a Biographical Memoir of the Artist. London, H.R. Young.

Favaro, A., 1912-13. Studi e ricerche per una iconografia galileiana. Atti dell'I.R. Istituto Veneto di Scienze, Lettere ed Arti, 72, 995–1051.

Galilei, G., 1632. Dialogo Sopra i due Massimi Sistemi del Mondo. Florence, Batista Landini.

Galilei, G., 1635. Dialogus de Systemate Mundi, Lat. trans.. Strasbourg, Elzevier and David Hauttus.

Gassendi, P., 1654. Nicolai Copernici Varmiensis Canonici. In *Tychonis Brahei Equitis Dani, Astronomorum Coryphaei, Vita*. Paris, Dupuis.

Hipler, F., 1875. Die Porträts des Nikolaus Kopernikus. In *Mittheilungen des Ermländischen Kunstvereins*, Volume 3, 73–161.

Inventario dei Mobili e Masserizie della Proprietà del Serenissimo Signor Principe Ferdinando di Gloriosa Ricordanza. Ritrovate Doppo la di Lui Morte nel Suo Appartamento nel Palazzo de' Pitti. 1713. Florence, Archivio di Stato, Guardaroba medicea, 1222.

Inventario Generale dei Dipinti di Magazzino della R. Galleria di Firenze, III categoria, 1880-1881. Florence, SSPSAEPM Fl/ Ufficio Ricerche.

Lerner, M.-P., Segonds, A.-Ph., and Verdet, J.-P. (eds.), 2015. Dossier iconographique. In Copernicus, N., *De Revolutionibus Orbium Coelestium / Des Révolutions des Orbes Célestes*, French trans., Volume 3. Paris, Les Belles Lettres. Pp. 709–730.

Metze, G., 2004a. *Die Entwicklung der Copernicus-Porträts vom 16. Jahrhundert bis zum 18. Jahrhundert.* PhD Thesis, Ludwig-Maximilians-Universität, München, Germany.

Metze, G., 2004b. Katalog der Copernicus-bildnisse. In Kühne, A., Kirschner, S. (eds.). *Biographia Copernicana: Die Copernicus-Biographien des 16. bis 18. Jahrhunderts. Texte und Übersetzungen.* Berlin, Akademie Verlag. Pp. 329–416.

Morelli, L., 2020. I ritratti di uomini illustri degli Uffizi dipinti da Carlo Ventura Sacconi, Giovanni Pietro Pollini e Giovanni Berti. In Betti, M., and Brovadan, C.P. (eds.). *Donum. Studi di Soria della Pittura, della Scultura e del Collezionismo a Firenze dal Cinquecento al Settecento*. Florence, Firenze University Press. Pp. 241–267.

Nelli, G.B., 1793. Vita e Commercio Letterario di Galileo Galilei Nobile e Patrizio Fiorentino. 2 volumes. Lausanne. Panofsky, E., 1956. More on Galileo and the arts. Isis, 47, 182–185.

Pantin, İ., 1993. Une Ecole d'Athènes des astronomes?: la représentation de l'astronome antique dans les frontispices de la Renaissance. In Baumgartner, E., and Harf-Lancner, L. (eds). *Images de l'Antiquité dans la Littérature Française: le Texte et son Illustration*. Paris, Presses de l'Ecole normale supérieure. Pp. 88–95.

Perelli, T., 1771. Prefazione in cui si prova che il Galileo fosse il primo ad applicare il pendolo all'orologio. *Giornale dei Letterati*, 2, 234–238.

Reicke, R., and Wichert, E., 1876. Das Original-Porträt. In *Altpreussische Monatsschrift neue Folge*. Könisberg, Ferd. Beyer's Verlag.

Scharf, G., 1858. On the Manchester Art-Treasures Exhibition, 1857. *Transactions of the Historic Society of Lancashire and Cheshire*, 10, 269–331.

Simari, M.M., and Barbolani Da Montauto, A. (eds.). 2023. *La Collezione Gioviana Degli Uffizi*. 2 volumes. Florence, Giunti.

Suter, R., 1952. Four Galileian inscriptions. Isis, 43, 231-236.

Tognoni, F., 2023. Vincenzo Viviani: un ritratto ritrovato. Galilaeana, 20, 169-188.

Viviani, V., 1655. Letter to S. Della Bella, dated 21 December. National Central Library of Florence (Ms. Gal. 157, c. 16r).

Zinner, E., 1988. Entstehung und Ausbreitung der Copernicanischen Lehre. München, C.H. Beck.

Zittel, C., 2014. Zeichenkunst und Wissenschaft: Stefano della Bellas Frontispize zu Werken Galileo Galileis. In von Albrecht, A., Cordibella, G., and Remmert, V.R. (eds.). *Tintenfass und Teleskop: Galileo Galilei im Schnittpunkt Wissenschaftliche, Literarischer und Visueller Kulturen im 17. Jahrhundert.* Berlin, De Gruyter. Pp. 369–403.

Zittel, C., 2015. Copernicus found a treasure the true value of which he did not know at all: the "Life of Copernicus" by Pierre Gassendi. In Neuber, W., Rahn, Th., and Zittel, C. (eds.). *The Making of Copernicus: Early Modern Transformations of the Scientist and his Science*. Leiden, Brill. Pp. 251–286.

Natacha Fabbri holds a PhD in Philosophy from the Scuola Normale Superiore in Pisa, an MA in Philosophy from



the University of Pisa, an MA in Piano Performance from the Conservatory of Music of Florence, and a National Habilitation as Associate Professor in History of Science. She is an Adjunct Professor of History of Science at the University of Siena and the Stanford University Bing Overseas Studies Program, and she is in charge of some research projects at the Museo Galileo, Institute and Museo for the History of Science of Florence. She is also Scientific Coordinator and Chief Editor of the area "Science" for the Digital Cultural Ecosystem of Tuscany. She was a Postdoctoral Fellow at the Universities of Pisa, Florence, Los Angeles, at the International Balzan Prize Foundation and at I Tatti – The Harvard Center for Italian Renaissance Studies.

Her research interests include Renaissance and modern philosophy and science, history of astronomy, the relationship between music and science, and gender in science. She designed and curated the exhibition *Women of the Sky: From Muses to Scientists* (Florence, National Library, 8 March–8 June 2024).

Natacha is the author of numerous articles on the history of science and of three monographs: Cosmologia e armonia in Kepler e Mersenne (Florence, Olschki, 2003); De l'utilité de l'harmonie. Filosofia, musica e scienza in Mersenne, Descartes e Galileo (Pisa, Edizioni della Normale, 2008); Profili di donne sulla Luna. Riflessi di filosofia, scienza e letteratura (Pisa, Edizioni della Normale, 2022). She acted as co-editor of the books Copernicus Banned. The Entangled Matter of the anti-Copernican Decree of 1616 (Florence, Olschki, 2018) and Vincenzo Galilei. The Renaissance Dialogue between Music and Science (Florence, Olschki, forthcoming).