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## Reflections of the Hidden Duchess and the Moon King: The Tabula Scalata and the Engaged Beholder in Sixteenth-Century Italy

### Abstract

A *tabula scalata* consists of triangular slats painted on two sides and attached to a panel, creating a “double image”. Sometimes, a mirror was placed at straight angles of the upper frame, allowing the beholder to see both painted sides at the same time – but only when standing in the right position. This contribution analyses how these scarcely studied devices relied on the beholder’s active participation to convey intertwined layers of artistic, scientific, political, and poetic meanings. To do so, it discusses two sixteenth-century case studies.

The first is a lost painting created in French royal court circles around 1550 and subsequently making its way to Rome as a diplomatic gift. The device combined a portrait of Henry II of France, a moon symbol, and a puzzle-ridden poem to convey interrelated political and poetic meanings. The second painting is Ludovico Buti’s *Portrait of Charles III of Lorraine and Christina de’ Medici*. It was commissioned by the Medici, and originally hung in a room filled with maps and geographical devices. This article considers three aspects central to the paintings’ reception: motion, sensory perception, and ideology.

Operating in an intellectual culture fuelled by curiosity and designed to evoke wonder, these devices aimed to prolong the beholders’ attention by establishing thresholds within the artistic experience. As such, they straddled the vague boundaries between painting, scientific instrument, and poem to stimulate the beholders’ senses and involve them in an interactive game of meaning-making.

**Keywords:** renaissance studies, visual puzzles, corporality, court culture, interaction, liminality

When Giorgio Vasari visited the palace of Cardinal Innocenzo Ciocchi del Monte (c. 1531–1577), he saw a painting that appeared to change as he moved, showing an image of the king of France slowly emerging out of that of the waxing moon. This “*quadro di pittura capricciosissimo*”, as Vasari called it, was a *tabula scalata* (ladder painting), a device both difficult to produce and puzzling to behold.<sup>1</sup> By painting triangular slats on two sides and attaching them to a flat panel, a double image was created. Beholders could switch between two images by moving their bodies or by rotating the painting. Like many other variations of anamorphic imagery, these paintings were popular throughout early modern Europe, and are exemplary of the sixteenth-century tendency to engage paintings kinetically and physically.<sup>2</sup> Within the elite culture of the sixteenth-century Italian *palazzo*, these interactions took on a distinctively social and intellectual character.<sup>3</sup> Designed to evoke wonder and part of a culture of curiosity, many paintings presented visual and textual enigmas to stimulate the beholder’s sensorium and activate both mind and body.<sup>4</sup>

Some *tabulae scalatae* had vertical slats and a tilted mirror mounted on the upper frame (Fig. 1). This enabled the spectator to see the two sides at the same time – but only when standing in the right position. By moving, beholders could make the mirror image emerge or disappear, prompting a layered artistic experience that went through consecutive phases. The devices thus had what John Shearman famously called a “slow fuse”, being “structurally complex in self-reference, and wide-ranging, memory-challenging in external reference and imitation”.<sup>5</sup>

1 Academic attention for the *tabula scalata* has been scarce, not in the least because just a few artifacts have survived. For exceptions, see A. de Rosa, “Jean François Nicéron: Perspective and artificial magic”, *FME Transaction*, 2017, 45, pp. 215–226; J. L. Hunt and J. Sharp, “The Mathematics of the Channel Anamorphosis”, *Journal of Mathematics and the Arts*, 2009, 3, no. 1., pp. 19–31; Y. Hersant, “Giochi di specchi: La macchina convertitrice di Ludovico Buti”, in: *Il ritratto*, ed. A. Castoldi, Milan, 2004, pp. 55–65B; M. Stafford and F. Terpak, *Devices of Wonders: From the world in a box to images on a screen*, Los Angeles, 2001, p. 29; and S. Zanieri, “Un gioco ottico di Ludovico Buti al Museo di Storia della Scienza a Firenze”, *Nuncius*, 2000, 15, no. 2, pp. 665–670.

2 For in-depth studies on the correlation between visual, corporal, and kinetic interaction in early modern art, see A. Beyer, G. Cassegrain eds., *Mouvement. Bewegung. Über die dynamischen Potenziale der Kunst*, Berlin, 2015; S. Blick and L. D. Gelfand eds., *Push Me, Pull You: Imaginative and Emotional Interaction in Late Medieval and Renaissance Art*, Leiden, Boston, 2011 (two volumes); D. Ganz, S. Neuner eds., *Mobile Eyes. Peripatetisches Sehen in den Bildkulturen der Vormoderne*, Munich, 2013; and S. Leyssen, P. Rathgeber eds., *Bilder animierter Bewegung/Images of Animate Movement*, Munich, 2013.

3 This contribution is part of a larger project on sixteenth-century paintings with mobile parts (e.g. doors, sliding covers, veils) that lured the spectator into a prolonged interaction that was both physical and intellectual.

4 C. Strunck, “*Concettismo* and the Aesthetics of Display: the Interior Decoration of Roman Galleries and *Quadriere*”, in: *Display of Art in the Roman Palace 1550–1750*, ed. G. Feigenbaum, Los Angeles, 2014, p. 219. For an overview of early modern curiosity, see B. M. Benedict, *Curiosity: A Cultural History of Early Modern Inquiry*, Chicago, London, 2001; and R. Evans, A. Marr eds., *Curiosity and Wonder from the Renaissance to the Enlightenment*, Aldershot, Burlington, VT, 2006.

5 J. Shearman, *Only Connect – Art and the Spectator in the Italian Renaissance*, Princeton, 1992, p. 259.



**Fig. 1.** Ignazio Danti, *Schematic representation of a tabula scalata depicting Gregory XIII.* From: I. Danti, *Le due regole della prospettiva pratica di M. Iacomo Barozzi da Vignola con i comitarij del R. P. M. Egnazio Danti dell'ordine de Predicatori matematico dello studio di Bologna*, Rome, 1583, p. 95

This article argues that the *tabula scalata* constructed and conveyed interrelated layers of artistic, poetic, and ideological meaning through movement, inviting the beholder to participate in an interactive process of meaning-making that involved the body as well as the mind. I focus on two *tabulae scalatae* with mirrors: a Medici commission in the Museo Galileo in Florence (Fig. 2), and the painting that once belonged to Ciocchi del Monte, but is now lost (Fig. 3). Both works are seminal; the former is, to the best of my knowledge, the only surviving early modern *tabula scalata* with a mirror, while contemporary writers considered the latter to be one



**Fig. 2.** Ludovico Buti, *Tabula Scalata* with Charles III of Lorraine and Christina de' Medici, 1593, oil on panel and paper, glass, 112 x 815 x 500 cm, Museo Galileo, Florence, inv. 3197 © Museo Galileo, Florence



**Fig. 3.** Possible reconstruction according to Vasari's description of: Unknown French artist, *Tabula Scalata* with Henry II of France, between 1547–1559, c. 150 cm in length © L. G. Modderkolk / C. Wijnands

of the first of its kind. This contribution gives a brief overview of early modern writings on the *tabula scalata* and then proceeds to consider the patronage and reception of the two case studies. The second half of this contribution examines three themes recurring in both devices: motion, multisensory perception, and ideology.

## The *Tabula Scalata* in the Sources

Vasari was not alone in his fascination for the *tabula scalata*.<sup>6</sup> In 1583, the Medici court cartographer and mathematician Ignazio Danti published his commentaries on Vignola's *Due Regole della Prospettiva Pratica*.<sup>7</sup> This book was the first to elaborate on the optical and technical foundations of the *tabula scalata*, providing detailed instructions on how to manufacture one, and mentioning several paintings Danti had seen or heard of.<sup>8</sup> These are the only two texts on *tabulae scalatae* contemporary to our two devices, and both will be discussed in more detail later. The *tabula scalata* saw renewed interest in the seventeenth century, and detailed instructions on how to make one can be found in Jean François Nicéron's influential optical treatise *La Perspective Curieuse* (1638).<sup>9</sup> Very similar instructions appear in Mario Bettini's mathematical encyclopaedia *Apiaria* (1642, Fig. 4.), and in Gaspar Schott's *Magia Universalis* (1674–1677), another work on optics and mathematics.<sup>10</sup> Their fellow Jesuit Athanasius Kircher has been credited with coining the term *tabula scalata*, but although he writes about the devices in his *Ars Magna Lucis et Umbrae* (1645–1646), he calls them *tabula scalaria*, which means exactly the same: ladder-painting.<sup>11</sup> Nevertheless, I keep the term *tabula scalata*, if only because it has become the standard nomenclature. All of these authors – except Vasari – include the devices in their works on optics and/or mathematics, and are primarily concerned with technical aspects. Therefore, they teach us little of how the people who interacted with these works perceived them. This remarkable literary reception could suggest that the *tabula scalata* was solely seen as an optical game, but closer inspection of the two case studies will reveal that, at least in the sixteenth century, they carried a myriad of artistic, political, philosophical, and poetic connotations as well.

6 G. Vasari, *Le vite de' più eccellenti pittori, scultori, e architettori*, 1568, ed. G. Milanesi, Florence, 1878–1885, vol. 7, pp. 131–133.

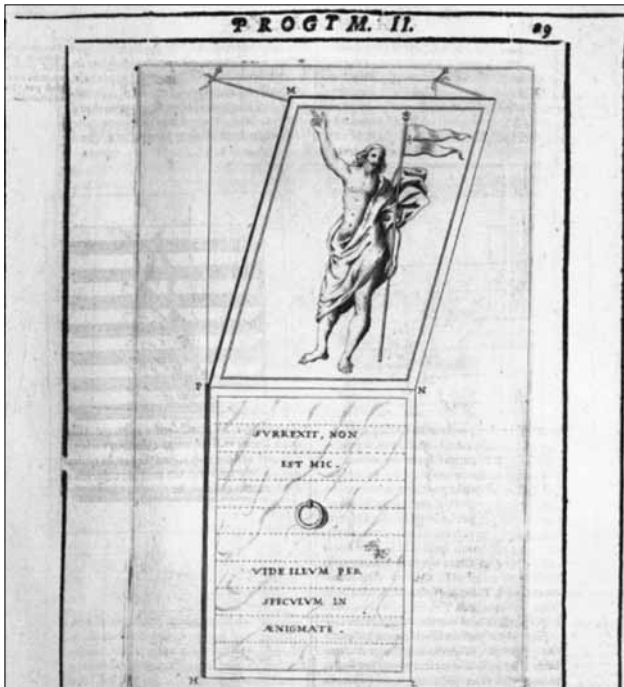
7 For more information on this edition, see F. Fiorani, “Danti Edits Vignola: The Formation of a Modern Classic on Perspective”, in: *The Treatise on Perspective: Published and Unpublished*, ed. L. Massey, New Haven, London, 2003, pp. 127–160.

8 I. Danti, G. B. Vignola, *Le due regole della prospettiva pratica di M. Iacomo Barozzi da Vignola con i comitarii del R. P. M. Ignazio Danti dell'ordine de Predicatori matematico dello studio di Bologna*, Rome, 1583, pp. 94–96.

9 J. F. Nicéron, *La perspective curieuse*, Paris, 1638, pp. 78–79.

10 M. Bettini, *Apiaria universae philosophiae mathematicae*, Bologna, 1642, vol. 1, pp. 28–30; and G. Schott, *Magia universalis natura et artis*, Bamberg, 1674–1677, vol. 1, pp. 143–153. For an overview of seventeenth-century Jesuit endeavours in natural sciences, see M. A. Waddell, *Jesuit Science and the End of Nature's Secrets*, Farnham, Burlington, 2015.

11 A. Kircher, *Ars Magna Lucis et Umbrae*, Rome, 1645–1646, pp. 903–904.



**Fig. 4.** Lost or fictitious *Tabula scalata* with *Resurrection*. From: M. Bettini, *Apiaria universae philosophiae mathematicae*, Bologna, 1642, vol. 1, part 5, p. 29

## The Medici Device

An entry in the *Guardaroba Medicea* dated February 27, 1593 records a payment to the Florentine painter Ludovico Buti (c. 1560 – after 1611) for “having painted in oil the head of Grand Duchess Christina Lorena copied from the gallery on the heads of 37 wooden slats to attach them to a panel of  $1\frac{1}{2}$  braccia in total length and reduce it to a width of  $1\frac{1}{8}$  in width, and for the head of the duke of Lorraine painted in oil on paper and attached to the aforementioned slats, which are as long and wide as mentioned before, one can be seen with the eye up front, the grand duchess by means of a sphere [mirror] which is above the panel of our wood: all of this prepared and sent to Giaches [Jacques Bijlevelt], who had the aforementioned object placed in a room in service of His Serene Highness [Grand Duke Ferdinand I], the timber and the slats were made in Cristoforo Tedesco’s workshop”.<sup>12</sup>

<sup>12</sup> Archivio di Stato di Firenze, *Guardaroba Medicea* 169, c. 188v. Original text: “aver ritratto a olio la testa della Granduchessa Cristina Lorena copiata dalla galleria sulla testata di 37 regoli di legname per attacharli su’ un quadro di lunghezza braccia  $1\frac{1}{2}$  in tutto e ridurlo a larghezza braccia  $1\frac{1}{8}$  e per la testa del Duca di Lorena dipinta a olio sul foglio e attachata in faccia a detti regoli lunga e larga come il suddetto, una si vede con l’occhio in faccia, la Granduchessa per via di sfera che sta sopra detto quadro, nostro legname: fatto e consegnato tutto a Giaches, fatto il detto attachare in una camera per servizio di S. A. S., qual legname e regoli fatti in bottega di Cristoforo Tedesco”.

As we can read, the painting now in the Museo Galileo is a double portrait of Grand Duchess Christina (1565–1636) and her father, Duke Charles III of Lorraine (1543–1608). The portrait of the daughter is only visible in the mirror attached to the upper frame.<sup>13</sup> Still seen as a luxury product in the late sixteenth-century, the plane glass mirror performs a seminal task in the meaning-making of our devices. In *cinquecento* paradigm, the mirror was charged with revelatory potency that extended beyond its practical function.<sup>14</sup> Brunelleschi famously used a mirror in his experiments to codify linear perspective. Alberti and Leonardo hailed the mirror as the painter's master, but were at the same time aware that it reflected illusions as well as truth.<sup>15</sup> In our devices the mirror appears in a dialectical relation with painting, inviting the beholder to compare the reflected image with the painted one. However, the tilted mirror does not reflect the image in front of the beholder, but a different one – one that is furthermore *only* visible through the mirror. Rather than transforming from one fixed state to another, the two images alternate when the beholder moves to a different position. Buti's looking glass thus facilitates a chameleonic shape-shifting between father and daughter, painted and reflected image, and illusion and truth.<sup>16</sup>

The Medici document attests that Jacques Bijlevelt, the director of the *galleria* in the Uffizi, had the device placed in an unspecified room. A 1670 travel report by the English priest Richard Lassels confirms that it was displayed in a (now empty) niche above the door of the *stanza delle carte geografiche*.<sup>17</sup> This room, refurbished by Ferdinand in 1589, mostly contained geographical instruments and its walls were decorated by Buti with painted maps. Lassels writes that the room contained two great globes, which must have been Antonio Santucci's armillary sphere (1588–1593), and a terrestrial globe designed by the aforementioned court cartographer Ignazio

13 Y. Hersant, op. cit., p. 65. Hersant reads the device as a machine turning an *eikon* (Charles) into an *eidolon* (Christina). Although his interpretation (or as he himself humbly calls it "*la mia fantasticheria*") is interesting, it is not supported by argumentation.

14 S. Melchior-Bonnet, *The Mirror: A History*, New York, London, 2001, p. 101.

15 Ibid, pp. 128–129.

16 P. Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy*, Berkeley, Los Angeles, London, 1994, pp. 299–301. Findlen notes the strong correlations between mirrors and chameleons in early modern collections, reading both as testaments to the shifting features of nature and the adaptability of human nature.

17 R. Lassels, *The Voyage of Italy*, Paris, 1670, vol. 1, pp. 168–169. "In the second cabinet I saw two great globes, which were made in this room, being too great to be ever carried out, or brought into it by the door. I saw also here a polished table of polished stones representing a town in Bohemia, with divers pictures of men, horses, and landskips: where there is a tree represented most naturally, because it is represented by the very wood of a tree petrified into stone, and looking like wood as it was; and shining like polish'd stone, as it now is. The statues, or busto's of three or four of the Great Dukes, in porphyry. A curious looking glass over the inside of the door, which placed directly over the picture of a man, contracts into the picture of a woman (that means wife) which you see plainly in it: drawing thus Eve out of Adam again by a curious reflexion."

Danti, which are known to have been displayed in the *stanza*.<sup>18</sup> As Lassels notes, the globes were too large to carry through the door (Santucci's may have been made in the room, while Danti's globe could have been transferred from the *guardaroba nuova* before Ferdinando ordered the former terrace to be walled up in 1589), making it unlikely that the globes were located in a different room before his 1670 publication. Other objects Lassels saw in the room were a table in *pietre dure*, and "three or four" porphyry busts of the grand dukes. Lastly, he describes "A curious looking glass over the inside of the door, which placed directly over the picture of a man, contracts into the picture of a woman (that means wife) which you see plainly in it: drawing thus Eve out of Adam again by a curious reflexion."<sup>19</sup> Although Lassels is clearly unaware whose portraits he was looking at, his description of the *tabula scalata* as a man and a woman make it extremely likely that he saw the portraits of Charles of Lorraine and his daughter above the door, as there are no known records of other Medici *tabulae scalatae* depicting a man and a woman. Its position above the only door in the room – a site of connection, separation, and transformation – underlines the painting's importance as a threshold marker.<sup>20</sup> Staging metamorphosis in a liminal zone 'betwixt and between', Buti's painting was well-suited to the space it occupied, captivating the imagination of visitors like Lassels.<sup>21</sup>

Its position in the Room of maps, surrounded by instruments designed by the Medici's leading scientists, also placed Buti's portrait at the core of a scientific discourse, and we know from Galileo's often-cited letter to Christina that the grand duchess was interested in astronomy.<sup>22</sup> In fact, the combination of artworks and scientific instruments was nothing unheard of in sixteenth-century collections in which the realms of knowledge and art often overlapped and served similar goals: the cultivation of curiosity and wonder.<sup>23</sup> Like the *tabula scalata*, the detailed maps and the three-dimensional globe and armillary sphere sent the engaged spectator moving across the room to study their different aspects more closely, while the porphyry busts and *pietre dure* table must have enticed wonder by virtue of their costly

18 F. Fioriani, *The Marvel of Maps: Art, Cartography and Politics in Renaissance Italy*, New Haven, London, 2005, pp. 134–135; and D. Heikamp, "L'antica sistemazione degli strumenti scientifici nelle collezioni Fiorentine", *Antichità Viva*, 1970, 9, no. 6, p. 5. See <https://brunelleschi.imss.fi.it/mediciscienze/imed.asp?c=36200> [accessed 3 January 2020] for a digital reconstruction of the room made by the Museo Galileo.

19 R. Lassels, op. cit., p. 169.

20 For a liminal reading of sixteenth-century paintings on and near doors, see S. Rutherglen, "Painting at the Threshold: Pictures for Doors in Renaissance Venice", *The Art Bulletin*, 2016, 98, no. 4, pp. 438–465.

21 For other examples of how the notion of liminality is employed to understand the reception of mobile early modern paintings, see L. Jacobs, *Opening Doors: Reinterpreting the Early Netherlandish Triptych*, University Park, 2012, and eadem, *Thresholds and Boundaries: Liminality in Netherlandish Art (1385–1530)*, London–New York, 2018.

22 Galileo, *Letter to the Grand Duchess Christina* (1615).

23 C. Volpi: "The Display of Knowledge: *Studioli*, *Camerini*, and Libraries", in: *Display of Art in the Roman Palace 1550–1750*, ed. G. Feigenbaum, Los Angeles, 2014, p. 257.



materials.<sup>24</sup> The Medici Room of Maps should thus be seen as part of a tradition of curiosity that had its roots in the fifteenth-century *studiolo*, a space aimed towards evoking wonder and visualising knowledge.<sup>25</sup> Like *tabulae scalatae*, works in the *studiolo* were often multivalent and intertextual, engaging with other objects and presenting visual puzzles to its beholders.<sup>26</sup> The most eccentric works, painted on unusual supports or depicting arcane subjects, were often displayed in the *studiolo*<sup>27</sup>, and anamorphoses like Buti's painting were also common, as can most famously be seen in the woodwork of Federico da Montefeltro's *studiolo* in Urbino.<sup>28</sup> The Medici's enthusiastic participation in these practices of collecting and displaying is demonstrated by Cosimo I's *guardaroba* and Francesco's *studiolo* in the Palazzo Vecchio, and Ferdinand's display of natural and man-made wonders in the Uffizi *tribuna*, armoury, and map room.<sup>29</sup>

Both the *tabula scalata* and the room were also part of a political discourse. The maps Buti painted on the walls depicted the territories ruled by the grand duke: Florence, Siena (conquered by Ferdinand's father Cosimo in 1555), and the island of Elba. The Uffizi room can be seen as heir to a tradition of map cycles that included projects like Cosimo's *guardaroba* (commissioned in 1563) and Pope Gregory XIII's *galleria delle carte geografiche* (1580–1583). These cycles were testament to a widely shared curiosity for (recently explored) foreign lands, but were also politically charged.<sup>30</sup> As Mark Rosen notes, maps of local territories in particular had “an explicit element of control”, and served to showcase the ruler's power of the depicted lands.<sup>31</sup> The material presence of the grand dukes in the form of the porphyry busts described by Lassels must only have underlined this message, although these sculptures are probably the busts Tommaso Fedeli sculpted in the early seventeenth

24 At the same time, the table employed a polyfocality of vision similar to the *tabula scalata*, maps, and instruments. Paola Squellati Brizio argues that painting on stone requires a double exercise of sight in which the artistic representation and the natural forms of the stone overlap, and Lassels's marvel at the inclusion of a fossilised piece of wood to represent a tree is testament to this dichotomy. P. Squellati Brizio, “Natura Sollecitata”, in: *Bizzarrie di pietre dipinte dalle collezioni dei Medici*, eds. M. Chiarini, C. Acidini Luchinat, Milan, 2000, pp. 32–38.

25 R. Kirkbride, *Architecture and Memory. The Renaissance Studioli of Federico de Montefeltro*, New York, 2008, 1, 4–5. <http://www.gutenberg-e.org/kirkbride/index.html> (accessed 6 January 2020). For more information on Renaissance *studioli*, see L. Clark, *Collecting Art in the Italian Renaissance Court: Objects and Exchanges*, Cambridge, 2018; and C. Volpi, op. cit., pp. 250–263.

26 Kirkbride, op. cit., 4, 14.

27 Volpi, op. cit., p. 257.

28 See Kirkbride, op. cit. for more information on the Montefeltro *studioli*.

29 For an in-depth discussion of the Medici collection of curiosities, see A. Turpin, “The New World collections of Duke Cosimo I de' Medici and their role in the creation of a *Kunst- and Wunderkammer* in the Palazzo Vecchio”, in: R. Evans, A. Marr, op. cit., pp. 63–86.

30 For more information on early modern painted map cycles, see M. Rosen, *The Mapping of Power in Renaissance Italy: Painted Cartographic Cycles in Social and Intellectual Context*, Cambridge, 2015; and F. Fiorani, *The Marvel of Maps: Art, Cartography and Politics in Renaissance Italy*, New Haven, London, 2005.

31 M. Rosen, op. cit., p. 5.

century, and were therefore not part of the original decorative programme.<sup>32</sup> We know from contemporary accounts such as Francesco Bocchi's 1591 *Bellezze della Città di Fiorenza* that the Medici galleries were open to (upper-class) public, at least on request, and Ferdinand's political propaganda must therefore have impressed Florentine citizens, foreign dignitaries, and well-to-do travellers alike.<sup>33</sup> As shall be discussed in detail later on, Buti's portrait of the grand duchess and her father harnessed the forces of wonder and curiosity for similar political purposes as his maps, and was thus fully integrated in the room's visual discourse.

It is very likely that Buti relied on Ignazio Danti's instructions to produce a *tabula scalata*.<sup>34</sup> As mentioned earlier, the cartographer described the best method of making one in his commentaries on *Vignola's Due Regole*. Although Danti himself had died six years before Buti's payment record, there are several reasons to assume that Buti had known Danti and was familiar with his work. They were both affiliated to the Medici court and Buti had previously worked on decorations of the convent of Santa Maria Novella, where Danti lived.<sup>35</sup> Additionally, Buti collaborated with Stefano Buonsignori, Danti's successor as court cartographer, to paint the maps in the *stanza*, and also must have known Ignazio's brother Vincenzo, who taught at the Florentine *Accademia*.<sup>36</sup> Yet, Buti did not follow Danti's instructions to the letter. As the "mirror image" was usually painted first, the other side of the triangular slats had to be painted when the latter were already attached to the panel. Aware of this inconvenience, Danti recommends decorating this side with an inscription rather than a portrait.<sup>37</sup> Later authors offered the same advice, and Buti seems to have been the only painter not to have followed it. His solution for painting two portraits was deceptively simple. As mentioned in the payment record, he painted Christina's portrait directly on the slats, and then did Charles's on paper, cut the sheet in 37 strips, and glued the paper strips to the unpainted side of the wooden triangles.

Danti mentions a *tabula scalata* depicting Cosimo I de' Medici, which – if it was (still) in Florence – must have served as Buti's prototype.<sup>38</sup> Neither Cosimo's nor Christina's painting were the first of their kind, however. In fact, Danti writes

32 Fedeli's porphyry busts of Ferdinand I (inv. 1914, n. 48) and Cosimo II (inv. 1914, n. 47) are still in the Uffizi. The latter had been paid for in 1624.

33 F. Bocchi, *Le Bellezze della città di Fiorenza*, Florence, 1591, trans. by T. Frangenberg, R. Williams, Turnhout, 2006, p. 71.

34 Zanieri, op. cit., p. 668.

35 Ibid., p. 670.

36 For more information on the network of the Danti brothers, see A. Proctor, "A Family Network: The Danti Brothers at Work for the Medici in Late Renaissance Florence", in: *Encountering the Renaissance: Celebrating Gary M. Radke and 50 Years of the Syracuse University Graduate Program in Renaissance Art*, eds. M. Bourne, A. V. Coonin, Ramsey, 2016, pp. 41–50

37 Danti, op. cit., p. 55. "d veramente in esse faccie GHI, si scriveranno le lettere in lode di colui, il cui ritratto si mira nello specchio, si come si vede fatto nel prenominato ritratto del Re Enrico, il che è molto piu à proposito di fare, che il dipignerui qual si voglia altra soca: atteso che le righe che sono fra una tavolette & l'altra, sempre si veggone, & meno disdicono tra un verso di lettere, & l'altro, che non fanno nell'attraversare l'altre pitture."

38 S. Zanieri, op. cit., p. 669.

that the first devices known in Italy were two French paintings depicting Francis I and his son Henry II, respectively.<sup>39</sup> These two artefacts were doubtlessly seminal works, and although little is known about the former, Vasari describes the latter in great detail.

## The Valois Device

Both Danti and Vasari elaborate on the provenance of the French device: King Henry II (1519–1559) presented it as a gift to Cardinal Carlo Carafa (1517–1561), who later donated the painting to his fellow cardinal Innocenzo Ciochi del Monte. The latter had gained notoriety as Pope Julius III's lover and prominence as his cardinal-nephew.<sup>40</sup> If Vasari and Danti are to be taken on their word, the painting must have been executed between Henry's ascension to the French throne in 1547 and his death in 1559.

Vasari underlines that the author of the device is unknown, but as Del Monte's *guardaroba* also contained several paintings by Taddeo Zuccari, Vasari includes the device in Zuccari's *vita*.<sup>41</sup> Although we know far less about this *guardaroba* than about the Medici gallery, it must have functioned in similar contexts of wonder and curiosity, containing, in Vasari's words, "a vast number of things ancient and modern, all truly of the rarest [...]"<sup>42</sup> The author was so impressed that he includes a lengthy description of the *tabula scalata*. He writes that his attention was drawn towards the device by his "amicissimo" Silvano Razzi (1527–1611), but his description is so detailed that it suggests that the writer has seen the painting with his own eyes. Vasari's description goes as follows:

In this picture, which is about two *braccia* and a half in height, there is nothing to be seen by him who looks at it from the ordinary point of view, from the front, save some letters on a flesh-coloured ground, and in the centre the moon, which goes gradually increasing or diminishing according to the lines of the writing. And yet, if you go below the picture and look in a sphere or mirror that is placed over the picture in the manner of a little baldachin, you see in that mirror, which receives the image from the picture, a most lifelike portrait in painting of King Henry II of France, somewhat larger than life, with these words about it – HENRY II, ROY DE FRANCE. [...] it is painted on twenty-eight ridges, too low to be perceived, which are between the lines of the words given below [...].<sup>43</sup>

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39 J. Danti, op. cit., p. 55.

40 G. Vasari, op. cit., p. 132, and Danti, op. cit., p. 55. The Valois provenance brings this device tantalizingly close to the Medici painting. Christina of Lorraine was the granddaughter of Catherine de' Medici, wife of Henry II, and was raised at the Queen's court. If the *tabula scalata* was indeed a French invention, it is likely that Christina was familiar with it before moving to Florence.

41 G. Vasari, op. cit., p. 132.

42 Translation by G. du C. de Vere, London, 1912–1915, v. 8, p. 259. Original text in: G. Vasari, op. cit., p. 131: "una infinità di cose antiche e moderne, veramente rarissime [...]"

43 Translation by G. du C. de Vere, op. cit., pp. 259–260. Original text in: G. Vasari, op. cit., p. 132. "In questo quadro, dico, che è alto circa due braccia e mezzo, non si vede, da chi lo guarda in prospet-

Vasari's account allows for the following reconstruction: a *tabula scalata* of approximately 150 cm in length, consisting of 28 triangular slats, with a mirror attached to the upper part of the frame "like a baldachin". Like the Florentine device, it was displayed in a high position. The normally visible side showed nothing but a waxing moon against a flesh-coloured ground, and a Latin poem.<sup>44</sup> When looking in the mirror from below, one would see in its reflection the portrait of Henry II of France along with an inscription identifying him. Figure 3 is my proposal for a schematic visual reconstruction, although it should be noted that this reconstruction does not claim to be definitive and should mostly be seen as one possible way the device could have looked like.

Vasari took special care to record the exact structure of the inscription (Fig. 5). Translated in English, it reads:

Hey you, what do you see? Nothing, I think, except the waxing moon that is placed outside the area. As the moon grows steadily, it invites us, you as well as me, to grow in one hope, one faith and one love, enlightened by the word of God, until the light shines ever so bright in us thanks to his grace, he who is the eternal giver of light: if us mortals hope to receive light in him and from him, we shall not be hoping in vain.<sup>45</sup>

The poem is a triple acrostic, which means that the first, middle, and last letters of each verse form a sentence: HENRICUS VALEIUS DEI GRATIA GALLORUM REX INVICTISSIMUS ("Henry Valois, by the grace of God, most invincible king of the French"). This acrostic further activates spectators to interact with the painting, as only an engaged beholder is able to deduce the king's "presence" by solving the textual puzzle before even seeing the portrait reflected in the mirror. As noted by Leah Clark, "the relationship between images and words was a fraught one within both humanist and religious circles [...]", and this *paragone* was debated by early modern writers, painters, and viewers.<sup>46</sup> Likewise, *studioli* were filled with objects combining image with text, like illuminated books, and double-sided medals or coins (all of which have a distinctively sequenced narrative structure), challenging the engaged beholder to decipher meaning from multiple sources.<sup>47</sup>

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*tiva et alla sua veduta ordinaria, altro che alcune lettere in campo incarnato, e nel mezzo la luna, che secondo le righe dello scritto va di mano in mano crescendo e diminuendo, e nondimeno, andando sotto il quadro e guardando in una sfera, o vero specchio, che sta sopra il quadro a uso d'un picciol baldacchino, si vede di pittura e naturalissimo in detto specchio, che lo riceve dal quadro, il ritratto del re Enrico Secondo di Francia, alquanto maggiore del naturale, con queste lettere intorno: HENRY II ROY DE FRANCE. [...] è dipinto sopra ventotto gradini sottilissimi, che non si veggiono, i quali sono fra riga e riga dell'infrascritte parole [...]*".

44 As the poem cited by Vasari consists of 14 verses, and the painting was made up of 28 slats, the inscription must have filled half of the pictorial field. The other half (either above or below the poem) must have been occupied by the moon symbol.

45 G. Vasari, op. cit., p. 133. Translation by Tommaso Suaria.

46 L. Clark, op. cit., p. 14.

47 See C. Nygren: "Titian's Christ with the Coin: Recovering the Spiritual Currency of Numismatics in Renaissance Ferrara", *Renaissance Quarterly* 69, 2016, 2, pp. 449–488 for an elaboration on the engagement with coins and medals in the *studiolo* of Alfonso d'Este in Ferrara.

H	E	U	S	T	U	Q	U	I	D	V	I	D	E	S	N	I	L	U	T	R	E	O	R	
N	I	S	I	L	U	N	A	M	C	R	E	S	C	E	N	T	E	M	E	T	E			
R	E	G	I	O	N	E			P	O	S	I	T	A	M	Q	U	A	E		E	X		
I	N	T	E	R	V	A	L	L	O					G	R	A	D	A	T	I	M	U	T	
C	R	E	S	C	I	T			N	O	S			A	D	M	O	N	E	T	U	T	I	
U	N	A	S	P	E	F	I	D	E	E	T			C	H	A	R	I	T	A	T	E	T	
S	I	M	U	L	E	T			E	G	O			I	L	L	U	M	I	N	A	T	I	
V	E	R	B	O	D	E	I		C	R	E	S	C	A	M	U	S				D	O	N	
A	B								E	I	U	S	D	E	M		G	R	A	T	I	A	F	
L	U	X							I	N				N	O	B	I	S		A	M	P	L	
E	S	T							A	E	T	E	R	N	U	S		I	L	L	E	D	A	
I	N	Q	U	O	E	T			A	Q	U	O		M	O	R	T	A	L	E	S			
V	E	R	A	M					L	U	C	E	M		R	E	C	I	P	E	R	E	S	
S	P	E	R	A	M	U	S							I	N	V	A	N	U	M	N	O		

**Fig. 5.** Unknown author, *Acrostic poem on Cardinal Ciochi Del Monte's tabula scalata as recorded by Vasari, between 1547–1559.* From: G. Vasari, *Le vite de' più eccellenti pittori, scultori, e architettori*, 1568, ed. G. Milanesi, Florence, 1878–1885, vol. 7, p. 131

If painting was like “mute poetry”, as was often noted in the Renaissance, the acrostic makes this particular device more talkative than most paintings. The inscription gives meaning to the painted image and is an integral part of the theological and political allegory it constitutes. Mankind is likened to the moon, which gradually increases and diminishes under the light of God’s love (the sun). As Henry II is hiding both literary and figuratively between the lines, and the moon is mentioned to be “growing steadily” we are left to assume that the king, above all, is basking in the light of divine love. The poem is therefore first and foremost a way of legitimising power. Yet, the moon does not only refer to the king, but also to his mistress. Diane de Poitiers (1499–1566) played a central role in Henry’s artistic programmes, often eclipsing the queen herself, and was celebrated in poetry, prose, sculpture, painting, and tapestries.<sup>48</sup> In many of these works, she was likened to the moon goddess Diana, and this connection became so strong that she adopted the crescent moon as her personal symbol.<sup>49</sup> The moon makes the painting something like an allegorical portrait, spreading the device’s already stretched semantic fabric even further. Diane is invisible, but is referred to through obvious symbols. Henry is visible through his portrait, but not at first sight, and his presence is initially obscured by Diane’s visual and textual symbols.<sup>50</sup> The analogy between the king’s lover and the moon are exemplary of the cosmic motives prevalent in sixteenth-century French

48 K. Crawford, *The Sexual Culture of the French Renaissance*, Cambridge, 2010, p. 207.

49 *Ibid.*, pp. 207–209.

50 The question must be asked whether the typically French context of cosmic poetry and its references to Diane de Poitiers were understood by a Roman audience. However, as Diane was such an influential figure in French culture, I think it is safe to assume that these references were not lost on Del Monte and his high-brow guests.

love poetry.<sup>51</sup> In these poems, a recurring motif was the comparison between the lady and the changeable yet beautiful moon. In Maurice Scève's influential *Délie* (1544), for example, the poet constantly likens his lady to the moon. As such, she is less divine than the usually employed trope of the radiant sun, and yet provides access to it.<sup>52</sup> The anonymous creator of Henry's device responded and contributed to these topoi, integrating the work in textual as well as visual discourses.

## Moving bodies, mobile images

Clearly, the *tabula scalata* requires a more engaged beholder than most paintings to transfer meaning. The remainder of this article analyses three facets of the *tabula scalata's* meaning-making: motion, multisensory perception, and ideology.

Through movement, the devices' beholder could alternate between images. However, Vasari stresses that there is only one "perfect" viewpoint. He also writes that it was possible to take the panel down from its high position, turn it around, and look at the side normally seen in the mirror. However, as the author stresses, this will result in an upside-down image, and render the other side invisible.<sup>53</sup> The latter mode of viewing was evidently seen as undesirable. *Cinquecento* thought envisioned a stable world order, in which every component had its fixed place. This belief, as Vincent Robert-Nicoud recently argued, made the *mundus inversus* a powerful metaphor, as "the topos of the world upside-down often highlights transgressions or anomalies by comparing them with the proper order of the world. In doing so, it swaps elements within the chain of beings but without reference to the other elements."<sup>54</sup> Small wonder that Vasari insists that there is only one correct way of viewing the devices. Yet, the fact that the *tabula scalata* at least offers the beholder the opportunity to invert the rulers' portrait – and thus the cosmic order of things – bestows a significant degree of agency on the viewer. While the right movements confirmed the beholder's and the depicted rulers' proper place in the cosmos, the moving beholder could just as well compromise this cosmic order by making the "wrong" movements.<sup>55</sup>

This intricate stop-motion game was therefore vital for the artistic experience, underlining that physical movement and the beholder's agency were more impor-

51 K. Banks, *Cosmos and Image in the Renaissance: French Love Lyric and Natural-Philosophical Poetry*, London, 2008, p. 1.

52 Ibid, p. 184.

53 G. Vasari, op. cit., p. 132.

54 V. Robert-Nicoud, *The World Upside-Down in 16<sup>th</sup>-Century French Literature and Visual Culture*, Leiden, 2018, p. 8.

55 This element of play and the intertwinement of spectator and artwork is central to Mikhail Bakhtin's notion of the *carnavalesque* (on which Robert-Nicoud builds) as a recurrent subversive theme in early modern art and literature. Carnival, Bakhtin maintains, "does not acknowledge any distinction between actors and spectators". M. Bakhtin, *Rabelais and his World*, trans. H. Iwolsky, Bloomington, 1984, p. 7.

tant for the *cinquecento* reception of painting than is often reckoned. We need only think of the many “mobile” or polyfrontal types of painting that flourished in the curiosity-driven *studiolo* culture of Renaissance Italy, like diptychs, triptychs, paintings with sliding covers, and *bifronti* painted on two sides. These objects all featured hidden images that the curious beholder could only unveil by physical manipulation through opening, closing, rotating, and so on.<sup>56</sup> Even in the perception of monofrontal paintings that are now seen as static, the beholder’s motion and touch was often considered vital. Paintings were stored away and taken out of bags, cupboards and boxes, or covered by curtains.<sup>57</sup> Even if this was not the case, many paintings demanded motion through their stylistic or material qualities. One only has to think of Vasari’s often-cited remark that Titian’s free handling of his paint resulted in paintings with two distinctive viewpoints: up close, where all one would see were blobs of paint, and from a distance, where the Venetian’s bold strokes blended into an intelligible *storia*.<sup>58</sup> Likewise, the devices in Ferdinand’s *stanza* and Del Monte’s *guardaroba* only betrayed their secrets over time, and if the moving body was the engine driving this sequenced artistic experience, curiosity was its fuel.

## Sensory hierarchy

Embodying sixteenth-century notions of sensory perception, the *tabula scalata* relied on a collaboration between the beholder’s mental and sensory capacities to transfer meaning.<sup>59</sup> Following Aristotle, Galen, and the scholastics, *cinquecento* thinkers like Leonardo da Vinci believed in the existence of a *sensus communis*; a place within the

56 L. Clark, op. cit., pp. 123–127; See also D. Ganz, M. Rimmel eds., *Klappereffekte: Faltbare Bildträger in der Vormoderne*, Berlin, 2016.

57 See A. W. B. Randolph, *Touching Objects: Intimate Experiences of Italian Fifteenth-century Art*, New Haven, London, 2014 for an in-depth discussion of these kinds of interactions with paintings, chests, trays, and more.

58 G. Vasari, op. cit., VI, p. 166.

59 The “sensory turn” in the humanities has encouraged scholars to adopt a cultural approach to study the sensorium and a sensory approach to study culture. The work of David Howes and Constance Classen in particular has set the tone for later researchers (see, for example: C. Classen, *Worlds of Sense: Exploring the Senses in History and Across Cultures*, London, 1993; C. Classen, D. Howes and A. Synnott, *Aroma: The Cultural History of Smell*, London, 1994; C. Classen, *The Deepest Sense: A Cultural History of Touch*, Champaign, 2012; D. Howes, *The Varieties of Sensory Experience*, Toronto, 1991; and D. Howes, *Empire of the Senses: The Sensual Culture Reader*, Oxford, 2005). For discussions on the entanglement of the senses in late medieval and early modern art and culture, see F. Quiviger, *The Sensory World of Italian Renaissance Art*, London, 2010; A. E. Sanger, S. T. K. Walker eds., *Sense and the Senses in Early Modern Art and Cultural Practice*, Farnham, Burlington, 2012; T. L. Hedrick, N. Ergin, “A Shared Culture of Heavenly Fragrance: A Comparison of Late Byzantine and Ottoman Incense Burners and Censing Practices in Religious Contexts”, *Dunbarton Oaks Papers*, 2015, 69, pp. 331–354; Exh. Cat. Baltimore 2016, *A Feast for the Senses: Art and Experience in Medieval Europe*, ed. M. Bagnoli, New Haven, London, 2016; and S. Blick, L. Gelfand, op. cit.

brain that not only housed the soul, but also functioned as convergence point of the five classical senses.<sup>60</sup> While the senses were interpreted as distinctive yet cooperating methods to perceive reality, a pervasive tradition presupposed a hierarchy within the sensorium. Sight enjoyed the highest theological and epistemological value, and was especially lauded for its ability to perceive the truth. Hearing came next, smell hovered somewhere in the middle, while taste and especially touch were seen as base senses, involving the body rather than the intellect.<sup>61</sup> This distinction is illustrated by Vasari's account:

You can see the same [Henry's] portrait by lowering the picture, placing your brow on the upper part of the frame, and looking down; but it is true that whoever looks at it in that manner, sees it turned the other way from what it is in the mirror. That portrait, I say, cannot be seen save by looking at it as described above.<sup>62</sup>

Vasari maintains that the *only* correct way of observing the device is by *looking* at through the mirror. However, despite his insistence on the primacy of sight, it seems that Vasari, too, lowered the painting, and turned it around (ergo: touched it) to understand how the device "worked".<sup>63</sup> This physical interaction corresponds to a trend in early modern art, which often contained references to the operations of senses other than sight, and moreover relied on a cooperation between the senses for its reception.<sup>64</sup> Indeed, sight may have been the most noble of the senses, but was not necessarily seen as the most trustworthy.<sup>65</sup> Thus, in our devices at least, touch was something of a last resort to know the truth, an effective yet morally undesirable instrument of verification.

While Renaissance Aristotelians clung to Thomas Aquinas's famous dictum that "there is nothing in the mind that was not previously in the senses", Neoplatonists and Augustinians held that, at least when it comes to higher truths, the intellect was more reliable than the sensorium.<sup>66</sup> Marsilio Ficino, who was widely read in Medici Florence as well as Valois France, argued that reason was the sixth and highest sense, as it was unhindered by spatial or temporal boundaries.<sup>67</sup> The epistemological hierarchy established by the Valois painting adheres to this notion.

60 F. Quiviger, op. cit., p. 15.

61 Idem, p. 8; A. Sanger, S. Walker, op. cit., pp. 6–7; S. Blick and L. Gelfand, op. cit., p. xli.

62 G. Vasari, op. cit., p. 132. "*Il medesimo ritratto si vede, calando il quadro abbasso e posta la fronte in sulla cornice di sopra, guardando in giù, ma è ben vero che chi lo mira a questo modo lo vede volto a contrario di quello che è nello specchio, il quale ritratto, dico, non si vede, se non mirandolo come di sopra.*" . Translation by G. du C. de Vere, op. cit., p. 260.

63 It should be noted that the ridges were probably very hard to discern in the devices' high position.

64 A. Sanger, S. Walker, op. cit., p. 1.

65 Idem, p. 3.

66 B. Copenhaver, C. Schmitt, *Renaissance Philosophy*, Oxford, New York, 1992, p. 40.

67 A. Sanger, S. Walker, op. cit., p. 3. For Ficinian influences on French literature, see K. Banks, "Space and Light: Ficinian Neoplatonism and Jacques Peletier Du Mans's *Amour des Amours*", *Bibliothèque d'Humanisme et Renaissance*, 2007, 69, no.1, pp. 83–101.



Unlike in the Florentine device, the beholder can deduce the presence of a second – more important – image before looking in the mirror by solving the acrostic puzzle. The device erects epistemological thresholds between the spectator and the truth, and it is through movement and physical interaction that these thresholds are overcome. The presence of the king is first deduced by solving the acrostic, which can be done from any point within reading distance of the poem. However, the presence can only be confirmed by looking in the mirror, which has to be done by moving to a specific standpoint. Lastly, by taking down, touching, and rotating the painting, the beholder learns *how* the “illusion” in the mirror is generated. Thus, the unknown artist established a liminality within the artistic experience, stretching Shearman’s *slow fuse* and leading the beholder through a metaphorical *rite de passage* from absence to presence, deception to truth, and ignorance to knowledge.

## Political transformations

The two devices depict rulers, and are therefore irrevocably charged with ideological meaning. Given their similarities with anamorphic painting, which was often infused with political undertones and functioned in a similar private context, it can be productive to compare the two.<sup>68</sup> Using visual distortions and sophisticated perspectival systems, anamorphic art presents seemingly random shapes that only make sense when the beholder occupies a predetermined point within its perspectival construct. Our devices, as Yves Hersant noted, are no pure anamorphoses. Although the “perfect” viewpoint is fixed, they are intelligible from multiple positions and are no distortions.<sup>69</sup> Yet, they were perceived as such; in his 1647 *Apiaria*, Bettini referred to *tabulae scalatae* as “*distortiones*.”<sup>70</sup> Anamorphosis was often employed in royal portraiture, as “the drastic decentring and subsequent correction of perspectival vision occasioned by anamorphosis would seem to have the effect of making the invisible *Dignitas* visible in the king’s likeness. If the former cannot actually be seen, its presence is implied by the sudden manifestation of a hidden image.”<sup>71</sup> One of these images (Fig. 6) is a woodcut by Erhard Schön (c. 1491–1542). Essentially a “who’s who” of Europe’s most important rulers, it shows nothing but chaotic landscapes at first glance, but when seen from the right, the portraits of Emperor Charles V, his brother Ferdinand, Pope Paul III, and the French King Francis I emerge. Images like this *Vexierbild* propagate the omnipresence of the sovereign, whose body emerges from and consists of the hills, trees, and meadows he rules over.<sup>72</sup>

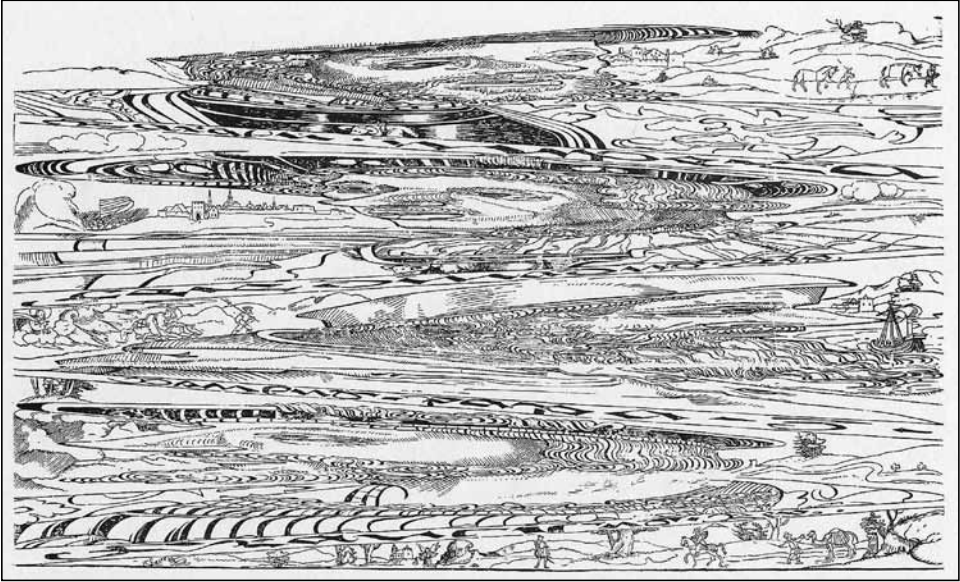
68 J. Baltrušaitis, *Anamorphic art*, Cambridge, 1977, p. 26.

69 Y. Hersant, op. cit., p. 62.

70 M. Bettini, op. cit., p. 28.

71 D. C. Sherer, *Anamorphosis and the Hermeneutics of Perspective from Leonardo to Hans Holbein the Younger: 1490–1533*, Cambridge MA, 2000, p. 145.

72 D. R. Castello, *(A)wry Views: Anamorphosis, Cervantes, and the early Picaresque*, West Lafayette, 2001, p. 11.



**Fig. 6.** Erhard Schön, *Vexierbild with Charles V, Ferdinand I, Pope Paul III, and Francis I of France*, c. 1535, woodcut. Public Domain

If the function of ideology is to veil power structures to make them “appear to be part of the natural, eternal law of things”, anamorphosis is certainly up to the task.<sup>73</sup>

The same idea is expressed in the French *tabula scalata*, which makes the king grow out of the moon.<sup>74</sup> Using the moon as a metaphor for Henry (and his mistress), the beholder is meant to understand that the king, like the moon, is a celestial body that is not only eternal, but also vigilantly observing what happens on earth.<sup>75</sup> In the Florentine device, Christina does not grow from a celestial entity, but from her

73 W. Chadwick, *Women, Art and Society*, London, 1990, preface. “The important function of ideology is to veil overt power relations obtaining in society, by making them appear to be part of the natural, eternal law of things. Power can only be exercised with the complicity of those who fail to realize that they submit to it [...] Ideology is successful precisely to the degree that its views were shared by those who exercise power and those who submit to it”.

74 France, too, had a strong anamorphic tradition. One only has to think of Holbein’s *Ambassadors* (National Gallery, London), commissioned by French patron, or of Leonardo’s anamorphic images for Francis I, described in G. P. Lomazzo, *Trattato dell’arte della pittura, scoltura et architettura*, Milan, 1590, pp. 335–336.

75 The French king was often connected to mirrors. The inventory of objects Christina inherited from Henry’s widow Catherine de’ Medici (1589) lists as many as five different objects that in some way combined a portrait of the king with a crystal mirror (n. 213, 255, 260, 261, 266). *Archivio di Stato di Firenze, Guardaroba Medici, 152, Inventari di Cristina di Loreno, Robe stateli lasciate per testamento*, pp. 14v–29v.

own father, and it is implied her power grows from him as well.<sup>76</sup> Yet, in the Renaissance paradigm of the truth as something that lies hidden and must be revealed and unveiled, the initially invisible daughter clearly takes precedence over her father.<sup>77</sup> Likewise, sacred images were shrouded with painted curtains and portraits of loved ones protected with decorative covers.<sup>78</sup> The *granduchessa's* sudden revelation thus indicated her prestige and must have been a central facet of the work's narrative structure that added to the beholder's interactive experience and agency.

The political messages transmitted by the devices become all the more relevant when considering that Henry II presented his painting as a diplomatic gift to Cardinal Carafa.<sup>79</sup> Gift-giving to notable guests or foreign rulers was a well-established practice in sixteenth-century Europe, and portraits of the giver were among the most commonly donated commodities.<sup>80</sup> Gifts were given for diplomatic reasons or to express respect towards the recipient, but also increased the giver's prestige by underlining his or her wealth and magnanimity.<sup>81</sup> In Valois France, elaborate gift-giving rituals were guided by considerations of courtesy, mutual reciprocity, and friendship.<sup>82</sup> Rare and thought-provoking gifts like the enigmatic *tabula scalata* would not only have indicated the giver's magnificence, but also his/her wit and erudition, and perhaps this was the reason why Carafa (according to Vasari) gave the work to Ciochi del Monte. As Stefania Zanieri notes, we cannot exclude that the Florentine painting was meant as a gift to the duke of Lorraine, but for some reason never left Florence.<sup>83</sup> Her suggestion is in line with the well-known Medici practice to donate dynastic portraits to nearly every person of note, and also resonates with Ferdinand's excessive gift-giving.<sup>84</sup> This hypothesis is especially interesting because it would imbue Christina's portrait with additional memorative meaning. The mirror, then, would show spectators what Charles is thinking of: his

76 Y. Hersant, op. cit., p. 58. Hersant notes that the Medici were unlikely to commission a work asserting the Duke's power over his daughter, as Lorraine and Tuscany were backing different candidates for the French throne in 1593. He reads the work, that at his time of writing was still displayed in an anachronistic rotating framework, as a conversion (in the original sense of the word *convertere*) of Charles into his daughter.

77 P. Simons, "The Visual Dynamics of (Un)Veiling in Early Modern Culture", in: *Visual Cultures of Secrecy in Early Modern Europe*, eds. T. McCall, S. Roberts, G. Fiorenza, Kirksville, MO, 2013, pp. 24–53.

78 P. Hills, *The Renaissance Image Unveiled: From Madonna to Venus*. The Watson Gordon Lecture 2009, Edinburgh, 2010.

79 Neither Vasari nor Danti tell us, however, if the painting was created with this function in mind, or had a "life" of its own at the French court before it was given to Carafa.

80 F. Kieffer, "Ferdinand I de Médicis (1587–1609) et le don d'oeuvres d'art: etiquette et représentation", *Seizième siècle*, 2017, 13, pp. 141–162, 144.

81 Ibid, p. 141.

82 N. Zermon Davis, *The Gift in Sixteenth-Century France*, Madison WI, London, 2000, p. 131.

83 S. Zanieri, op. cit., p. 667. For more background on the practices of gift-giving at Ferdinando's court, see S. Butter, "The Uses and Abuses of Gifts in the World of Ferdinando de' Medici (1549–1609)", *I Tatti Studies in the Italian Renaissance*, 2007, 11, pp. 243–354

84 F. Kieffer, op. cit., pp. 142–143.

far-away daughter.<sup>85</sup> Yet, the aforementioned payment record states that the director of the Medici gallery had the device placed in a room within the gallery after completion. If Buti's painting was initially intended as a gift to Lorraine, its purpose must have changed before or immediately after it was finished.

The paintings also carry philosophical and theological connotations that go beyond the political domain. The anamorphic shape-shifting that the mirror stages between father and daughter or moon and king gives visual testimony to Pico della Mirandola's exaltation of man as "chameleon", created by God as "a creature of indeterminate image" that possesses a "changing and metamorphous nature."<sup>86</sup> By interacting with the devices, the engaged beholder thus initiates and maintains a pendular shifting between two distinct yet interdependent forms, underlining the humanist notion of a chameleonic man with endless possibilities. As we have seen, this interaction even mirrors the divine act of creation in Richard Lassels's seventeenth-century description of the Florentine device, "drawing thus Eve out of Adam again by a curious reflexion."<sup>87</sup> The *tabula scalata* can therefore be seen as a shape-shifting device that used the beholders' moving bodies not only to transmit political messages, but also to encourage them to reflect on human nature itself.

## Conclusion

Much more can be said about the *tabula scalata* than I have done in this article. It would be interesting, for example, to delve deeper into its seventeenth-century reception, its position in the nascent field of optics and mathematics, or to examine with more scrutiny the French context in which the devices had their genesis. My goal, however, was not to be exhaustive, but merely to take two artefacts as testing grounds to come to a deeper understanding of how the *tabula scalata* constructed meaning.

In the 16<sup>th</sup> century, the boundaries between art and science were still vague, and the two devices examined in this study drew upon optics and mathematics as much as painting and poetry to create and convey meaning. Cardinal Del Monte may have been intrigued by his device's technical ingenuity, amused by its riddle-game, and wary of its political message. These multiple layers of scientific, poetic, and political meanings were neither mutually exclusive nor relevant to every beholder, and it depended on this beholder and his or her level of mental and physical interaction whether these layers were all fully explored. Significantly, both devices functioned within spaces that were meant to *show*: the Medici *galleria* and the Del Monte *guardaroba* respectively. As such, whether through art, science, or both, their

<sup>85</sup> I am grateful to Tristan Weddigen for suggesting this possible reading.

<sup>86</sup> G. Pico della Mirandola, *Oration on the Dignity of Man*, ed. and trans. F. Borgherini, M. Papio, M. Riva, Cambridge, 2012, pp. 123, 117, 125. See P. Findlen, *op. cit.*, pp. 299–301 for a discussion of the humanist conflation between man, mirror, and chameleon.

<sup>87</sup> R. Lassels, *op. cit.*, p. 169.

primary goal was to stupefy their beholders by tapping into their imagination as well as their bodies. The objects, the spaces they occupied, the artists who made them, the patrons who ordered them, and the spectators who marvelled at them were all actors in a system of cultivated curiosity that emerged out of Renaissance *studiolo* culture and developed in many different forms throughout the early modern period. Ludovico Buti and the unknown creator of Del Monte's device intensified this sense of wonder by erecting thresholds within the artistic experience, luring the spectator into a prolonged game in which puzzles were solved, transformations were witnessed, paintings were touched, and meanings were forged.

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