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QUESTIONS OF AUTHORSHIP AND AUTHORITY IN SOME EARLY MODERN ANATOMICAL IMAGES, THE *TABULAE ANATOMICAE* OF PIETRO DA CORTONA*

Abstract

The study is centered around a series of anatomical engravings made in the first half of the seventeenth century in Rome after anatomical drawings by the famous painter Pietro da Cortona, but first published over a century later. This case study allows, through the analysis of its intricate history, the inquiry into numerous issues fundamental for the understanding of the scientific image in the early modern era: issues related to technique (drawing, engraving), the role of reproduction in the history of science, problems of authorship and investment of the image with authority, as well as the destination and audience of the books containing these images.

Keywords: anatomical illustrations, artistic conventions in scientific representations, Pietro da Cortona, authorship, authority of the image.

Questions of the legitimacy of images and the possibility to derive knowledge from them constitute the subject of numerous debates in the scientific world of the sixteenth and seventeenth centuries. As a result,

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early modern natural historians who use images in their publications are extremely cautious when claiming the role of images as instruments of knowledge: they argue for images devoid of the marks of authorship, and thus able to embody a higher degree of objectivity. Consequently, the history of the scientific illustration is seen as the constitution of a *decorum* of objectivity in the search for the essences in nature,[1] parting with the conventions of high art and developing un-naturalistic conventions of its own (depictions of parts of the plants separately and in different scale, letters relating elements of the picture to text, see-through views, etc.).

Nevertheless, looking at sixteenth and seventeenth century scientific images (whether we choose Vesalius' anatomies, or the plants illustrated by the *Accademia dei Lincei*) we have the clear impression that high art conventions are not completely eliminated; on the contrary, they are deliberately employed in the construction of what has been called "the authority of the image". One such example is the *ad vivum* quality of the image based on elements and strategies meant to affirm and increase the credibility and authority of the image: what Martin Kemp calls the "rhetoric of the real".[2] Another interesting case is the use of Baroque scenographic strategies in the *mise-en-scène* of illustrated scientific experiments.

Not only might one wonder why such elements aren't disposed of by scientists, but the complex cohabitation between them and the conventions pertaining to the scientific usage of the image needs a closer investigation.

In looking at the construction of the rhetoric of scientific illustrations the question of agency arises: what are the relative roles of the author of the scientific text, the draftsmen, engravers and typographer. How do issues of authorship – a debated notion in the early modern era, both in the artistic and the scientific milieu[3] – arbitrate in this context? Such questions are often very hard to answer, as are questions pertaining to the intended audience of these books, but one must nevertheless have them present when trying to explain the visualization techniques in use in early modern science.

My focus in this article is a chapter of the history of anatomical illustration in the early modern period. By focusing on a specific case study I hope I will be able to throw light on the mechanism through which the legitimacy of the scientific image is constructed in the early modern period through interlocking references of authority and authorship.

In the focal point of the argument lies a series of engravings from a book published in 1741 in Rome by the surgeon and anatomist Gaetano Petrioli:

Tabulae anatomicae a celeberrimo pictore Petro Berrettino Cortonensi Delineatae, & egregiae aeri incisae nunc primum prodeunt... As the title makes clear, the engravings are based on drawings made by Pietro da Cortona (1596-1669),[4] a famous seventeenth-century painter, so famous that he is worth being mentioned in the title of the publication, whereas many anatomical treatises from the sixteenth through the eighteenth centuries don't mention either the artist responsible for the drawings nor the engraver in charge of their transfer into print.

Pietro da Cortona's drawings (Fig. 1), which have miraculously survived,[5] are thought to have been made by the artist at a young age, around 1618,[6] during his apprenticeship years, most probably after dissections. A handwritten note which in the eighteenth century accompanied the drawings stated that they had been made in the Santo Spirito hospital in Rome, with the help of a surgeon, Nicolo Lache.[7]

The provenance of the drawings is fairly well documented; they have been left to the Glasgow University Library by Dr. William Hunter, interestingly, the first doctor to have been appointed to teach anatomy at the Royal Academy of Art in London and someone with strong interests in the history of anatomical illustration. Hunter, who in a letter from 1773 agrees with the traditional attribution of the drawings, discusses them in connection to the plates in the 1741 printed edition.[8] He notices that the prints contain additional anatomical figures in respect to the drawings, which he deems to be "so injudiciously put in and [...] such mean compilations that they could not have been directed by the Author (Lache) of the original work". The "supplemental figures", as he calls them, "must have [therefore] been the absurdity of some person into whose hands the Drawings had fallen".[9]

Despite the claim that the 1741 edition is based on Pietro da Cortona's drawings, only twenty out of the twenty-seven plates (Pl. 1-19 and 27; Fig. 2) have corresponding drawings in Glasgow. Moreover, the style of Pl. 20-26 is different and they don't correspond in subject matter to the rest of the plates, sustaining the hypothesis that they have been made later than the original project. Due to this fact, I shall not take them into consideration.

A second edition of the plates is published in 1788 by Francesco Petraglia, who accompanies the images with a new text. More importantly, the plates (Fig. 3) – expurgated of all the flaws (*omni labe expurgatas*) – no longer exhibit the "supplemental figures" which have been erased, with the declared intention of restoring them to their original perfection

(*pro dignitate sua*) and the risk of leaving somewhat bewildering bare spaces (such as in Pl. 6 or Pl. 8). The new title, *Tabulae anatomicae ex archetypis egregii pictoris Petri Berrettini Cortonensis expressae et in aes incisae...* mentions the cleansing operation – *nothas iconas expunxit* (the bastard images were struck out/erased) –, underlining at the same time the conformity to the original, *archetypis*. Although Petraglia affirms he is very displeased with the stylistic incoherence (*discrepantia* [...] *a Berrettini stylo*) introduced by the additional figures, he maintains the additional plates (Pl. 20-26) considering they are all consistent (*consentaneas*) in style and design (*stylum, rationemque*).[10]

The copperplates themselves have not survived, but Petraglia suggests in his introduction that Petrioli had used plates engraved in the seventeenth century; the engraver has been identified as Luca Ciamberlano (an Umbrian active in Rome between 1599 and 1641), whose monogram LC appears on the first and fourth plates in both editions.[11] Alongside it, in Pl. 4, in some rare states of the 1741 edition, appears the year 1620, the probable date of production of the engravings.[12] The 1788 images are undoubtedly produced from the same original plates, "burnished and then re-engraved to effect repairs, in some cases clumsily".[13]

The rather small bibliography on the subject has perpetuated the idea of the composite nature of the 1741 plates: Martin Kemp, for example, considers that Hunter is "surely correct in his judgement [about] the additional illustrations"[14] and the classical work on the history of anatomical illustration by Roberts and Tomlinson, *The Fabric of the Body* of 1992, states that the figures in question were "engraved in an incongruous manner wherever there was sufficient space on the plate", with the result of "detract[ing] and irritat[ing] the viewer".[15] Details such as the lack of shading over Fig. IV in Pl. 3 (Fig. 2) confirm that they have not been engraved at the same time as the main figures.

Although I agree with the conclusion that the supplemental figures are additions to the original design, maybe made by a different hand – a somewhat less subtle engraver, as the close examination of the engravings let me to believe –, I consider that the nature of these figures deserves more attention and will prove insightful for the understanding of the status of anatomical illustration in the early modern period, at the intersection of the artistic practice and the scientific endeavor. I shall try to give a short outline of the early seventeenth-century Roman artistic and scientific circumstances relevant for this encounter.

By the early seventeenth century the involvement of artists in dissections and illustrations of medical treatises was by no means a novelty. In the artistic milieu, knowledge of anatomy was considered a precondition for the correct representation of the human body. The figure of Michelangelo, the perfection of whose bodies was regarded to be the outcome of his anatomical studies, lent authority to the practice of dissection by artists. Around 1600 however, the tight connection between artists and anatomists seems to have loosened and artists turned to treatises of anatomy for their knowledge of the human body rather than direct involvement with the interiority of cadavers. This happened in the context of the institutionalization of anatomical teaching in art academies (and, paradoxically, of the generalization of dissections intended for artists).[16]

Furthermore, this framework explains the diffusion of a new genre, the treatise of anatomy for artists. Some of these were produced by artists involved with scientific anatomical publications: Odoardo Fialetti, the draftsman who had produced the images for the anatomical treatises of Giulio Cesare Casserio, published *Il vero modo et ordine per dissegnar tutte le parti et membra del corpo humano* in 1608, and Luca Ciamberlano, the engraver of Pietro da Cortona's plates, will go on to engrave, in 1626, *Scuola perfetta per imparare a disegnare tutto il corpo Humano, cavata dallo studio e disegni de Caracci*. Although very different in form and intent (as will be discussed later), these publications suggest the many levels of intersection between the artists' and the anatomists' interests in anatomical images as a crucial site for the production and transmission of knowledge about the human body.

Pietro da Cortona's drawings originate in the midst of this anatomical culture where artists and anatomists still are indispensable to each other. He was the pupil of Andrea Commodi and Baccio Ciarpi, and through them he met Lodovico Cigoli and Domenico Passignano, all of whom belonged to a generation of artists educated at the *Accademia del Disegno* in Florence and for whom the study of anatomy was crucial; Cigoli studied anatomy intensely and produced, in collaboration with a physician and after dissections, a wax *écorché* (later cast in bronze). The young Pietro da Cortona must have also followed dissections offered to artists in the *Accademia di San Luca* in Rome.

The first question that might arise is what was the aim of Pietro da Cortona's 1618 drawings. They were undoubtedly made in view of engravings, but nothing is known either of the type of publication intended (loose sheets or anatomical treatise; the latter is more probable due to the

numbering of the plates[17]), the intended public of it (artists, anatomists, or a more general audience), or the reasons for not having been published in the seventeenth century (many planned illustrated books have never been completed due to financial shortcomings, and such is believed to have been the case here).

The drawings were most certainly done with the aid of an anatomist, apparently in the Ospedale di Santo Spirito in Sassia, the main site of anatomical dissection, teaching and research in early modern Rome.[18] Their medical specificity connects them closely to this scientific context of production. They focus, as pointed out for the first time by Hunter,[19] on muscles, veins and nerves, especially the latter, while ignoring other anatomical aspects, such as the abdominal cavity, the details of which are largely approximated. Although anatomically incorrect in various respects,[20] the kind of attention given to nerves, and in particular to the relationship between movement and brain,[21] leads to the conclusion that they were meant to illustrate an anatomical treatise on nerves,[22] and thus intended for medical practitioners, rather than for the use of artists, for whom the relevant parts of anatomy are the muscles and the skeleton, useful for representing bodies in motion.

Nevertheless, Petraglia insists in his 1788 Introduction that his publication is useful for students of anatomy, and especially for painters,[23] suggesting that this might be a path worth investigating.[24] Furthermore, their "artistry", often remarked by commentators, invites us to read them and the final appearance of the engravings also in the light of art-historical methods and concerns, a perspective, we would argue, more appropriate for the milieu in which they came into being. Nancy G. Siraisi and Silvia De Renzi have stressed the artistic and antiquarian expertise that, understood as a mark of local identity, single out the Roman medical practitioners.[25]

The case of Cassiano dal Pozzo is extremely illustrative for the meeting of artistic and scientific concerns in early seventeenth-century Rome: not a physician himself, but an antiquarian with natural history interests, Cassiano is the continuator of the natural history project of the *Accademia dei Lincei*, commissioning drawings of flora and fauna and supporting natural history publications. Better known for being the most important Italian patron of Poussin, he was also the creator of a visual encyclopaedia of the antique world, the *Museo Cartaceo* (which he never managed to finish and bring to print), employing young artists such as Poussin, François Duquesnoy, Pietro Testa and Pietro da Cortona.[26] Although the latter's contacts with Cassiano date from the early 1620's and thus

postdate his anatomical illustrations, they throw light upon the fact that artists, antiquarians and natural inquirers shared common skills and visual habits of inquiry, and conceive the image in pretty much the same way as a visual argument rather than an illustration to a text, allowing us to examine these fields in close connection.

The first issue worth looking into is that of the authorship of the plates. Both eighteenth-century editions claim very loudly in their titles that the *Tabulae anatomicae* are drawn (*delineate*) or portrayed (*expressae*) by the famous painter Pietro Berrettini. Despite this, and although their publication in the eighteenth century is very probably due to the fame of the painter, the authorial claims and debates surrounding them are not that simple.[27] And I am not referring to the attribution of the original drawings to Pietro da Cortona, since the issue did not come up in the eighteenth century.

Instead, in the publisher's foreword of the 1741 edition we read "the name of the author who composed these *Tabulae* [is] unknown";[28] he cannot be thinking of the text, since the text accompanying the plates was lost (or never existed) and Petrioli had to write one. Moreover Pietro Berrettini is not mentioned here. The Introduction written by Petraglia in 1788 engages in a true quest for the author.[29] He is more explicit: he is looking for the "*anatomic* author of the tables", since "for sure he cannot be the one who formulated them by pen or chisel".[30] Thus, the bulk of Petraglia's text deals with establishing who the anatomist behind the tables could have been, proving that some names invoked by writers before him could not have been involved and proposing his own candidate for the role of *the Author*. Nevertheless, on occasions he uses the same term when referring to Pietro da Cortona (*Auctoris stylum*), when he is distinguishing between his involvement and that of the "strange hand" responsible for the additions.[31]

We are faced with a regime of authorial identity and intellectual property very foreign to the modern sensibility. Looking into the specificity of the cultural and social framework of early modern book production will help us to better understand the factors influencing the fortune of these engravings.

The insistence with which the name of the artist is expressed on the frontispiece of both books is the outcome of a long process of radical reconceptualization of the artistic creative process during the Renaissance, which led to a conception of art as a process based on inspiration, rather than imitation, and of the artist as individual genius rather than artisan.

Although this was the general background for the development of "high art", the status of scientific illustrations and their makers was different. The authorial identity of the latter was questioned on two levels.

Firstly, because their activity was subject to the dynamics of book production and thus hinged on the role distribution in the manufacturing process: various craftsmen were usually involved in the production of a printed image, a draftsman, an engraver, and sometimes another artisan in charge of transferring the image onto the wooden block or copperplate. Among them – somewhat contradicting the modern notion of creation as the origin of the work of art – the better paid, and consequently the more appreciated was the engraver, not the artist who created the design.[32] Leonhart Fuchs, the author of one of the most celebrated sixteenth-century herbals, included the portraits of the three craftsmen who produced his illustrations in his *De historia stirpium* (though not in such a prominent place as his own portrait, which appears immediately after the frontispiece of the book). His attitude towards the image producers was revealed when the illustrations from his book were pirated and used in a book printed by another publisher. Fuchs' defence stressed that the one injured is Specklin, the engraver, attesting that he conceived Specklin to be the creator of the images, not the draftsmen who made the original drawings. Christian Egenolff, his plagiarizer, argued on his behalf that not all of Fuchs' images appear in his book, and that others have been added. The logic of the conception of the book in its entirety seems to prevail over the notion of artistic copyright of the images in his line of reasoning.[33] This attitude is in tune with the logic of the book market and book publishers, for whom the main investment is the woodblock or plate – a "regime [that] accorded printers, and, more importantly, booksellers, substantial power over the making and maintenance of [authorial] identities in print".[34]

The process was, nevertheless, beyond their control. Monetary interests led to scientific images often being copied and reused in other books, despite privileges granting intellectual property rights upon text and images to authors and publishers (never artists).[35] The illustrations of Andreas Vesalius' *De humani corporis fabrica* – which is the source for many additional figures in the 1741 edition of Pietro da Cortona's *Tabulae anatomicae* – became undoubtedly the most copied images in the sixteenth century; in some cases the whole book was unlawfully reissued, in other cases some of the images were used to illustrate other anatomical treatises and sometimes other illustrations were commissioned to complete the ones taken from Vesalius. Most authors or publishers practicing this

didn't even address the issue, but Juan Valverde, who transposed many of Vesalius' images from woodcuts to engravings, explained in a letter that he had done so with the purpose of pointing out the differences between his anatomical content and that of Vesalius.[36] Felix Platter, another anatomist who acknowledged his use of the Vesalian imagery, made explicit that he considered them a kind of canon of correctness and clarity.[37] These examples show that often images were thought to embody the authority of the author of the book.

This leads us to the second peril hovering over the concerns of artistic authorship: the hierarchy between artisans and scientists. Although the early modern period was a time of profound rethinking of the role of experience and artisanal involvement in the process of acquiring knowledge from nature,[38] the labor of the illustrator was perceived almost as an extension of the undertaking of the naturalist: he was credited with guiding the eye and hand of the draftsman and controlling the resulting images. Although Fuchs took pride in the fact that he had worked with the best available artists, he nevertheless felt obliged to ensure his readers that he had "not allowed the craftsmen so to indulge their whims as to cause the drawing not to correspond accurately to the truth".[39] Like Fuchs, many more early modern naturalists and anatomists – Vesalius above all – went to great efforts to ensure the quality and correctness of the illustrations in their books, suggesting that they perceived themselves as partaking to the authorial *persona* of the images. The inclusion of the portraits of the three craftsmen in Fuchs' herbal functioned more towards constructing "the rhetoric of the real,"[40] by showing direct acquiring of knowledge from nature, and thus as a strategy of lending authority to the images, rather than as an act of imparting authorship identity upon them (functioning thus very much like the inclusion of an image with the instruments for dissection in Vesalius' *Fabrica*).

Other cases confirm the view that artists were not generally thought to be the originators of scientific images. The publication of Charles Estienne's 1545 anatomical treatise was the subject of a lawsuit regarding whether the draftsman, a surgeon, should receive authorial credits and which ended in Estienne being granted full authorship. The case is even more bewildering since many of the illustrations were based on previous erotic mythological engravings,[41] and upon close inspection they appear to be composite in nature: the anatomical details of most of the plates have been inserted in the general design, showing that the anatomical image was separately conceived and then introduced into the woodblock,

suggesting maybe multiple authors.[42] Another astonishing case in this respect is Vesalius, who, although he speaks at length in his introduction about the illustrations, never names the artist who produced the most celebrated and influential anatomical images of the sixteenth century (he was identified as Jan Stephan van Calcar on the basis of other documents). Paradoxically, the engraver Nicolas Beatrizet who copied the images for Valverde signs his plates prominently.

There was more variety, though, in the views about the role of artists in scientific endeavors: one of Egenolff's arguments is that the credit for the images lies with the artists, not Fuchs.[43] This allegation, rather rare in the sixteenth century, saw a spike in the eighteenth-century editions of Pietro da Cortona's anatomical plates, but, even then, such a conception was not prevalent and one might wonder, had the publishers known the anatomist involved, would the titles had figured his name instead of that of the artist?

Another editorial project by Gaetano Petrioli gives us a hint: in 1740 he gives to print another set of old engraved plates, produced in the sixteenth century for (and probably after drawings by) Bartolomeo Eustachi, and published for the first time in 1714. Petrioli's edition includes eight more plates in respect to the 1714 edition, commissioned by him and intended to stand for eight lost plates of the original set.[44] Although one of the plates bears the names of the draftsman and engraver, he nevertheless describes them as *Tavole anatomiche di Gaetano Petrioli* and signs all of them *Orig. di Gaet. Petrioli Romano*. This leads us to believe that he conceived himself to be the originator of the plates, just like Eustachi had been for the rest, eluding the fact that Eustachi had probably drawn his own anatomical images.

But even leaving aside the customary draftsman / engraver respective roles and the artist – anatomist tension, we are faced with the puzzling situation of the mixed nature of the 1741 plates. The "supplemental figures" inserted into Pietro da Cortona's drawings prove to be the place of the intersection of artistic and scientific strategies of bestowing authority upon the image. It is not known who added these figures; Martin Kemp incriminates Petrioli, but it is worth noticing that neither Hunter[45] nor Petraglia, who erased them, identify Petrioli to be responsible for the insertion and he himself does not mention anything in his 1741 edition. I have been able to trace the source of almost all of the additional figures in the plates derived from designs by Pietro da Cortona (the sources being,

in the order of importance, Valverde, Vesalius, Casserio and probably Eustachi), and they all predate the original design, so I am tempted to consider them early additions to the plates. Many of them are, indeed, graphically inferior to the rest of the engraved design. Interestingly enough, they are indebted, in the manner of the engraved line, to the source: thus I was able to conclude that in many cases Valverde rather than Vesalius was the source of an image present in both treatises and the crudest ones derive from the less sophisticated illustrations of Bartolomeo Eustachi.

Nevertheless, there are reasons to believe that a composite design was envisaged in the original planning of the plates. Firstly, the main feature of the very drawings by Pietro da Cortona is the fact that in exactly half of them the main figure exhibits a framed image containing another anatomical feature. These have been kept in most of the engravings in both editions. Secondly, in some cases some of the additional images seem to have been planned: the drawing for Pl. 7 (Fig. 4), for example, shows signs of *pentimenti* in the area of the right arm of the figure, including the thought of the ribbon, and apparently the position of the figure was intended in view of the whole device. Fig. II – the bust suspended from the ribbon, which is taken from Valverde – is stylistically uneven with the main figure, leaving us unclarified as to the reason (Fig. 5). In the drawing for Pl. 3, the frame on the right side of the image leaves enough space to maybe add another figure, and in the corresponding engraving Fig. II – the hand detail – although part of Pietro da Cortona's drawing, has been moved, suggesting that the initial engraver sought space for more figures (Fig. 1 and 2). In Pl. 4 instead of a figure detailing the anatomy of the neck, planned by the draughtsman, we find another anatomical bust derived from Vesalius (Fig. 6 and 7);[46] we tend to believe that this was included in the original plate made by Luca Ciamberlano, since it is very unlikely that a later engraver would have made the change of the already engraved detail, and, most importantly, the monogram of the engraver lies upon this very element.

Could we read this as an assertion of authorship regarding the insertions? We could, had the stylistic differences not point us in the opposite direction. Other examples, nevertheless, attest to the early modern usage of this particular modality of author-function: Robert Felfe, for example, has discussed the collages of Johann Jacob Scheuchzer, a doctor and collector, which included images from different sources, such as a frontispiece by Holbein the Younger, but bore the signature of Scheuchzer.[47] An argument might be found, still, in another work by

Luca Ciamberlano, the anatomical treatise for artists already mentioned, containing engravings after images probably used in the Carracci workshop for teaching. In one of the plates, the rendition of a marble bust is much closer to the manner in which the bust in Pl. 4 is executed. It shows, in any case, that the engraver is very versatile in his manner of reproducing in print different kinds of designs, deliberately adapting his duct to the model. This impression of alertness to issues of authorship and style on the part of Ciamberlano is further enhanced by another plate, which he signs in a very visible place and in a way (Fig. 8) – representing the gesture of signing itself, a visual pun on the act of engraving maybe – that transforms the image into a discourse on representation and self-presentation.

This brings us to the question of the reason of the inclusion, and afterwards exclusion of the additional figures. Although traditionally discussed as *absurd* (Hunter), and not directly related to the main subjects of the prints (neurology and myology), they do follow in some sense the logic of the general design of the planned treatise. The order of the plates, it has been observed, follows the progressive flaying of the figure, showing successive layers of the dissection, and thus largely corresponds to Vesalius' plan: the figure is shown frontally in the first 14 plates, firstly standing, then progressively sitting or kneeling, and from the back in the plates 15-19.[48] The additional figures also follow the Vesalian order (followed by almost all the imitators and followers of Vesalius, Valverde first among them). So the question is whether the inclusions were intended to transform the anatomical treatise into a more general one (as suggested first by Hunter), making it maybe a more profitable investment, or whether the reasons for the inclusion might be found in the aesthetic of scientific illustrations, deeply rooted in a "highly reflexive image practice".[49]

The exclusion, on the other hand, is equally puzzling: was it made because of scientific reasons, to "expurgate the plates from every error" or because of the awkwardness of the distribution and discrepancy between some of the figures and the main figure (see, for example, Pl. 7 – Fig. 5 –, where the kidneys are interposed without any effort to suggest a spatial relationship to the rest of the composition). Both reasons are invoked in Petraglia's 1788 Introduction,[50] suggesting that the Neo-Classical criterion of "purity" governs both scientific and artistic practices (paradoxically, however, Pietro da Cortona was to be identified soon by Neo-Classical theorists with the supreme lack of taste represented by the Baroque[51]).

Rather than accepting Petraglia's judgement, I would like to look more closely at the strategy that first led to amalgamating various elements on the plates. Artistically incongruent, the general aspect of the plates actually follows "un-naturalistic" conventions of scientific images developed in the sixteenth century: both in plant and anatomy illustrations crucial parts of the main figure are illustrated separately, in bigger detail – proposing a visual equivalent to the action of medical dismemberment through dissection, and, slightly later, of anatomical preparations –, a development which Brian Ogilvie has called the "scientific" or "analytic realism".[52] The artist Pietro da Cortona is reacting to the un-naturalistic character of these conventions, by introducing the "frame-devices", but the person responsible for the additions is more reliant on the analytic aesthetics, which legitimizes the body part *per se*. This follows developments in late sixteenth-century anatomy, which mark a movement away from general anatomy and towards the anatomy of particular parts (organs, apparatus),[53] establishing "a new aesthetic of the part, [...] an aesthetic that did not demand or relied upon the reintegration of the part into a predetermined whole".[54] Other types of anatomical images, or better called devices, embody – if I may be allowed a wordplay – this logic: anatomical flap-images, which have detachable body parts in order to show successive layers. Vesalius in fact intended some of his plates to be cut out and reassembled to be used as a kind of anatomic mannequin (and he even provided instructions for the reader). The book itself, *Epitome*, was conceived to be read either from the skeleton, with which it began, towards the full nudes in the middle of the book, or the other way around,[55] encouraging thus an interactive approach on the part of the readers towards both text and images.

Alternatively we can look for the pictorial logic of the anatomical supplements. There is, from this point of view, an ontological difference between the framed details, which respect the artistic logic, and the floating organs or body parts. Some of the supplemental figures follow though the logic of the former, suggesting that they are reliefs or are in some kind of relation to the main figure and subject to the perspectival laws governing the image as a whole.

Pietro da Cortona's framed images are often discussed as mirrors.[56] Though this possibility would not really undermine my argument, since mirroring is itself thought of as a model for representation in early modern art theory, I think that it's worth acknowledging that they are meant to be read as artificial representations: in Pl. 16 (Fig. 9) a shadow

is cast over the device, in a way impossible for a mirror; in Pl. 12 (Fig. 10) the framed representation overflows its frame, in a way that recalls equivalent illusionistic tricks employed in seventeenth-century painting as commentaries on the limits between fiction and real, on the nature of representation itself. Lastly, some of these devices, such as those in Pl. 3 (Fig. 1-3), are extremely large, which was very rare for mirrors in early seventeenth-century Italy.

Framed images, or *quadri riportati*, were a common device in late Mannerist and Classicist painting in Rome. To give only an example, probably the most important one for Pietro da Cortona, who like most of his peers studied this masterwork intensely: Galleria Farnese painted by Annibale Carracci in the last decade of the sixteenth century thematised illusion through a dense network of references to different levels of reality and different grades of presence and illusion (fictive framed canvases, painted sculpture, fictive bronze medallions) and through a critical approach to artistic tradition. In the large decorative projects painted later in his career, Pietro da Cortona engaged with this strategy of articulation of the surface of the vault through *mise en abyme* devices, making frequent use of enframed images; a drawing in the British Museum (which is generally considered to be a study for the vault of the salon in the Barberini Palace, though on iconographic grounds I find it closer to the later Palazzo Pamphili decorations) shows a nude male holding a medallion in a similar way to the anatomical nudes of his early career (Fig. 11).

But frame-devices have in the seventeenth century a more complex role than simply organizing a large pictorial space. Louis Marin, arguably the most important thinker on painting as a semiotic system, discussed the physical frame, which isolates the image, and concentrates our visual rays upon it, as an operator which introduces the effect of theoretical (attentive, contemplative, that is) gaze. The perception of the frame, or the introduction into the area of the representation of this material condition of the representation, disrupts the transitive reading of the image, putting forward the reflexive dimension of the representation.[57] Also, Victor Ieronim Stoichiță has examined in his book, *The Self-aware Image*, the role played by mechanisms of framing, mirroring, assemblage, etc. in the meditation on the nature of representation and the affirmation of the autonomy of the artwork in the early modern period.[58]

Pietro da Cortona's framed images embody this meta-artistic concern for the presentation of the representation which represents, as Louis Marin would put it.[59] On the one hand the drawings are made in view of

engraving, which itself is a technique of replication, creating a double, or to be more precise, many more instantiations of the original image. The technique itself defines the resulting image as a reflexive discourse. But in the same time, the construction of the image as an intertextual play serves the anatomical gaze. The frames serve to present to the viewer for inspection enlarged details. The operation of framing is a rhetorical one – just like the gestures of self-presentation of the main figures – and guides the eye towards the correct reading.

Both artistic and medical practices were, in the early modern era, going through a process of institutionalization, trying to "legitimate their new-found status [and] intellectual frameworks", in the words of Ludmilla Jordanova.[60] Self-awareness was central to this discourse, and the *instauration du tableau*[61] is the effect of it on the art scene. Many anatomical illustrations of the sixteenth and seventeenth centuries exhibit this programmatic character as well: the process of repeating images from previous books is firstly determined by commercial interests, but it also introduces, through the imagistic material, the historical dimension. The compositional logic of the 1741 plates is thus not that of "addition", but of visually rooting the process of knowledge acquisition in this authorial reservoir of historical images, since anatomical images, as brilliantly shown in Sachiko Kusukawa's recent book, don't just illustrate the text, but they adjudicate authority, they are employed to convince the reader of a particular interpretation and so on.

The only evidence of the usage of the *Tabulae anatomicae* that I could find attests to this dynamics: Plate 26 of the 1741 copy of the book found in the Wellcome Library in London (shelfmark F.109) bears letters added in pencil next to some of the ones printed on the plates to identify the bones. I believe they must correspond to the description of the skeletal system in a different anatomical text and that they thus prove images to be at the core of an inter-textual cross-referencing process through which knowledge is produced.

But images often display a kind of metarepresentational network, as well. An anonymous flap image produced in late sixteenth century, a male nude, is bearing the portrait of Vesalius himself, which functions "as a guarantee [...] of the correctness of the anatomy".[62] The inclusion of scientific instruments[63] (such as in Vesalius), or the many details in later images which suggest the method of anatomical study by displaying anatomical preparations (such as in the images made by Gérard de Lairesse

for Govert Bidloo's *Anatomia humani corporis* of 1690, Fig. 12), refer to the process of production of knowledge itself.

The most widespread mark of self-reflexion in anatomical images are the dramatic gestures of exposure, cadavers showing (off) their interior or body parts, a performative mode to which Pietro da Cortona's drawings explicitly take part. But maybe the most surprising of them all is Valverde's dissected man who dissects another body (Fig. 13), actually an assemblage (another meta-artistic and meta-scientific figure) of two figures previously published in Vesalius (Fig. 14 and 15). The imagistic motif is so powerful that it is reduplicated in Pl. 10 of the 1741 *Tabulae anatomicae* (Fig. 16). There was not enough space for the display of the whole exhibit, so only the standing figure is kept, but the reflexive reference to the act of dissection is maintained, as the figure is fitted with dissecting instruments.

On a second level, there is an intimate connection between the reflexivity embedded in the structure of the image and anatomical content. As Susan Dackerman recently wrote, "artists as well as their scientific colleagues assumed each other's authority as a means of deploying their own expertise".[64]

The framing operation – *opération de cadrage*, as Louis Marin would call it – exposes the visual mechanism behind the production of the image, as theorized in the fifteenth century by Alberti: the image is a selection, a cut-out (*découpage*) from reality, an intersection through the visual pyramid which connects the eye of the painter to the visible world, an operation which closely mirrors that of the anatomist's act of dissecting.

Anatomical procedures are being engaged and interrogated through the medium itself. Flap images, it has been argued, influenced the way medical practitioners conceived their interaction with the human body, particularly hands-on examination.[65] The act of incision is common to both medical dissection and engraving, and even the specific instruments look alike (as one can see in Diderot and D'Alambert's *Recueil de planches, sur les sciences, les arts libéraux, et les arts méchaniques...*), introducing an explicit competition between representation and medium. The anatomists from the sixteenth century were very alert to the possibilities of the graphic medium: Vesalius writes to his publisher in order to ensure that he will pay extreme care to the rendering of the lines ("the thickness of the lines in certain parts, which is the most artful feature of these illustrations and thoroughly delightful for me to view, will appear along with the elegant darkening of the shadows"[66]); Valverde is even more aware of the double

function of hatching lines – conventions to render the volume and representations of the fibers of the muscles ("in this shading I demonstrate the course of the fibers of the flesh, according to their particular orientations in each muscle"[67]). Stylistic language becomes crucial to the content. In some late seventeenth-century books, the anatomical preparation is rendered in such a way that it looks like a demonstration of engraving technique (Fig. 17 and 18), making visible the tension between the double function of the graphic conventions envisaged over a century earlier by Valverde, a commentary on the opacity of the medium. And this is not just a visual pun, for the engraver the two could not be distinct, consisting of the same operation, as the transitive and reflexive dimension of the image can never be separated.[68]

For the viewer though, the opacity of the medium brings about the awareness of the delicate issue of visibility in representation. Louis Marin, speaking of an etching none the less, calls this phenomena "eruption of the invisible into the realm of the visible".[69] In the case of an anatomical image this brings about a supplementary level of self-reflexivity, since the anatomical gaze itself implies making the invisible visible. A powerful illustration of this fact is present in the last plate (Fig. 19), the only one dedicated to the female body, where the mystery of procreation is revealed.

Lastly, I would like to point to the influence of contemporary conventions of displaying works of art. It has been suggested that the associative structure of many anatomical images is dependent on the eclectic practices of collecting of the early modern Wunderkammern, or cabinets of curiosities.[70] Other collecting and display settings might prove even more relevant for this discussion, particularly the display of antiquities.

The 1741 plates present many anatomical preparations in the form of fragments of antique marble statues, taken from either Vesalius or Valverde. For Vesalius, their function is to suggest he is presenting the anatomy of the "canonical" body to the reader, one of his quotes being the celebrated Torso Belvedere, an antique fragment considered *absolutissimum* by none other than Michelangelo.[71] Treatises of anatomy for artists, such as Luca Ciamberlano's one mentioned earlier, often present antique sculpture as a means to teach anatomy.

Antique sculpture was perceived as the embodiment of the perfection that cannot be identified in a single natural specimen. Its fragmentary state is no impediment to the discernment of the perfection of the whole, or to the understanding of the relationship of the part to the whole body. The

"aesthetic of the fragment" governing the perception of antique sculpture informed, I reckon, the representation of the anatomical "aesthetic of the part". Antiquarian practices of display (Fig. 20) produced a discourse governed by intertextual mechanisms of montage meant to give visual form, through successive *mises en abymes*, to their historical discipline.

The case of Pietro da Cortona's drawings and the engravings made after them has shown that attention given to the usage of artistic conventions, techniques and medium in scientific images, understood as part of a larger artistic scene rather than an isolated phenomena dependent only on scientific developments, makes possible a better understanding of the complex interaction between artists and scientists in early modern Rome, by highlighting the processes of appropriation and transformation of artistic resources and strategies by the scientific world.

Fig. 1: Pietro da Cortona, drawing for Pl. 3 of *Tabulae anatomicae…*, brown ink and black chalk, blue, sepia and grey washes, white highlights, c. 1618, by permission of University of Glasgow Library, Special Collections

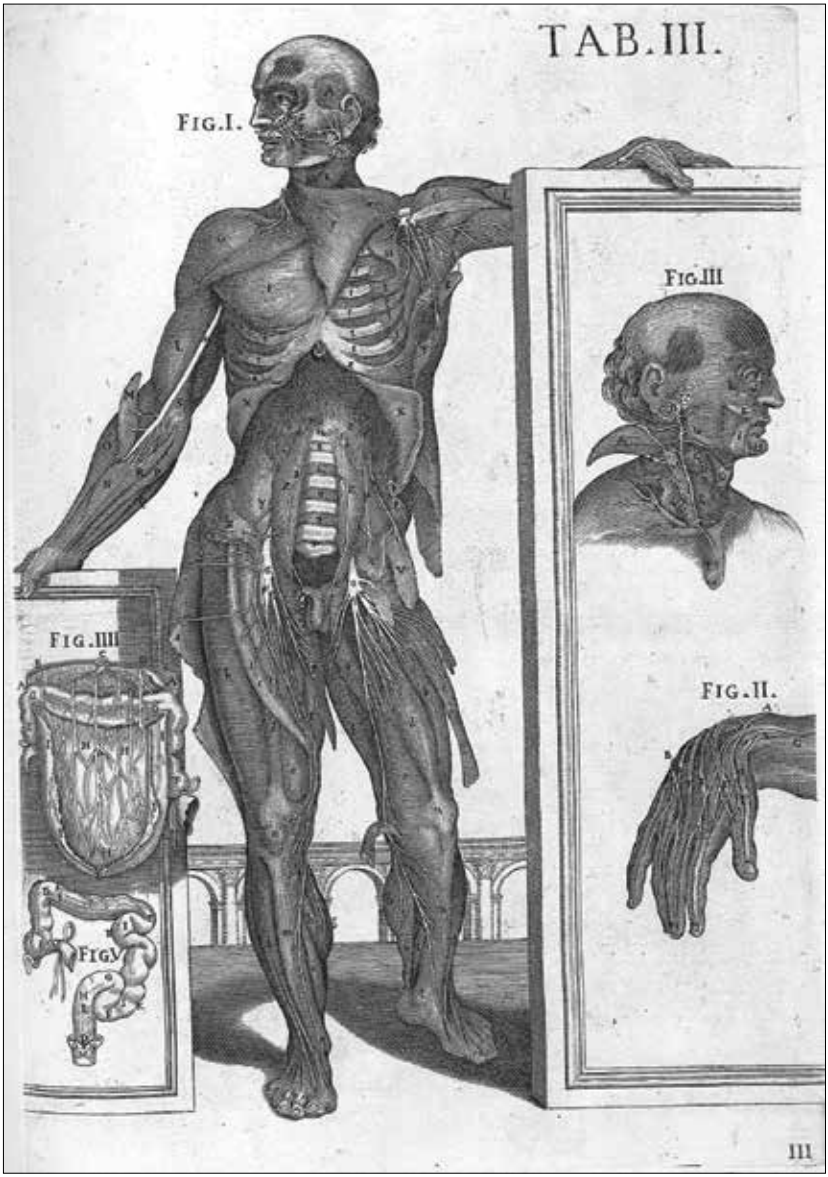

Fig. 2: Luca Ciamberlano (and possibly another engraver), after Pietro da Cortona (and with further additions), Pl. 3 of Gaetano Petrioli, *Tabulae anatomicae…*, Rome, 1741, copperplate engraving, BIU Santé, Paris

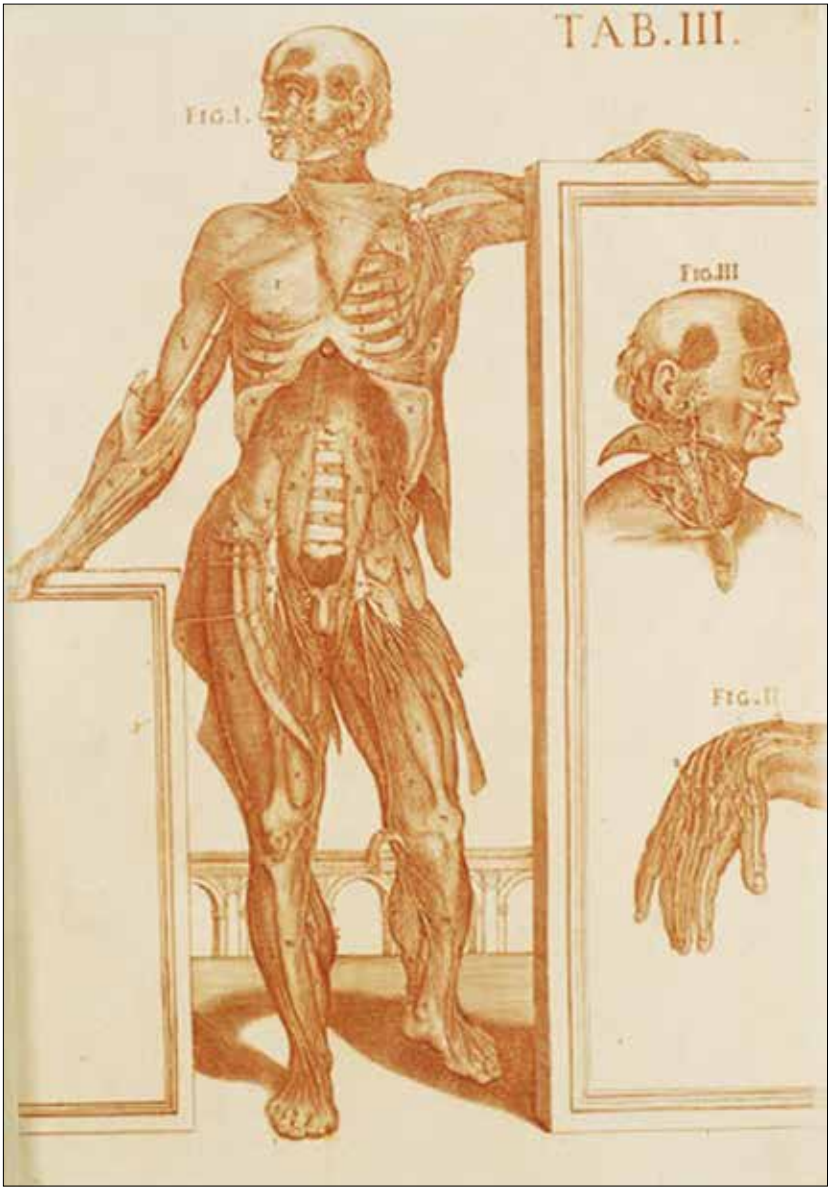

Fig. 3: Luca Ciamberlano, after Pietro da Cortona, Pl. 3 of Francesco Petraglia, *Tabulae anatomicae…*, Rome, 1788, copperplate engraving, BIU Santé, Paris

Fig. 4: Pietro da Cortona, drawing for Pl. 7 of *Tabulae anatomicae…*, brown ink and black chalk, blue, sepia and grey washes, white highlights, c. 1618, by permission of University of Glasgow Library, Special Collections

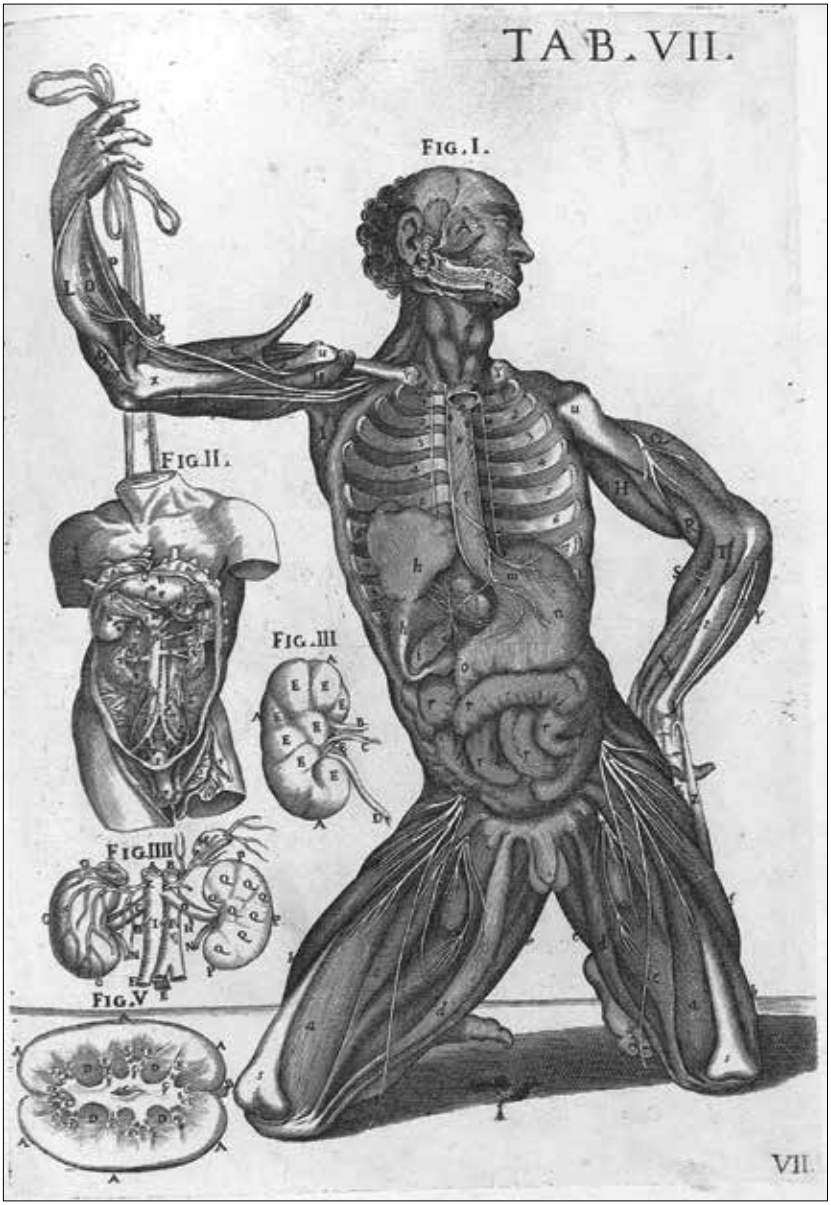

Fig. 5: Luca Ciamberlano (and possibly another engraver), after Pietro da Cortona (and with further additions), Pl. 7 of Gaetano Petrioli, *Tabulae anatomicae…*, Rome, 1741, copperplate engraving, BIU Santé, Paris

Fig. 6: Pietro da Cortona, drawing for Pl. 4 of *Tabulae anatomicae…*, brown ink and black chalk, blue, sepia and grey washes, white highlights, c. 1618, by permission of University of Glasgow Library, Special Collections

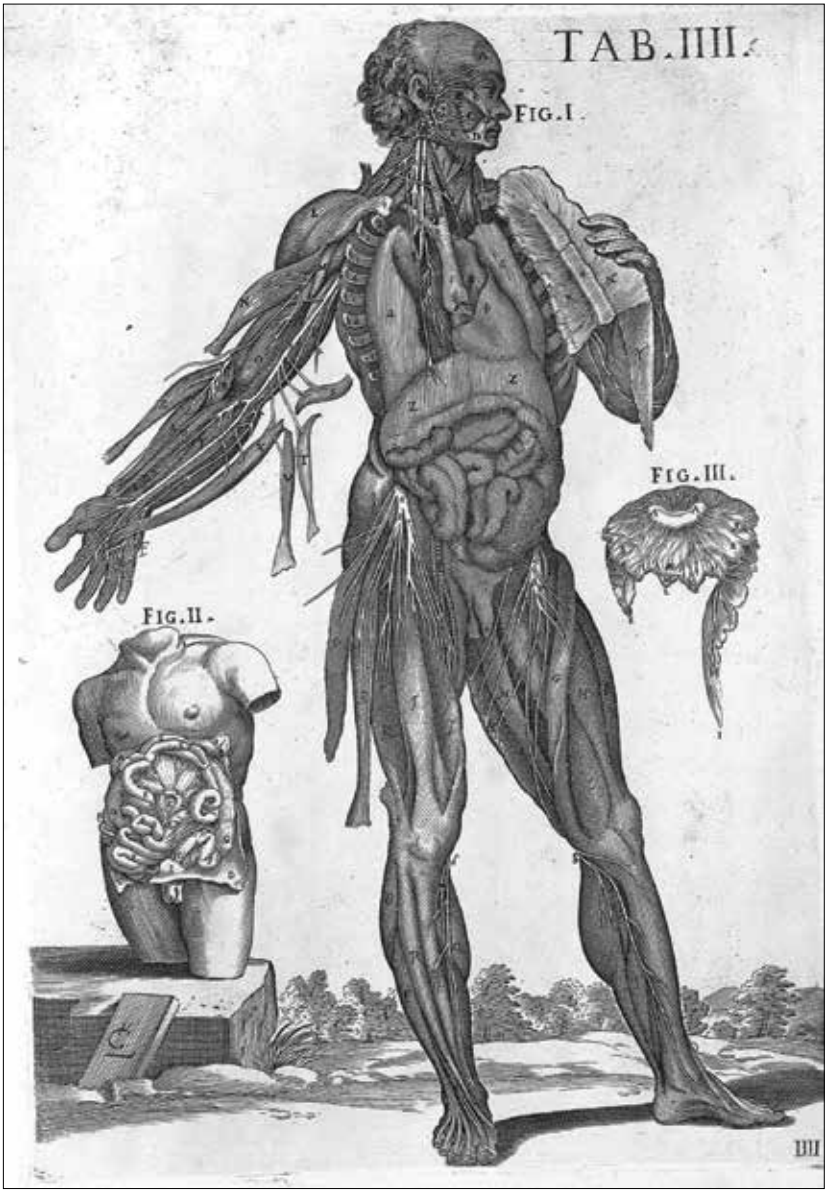

Fig. 7: Luca Ciamberlano (and possibly another engraver), after Pietro da Cortona (and with further additions), Pl. 4 of Gaetano Petrioli, *Tabulae anatomicae…*, Rome, 1741, copperplate engraving, BIU Santé, Paris

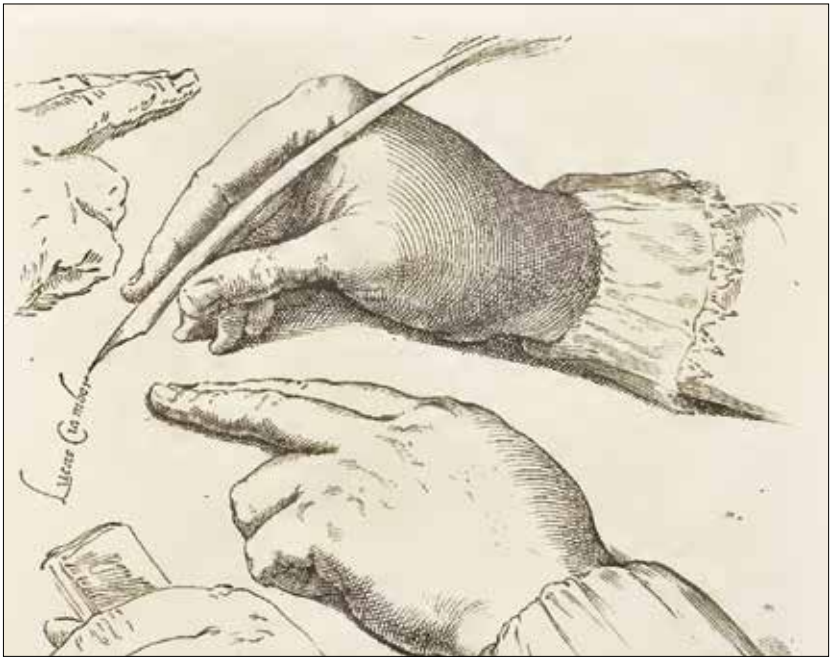

Fig. 8: Luca Ciamberlano (after Agostino Carracci?), detail of an unpaginated plate from *Scuola perfetta per imparare a disegnare tutto il corpo humano*, Rome, 1626, Getty Research Institute, available through http://archive.org

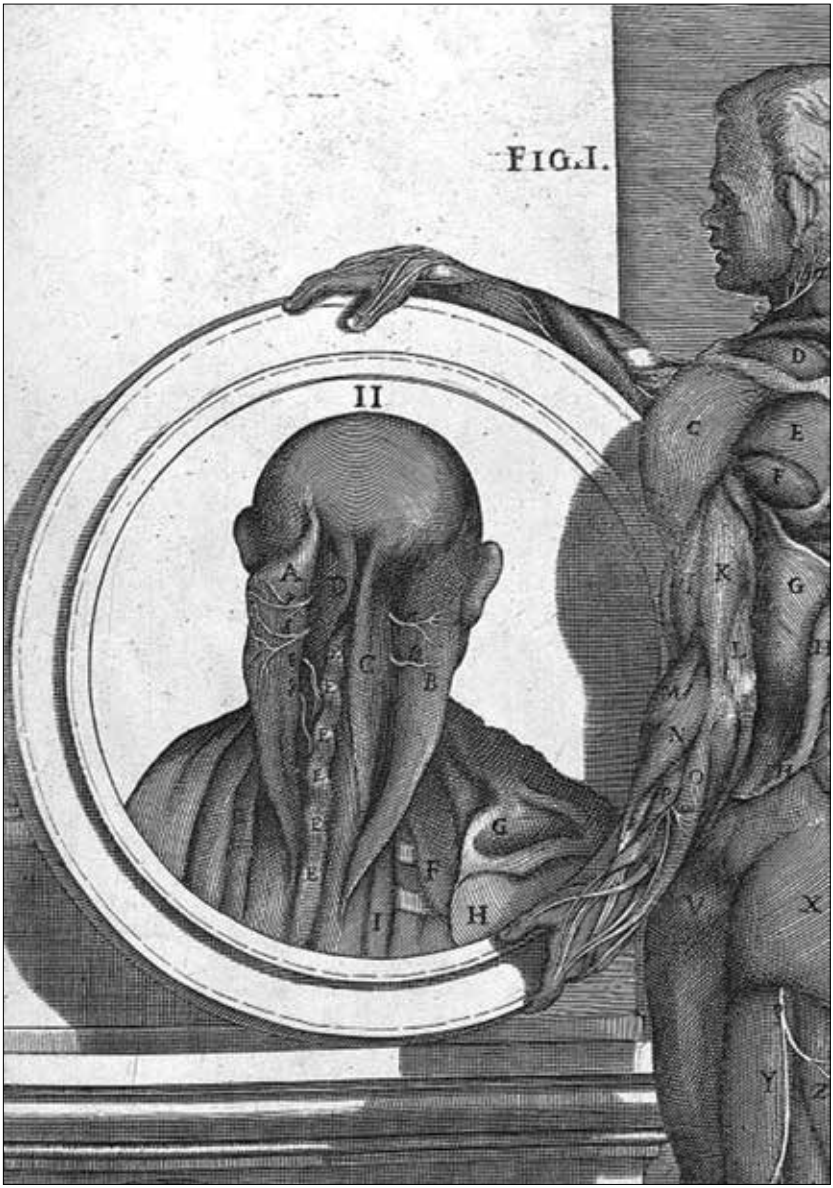

Fig. 9: Luca Ciamberlano (and possibly another engraver), after Pietro da Cortona (and with further additions), detail of Pl. 16 of Gaetano Petrioli, *Tabulae anatomicae…*, Rome, 1741, copperplate engraving, BIU Santé, Paris

Fig. 10: Luca Ciamberlano (and possibly another engraver), after Pietro da Cortona (and with further additions), detail of Pl. 12 of Gaetano Petrioli, *Tabulae anatomicae…*, Rome, 1741, copperplate engraving, BIU Santé, Paris

Fig. 11: Pietro da Cortona, Study after the nude, red chalk,
© Trustees of the British Museum

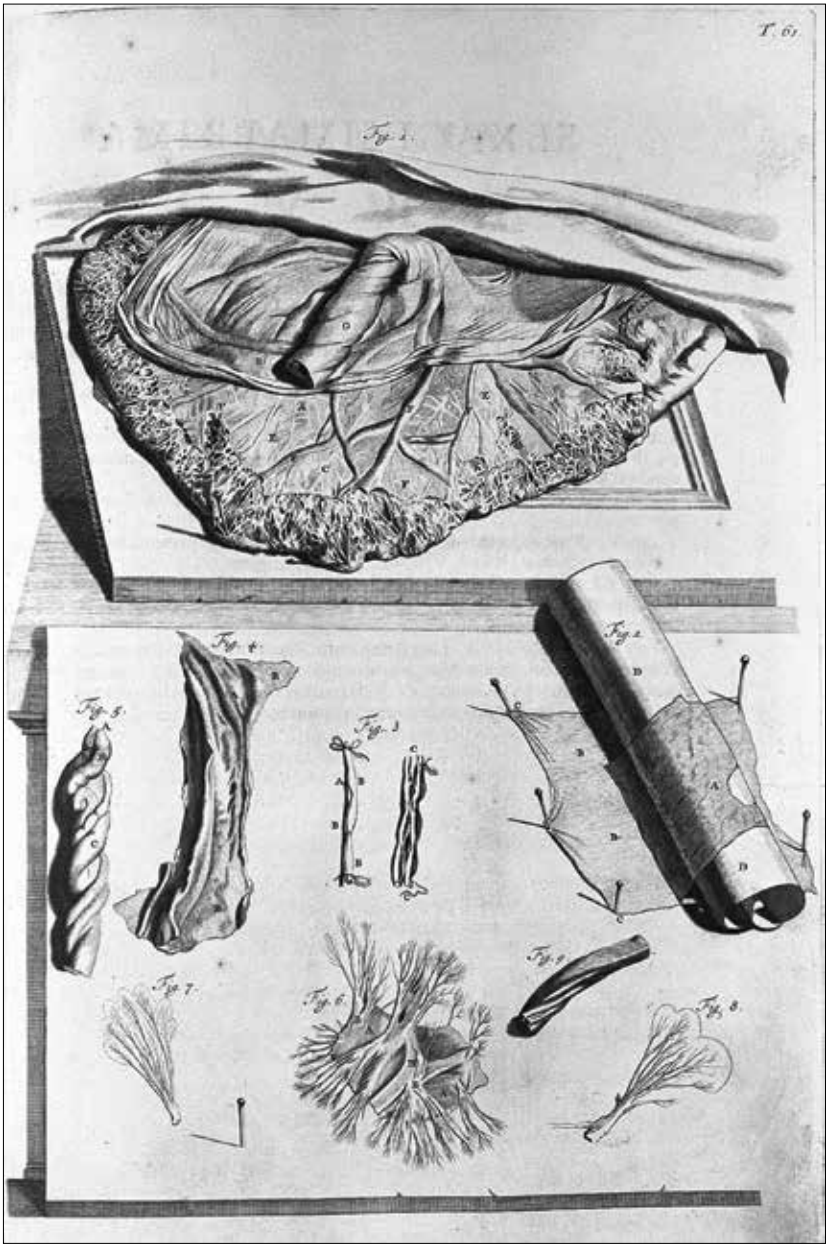

Fig. 12: Gérard de Lairesse, illustration from Govard Bidloo, *Anatomia humani corporis…*, Amsterdam, 1685, copperplate engraving, Wellcome Library, London

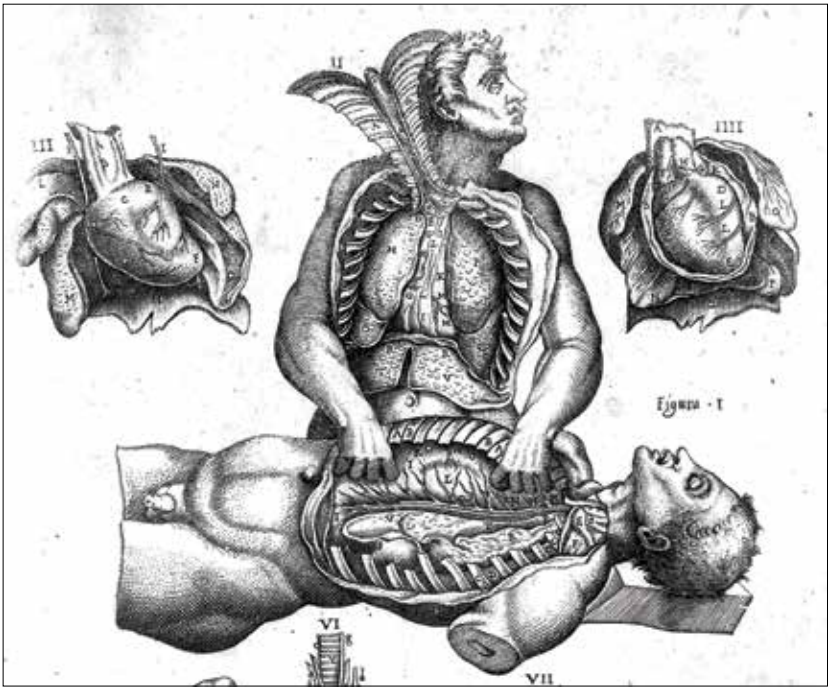

Fig. 13: Illustration from Juan Valverde de Hamusco, *Historia de la composicion del cuerpo humano*, Rome, 1556, Book IV, page 108, detail, copperplate engraving, Wellcome Library, London

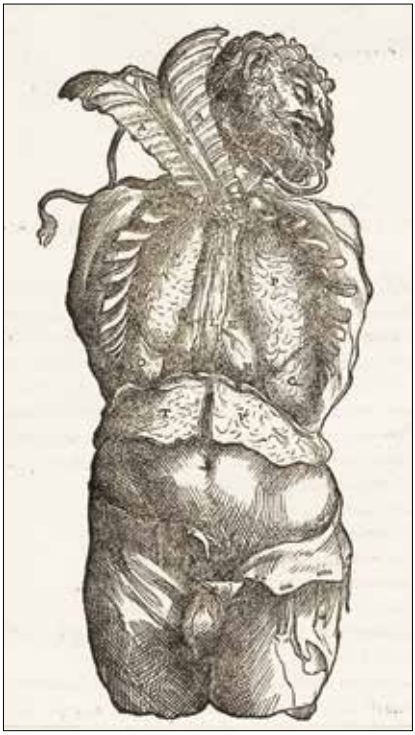

Fig. 14: Illustration from Andreas Vesalius, *De humani corporis fabrica…*, Basel, 1543, Book VI, page 560, woodcut, Wellcome Library, London

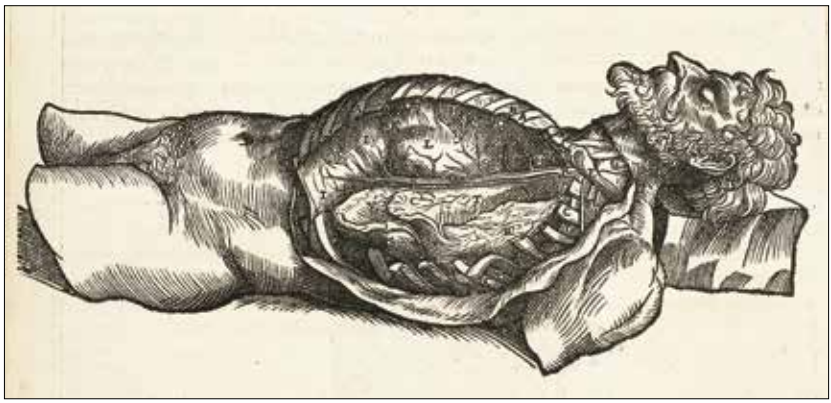

Fig. 15: Illustration from Andreas Vesalius, *De humani corporis fabrica…*, Basel, 1543, Book VI, page 559, woodcut, Wellcome Library, London

Fig. 16: Luca Ciamberlano (and possibly another engraver), after Pietro da Cortona (and with further additions), Pl. 10 of Gaetano Petrioli, *Tabulae anatomicae…*, Rome, 1741, copperplate engraving, BIU Santé, Paris

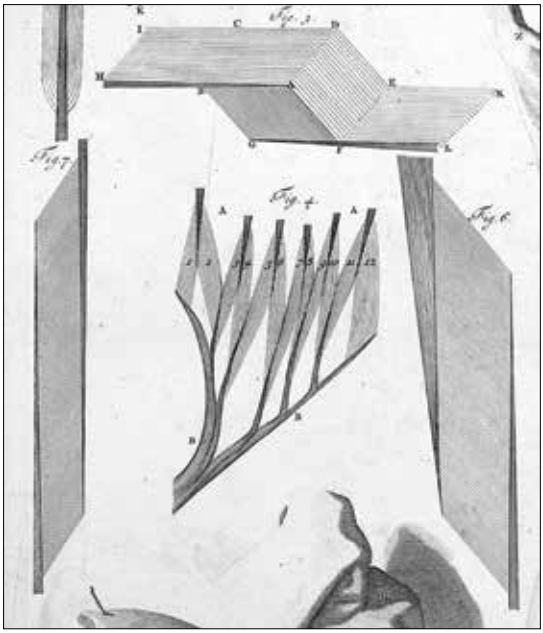

Fig. 17: Gérard de Lairesse, Anatomical plate detailing the fibres of the muscles, from Govard Bidloo, *Anatomia humani corporis…*, Amsterdam, 1685, copperplate engraving, detail, Wellcome Library, London

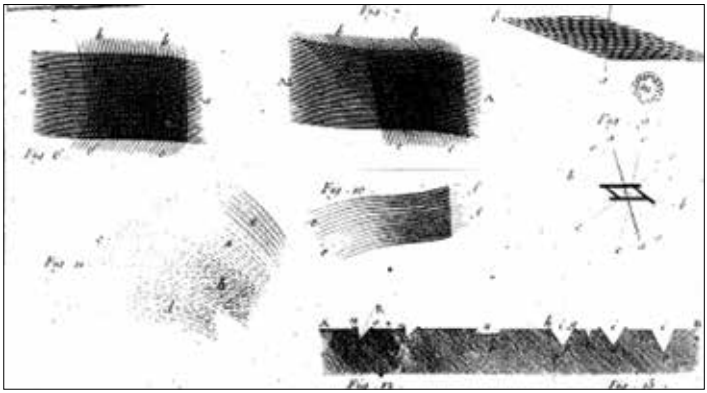

Fig. 18: Plate showing copper engraving technique, from Denis Diderot, Jean Le Rond d'Alambert, Pierre Mouchon, *Recueil de planches, sur les sciences, les arts libéraux, et les arts méchaniques...*, 4ème livraison, Paris, 1767, detail, Bibliothèque Nationale de France.

Fig. 19: Luca Ciamberlano (and possibly another engraver), after Pietro da Cortona (and with further additions), Pl. 27 of Gaetano Petrioli, *Tabulae anatomicae…*, Rome, 1741, copperplate engraving, BIU Santé, Paris

Fig. 20: Jan Goeree, Drawing with Roman monumets and artefacts for *Novus Thesaurus Antiquitatum Romanorum*, Amsterdam, 1704, pen and black ink, brush and brown wash, over traces of red and black chalk, Metropolitan Museum of Art, New York; www.metmuseum.org.

NOTES

1 Daston, L., Galison, P., *Objectivity*, Zone Books, New York, 2007.

2 Kemp, M., "Temples of the Body and Temples of the Cosmos: Vision and Visualization in the Vesalian and Copernican Revolutions", in Baigrie, B. S. (ed.), *Picturing Knowledge. Historical and Philosophical Problems Concerning the Use of Art in Science*, University of Toronto Press, Toronto, Buffalo, London, 1996. Parshall, P., "*Imago Contrafacta*: Images and Facts in the Northern Renaissance", in *Art History*, 16, 4, 1993.

3 Biagioli, M., Galison, P. (eds.), *Scientific Authorship. Credit and Intellectual Property in Science*, Routledge, New York, London, 2003.

4 An attribution with which current historiography concurs (except for the drawing related to Pl. 11, of a different style and lower quality and which seems a copy of the latter). Jörg Martin Merz, the authority on Pietro da Cortona, sustains it on stylistic grounds in *Pietro da Cortona und sein Kreis. Die Zeichnungen in Düsseldorf*, Deutscher Kunstverlag, München, Berlin, 2005, p. 42. The drawings have *pentimenti* and bear traces of their transfer for engraving, so they are considered to precede the plates. See Kemp, M., "Dr William Hunter on the Windsor Leonardos and His Volume of Drawings Attributed to Pietro da Cortona", *The Burlington Magazine*, Vol. 118, No. 876, 1976, p. 147.

5 Except for the drawing corresponding to Pl. 11, see the previous note.

6 The date is inscribed on some states of the first table of the 1741 edition (*Petr*^{s} *Berret.*^{s} *Corton.*^{s} *delin. 1618*), and also mentioned in the Introduction of the 1788 second edition (*Petrus enim Berrettini has eadem tabulas elaborare coepit anno 1618, ut ex prima tabula patet.*). For the dating, see Norman, J. M., "Introduction", in *The Anatomical Plates of Pietro da Cortona. 27 Baroque Masterpieces*, Dover Publications, New York, 1986.

7 Identified with Nicolas Larchée, the dissections of which were, according to Bellori, followed by Nicolas Poussin after his arrival in Rome in 1624. Choulant, L., *History and Bibliography of Anatomic Illustration...* [1852], trans. and ed. by M. Frank [...], University of Chicago Press, Chicago, 1920, p. 235 and Kemp, 1976, p. 148 and n. 15. The handwritten note is mentioned by Dr. William Hunter in a letter transcribed in Kemp, 1976, p. 148.

8 For the letter and the history of the provenance of the drawings see Kemp, 1976, pp. 144-8.

9 Hunter, in Kemp, 1976, p. 148.

10 Petraglia, F., "Lectoribus humanissimis...", in the 1788 edition, pp. xii-xv.

11 Identified by Choulant, p. 235.

12 For the dating of the plates see Dühme, L., *Die Tabulae anatomicae des Pietro Berrettini da Cortona*, Institut für Geschichte der Medizin, Köln, 1980, pp. 7-8. I do not agree though with the author's reading of two graphic signs

on the bottom left of Pl. 20 as the number 22, standing for 1622, especially since that is one of the plates added later.

13 Roberts K. B. & Tomlinson, J. D. W., *The Fabric of the Body. European Traditions of Anatomical Illustration*, Clarendon Press, Oxford, 1992, p. 276.

14 Kemp, 1976, p. 147.

15 Roberts & Tomlinson, pp. 274, 278.

16 Laurenza, D., *Art and Anatomy in Renaissance Italy. Images from a Scientific Revolution*, The Metropolitan Museum of Art, New York, 2012, pp. 29-33.

17 I have traced in the Istituto Nazionale per la Grafica in Rome a set of the plates which, unlike all the copies of the 1741 edition that I have seen, bears, on each of the 26 plates (Pl. 27 is missing), the inscription "LIBER II" (or LIB II). They come from the Biblioteca Corsiniana and are on deposit, since 1895, from the Accademia Nazionale dei Lincei. They all contain the "supplemental figures". In this state of the reseach I am inclined to interpret them as a first proof made after the plates, but I cannot say when they were done. The inscription "LIBER II" suggests that at some point the plates were intended to illustrate one book of a larger medical publication. I would like to thank Dott.ssa Francesca Orobi from the Istituto Nazionale per la Grafica in Rome and Dott.ssa Ebe Antetomaso from the Biblioteca dell'Accademia Nazionale dei Lincei e Corsiniana for their kind assistance in the research of this set of plates.

18 For medical practice in seventeenth-century Rome, see De Renzi, S., "Medical competence, anatomy and the polity in seventeenth-century Rome", in Cavallo, S., Gentilcore, D. (eds.), *Spaces, Objects and Identities in Early Modern Italian Medicine*, Blackwell Publishing, Oxford, 2008, p. 91.

19 "The work was intended evidently for the Nerves only." Hunter, in Kemp, 1976, p. 148.

20 Roberts & Tomlinson, pp. 276-8.

21 Dühme, p. 48.

22 The additional plates (Pl. 20-26) treat other topics – the brain, the eye, the ear, the vascular system, etc. –, another features concurring with the general agreement that they are later afterthoughts not intended in the original project.

23 Petraglia, pp. x, xv.

24 One way of figuring out the real audience of the book, if not the intended audience, is checking if different copies of the book have marginal notes (by medical practitioners, for example) on them. I have inspected six copies of the 1741 edition and six copies of the 1788 edition in different libraries in Rome, London and Berlin, but none had any adnotations on them. Only the 1741 copy of the book in the Wellcome Library in London had notes on one plate indicating, as I shall further discuss, medical use.

25 De Renzi, pp. 79-95; Siraisi, N. G., "Rome: Medicine, Histories, Antiquities, and Public Health", in *History, Medicine, and the Traditions of Renaissance Learning*, University of Michigan Press, Ann Arbor, 2007, pp. 168-193.

26 For Cassiano dal Pozzo's *Paper Museum*, see Cropper, E., Dempsey, Ch., *Nicolas Poussin. Friendship and the Love of Painting*, Princeton University Press, Princeton, New Jersey, 1996, esp. pp. 110-11; on his activity as a natural historian, Haskell, F. et. al., *Il Museo Cartaceo di Cassiano dal Pozzo. Cassiano naturalista*, *Quaderni Puteani* 1, Olivetti [f.l.], 1989.

27 History of science has put forward in the last decades a new vision about scientific images, expanding the notion of authorship to include artists, instrument makers, etc., and thus completely changing the traditional way of describing the process of construction of knowledge. My emphasis in what follows is somewhat different, trying to elucidate the *early modern discourse* about scientific/artistic authorship.

28 *Auctoris qui has Tabulas confinxit (nomen ignoratur)...* Fausto Amidei, "Studiose lector", in the 1741 edition (n.p.).

29 Other eighteenth-century authors before and after Petraglia tried to solve the enigma. See Albert von Haller, *Bibliotheca Anatomica: qua scripta ad anatomen et physiologiam facienta a rerum initiis recensentur. Tomus I.* TIGURI, apud Orell, Gessner, Fuessli, et Socc., 1774, pp. 340, 579; and the exchange of letters published in *Antologia romana*: "Lettera del Sig. Dott. Antonio Marinucci, medico primario sopra-numero del Venerabile Arcispedale della Santissima Consolazione al Sig. Dottor Pietro Orlandi sopra alcune notizie risguardanti il già celebre anatomico, e chirurgo Gio. Guglielmo Riva" (Vol. XV, Num. IV, 1788, Luglio, pp. 28-9) and "Lettera del Sig. Dott. Pietro Orlandi al chiarissimo Sig. Cavaliere Abate Girolamo Tiraboschi consigliere di S.A.S. il Sig. Duca di Modena, pesidente della ducal biblioteca, e galleria delle medaglie, e professore onorario nell'università della stessa città, sopra alcune memorie appartenenti alla vita del celebre medico, ed anatomico Romano Monsignor Gio. Maria Castellani archiatro della san. mem. di Gregorio XV" (Vol. XV, Num. XXVI, 1788, Decembre, pp. 204-5).

30 Petraglia, p. x.

31 Petraglia, pp. xii and xiv.

32 Kusukawa, S., *Picturing the Book of Nature. Image, Text, and Argument in Sixteenth-Century Human Anatomy and Medical Botany*, University of Chicago Press, Chicago and London, 2012, p. 45.

33 Kusukawa, 2012, pp. 47, 87.

34 Johns, A., "The Ambivalence of Authorship in Early Modern Natural Philosophy", in Biagioli & Galison, p. 70.

35 Kusukawa, 2012, pp. 64-9, 80-97.

36 Laurenza, p. 27.

37 Kusukawa, 2012, pp. 241-2.

38 Smith, P. H., *The Body of the Artisan. Art and Experience in the Scientific Revolution,* University of Chicago Press, Chicago, London, 2004.

39 Fuchs, L., *De Historia Stirpium* [1542], trans. in Ogilvie, B. W., *The Science of Describing. Natural History in Renaissance Europe,* University of Chicago Press, Chicago, London, 2006, p. 196.

40 Martin Kemp (1996, p. 42) coined this expression which he used to describe the series of elements and strategies meant to claim and increase the credibility and authority of the image.

41 Nutton, V., "Representation and Memory in Renaissance Anatomical Illustration", in Meroi, F., Pagliano, C. (eds.), *Immagini per conoscere. Dal Rinascimento alla Rivoluzione scientifica*, Leo S. Olschki Editore, Florence, 2001, pp. 73-4. Talvacchia, B., "Mythology, Sexuality, and Science in Charles Estienne's Manual of Anatomy", in *Taking Positions. On the Erotic in Renaissance Culture*, Princeton University Press, Princeton, New Jersey, 1999, pp. 161-88.

42 Petherbridge, D., "Art and Anatomy: The Meeting of Text and Image", in Petherbridge, D., Jordanova, L., *The Quick and the Dead. Artists and Anatomy,* University of California Press, Berkeley, Los Angeles, London, 1997, p. 54.

43 Kusukawa, 2012, p. 89.

44 Choulant, pp. 203-4. The images are drawn by Giovanni Pesci and engraved by Bald. Gabbuggiani, as appears on every single plate. They appear in *Corso anatomico o sia universal comento nelle tavole del celebre Bartolomeo Eustachio...* of 1740.

45 He just says "the absurdity of *some person* into whose hands the Drawings had fallen" (my emphasis). Hunter in Kemp, 1976, p. 148.

46 Petraglia (pp. xii-xiii) does not change this features according to Pietro da Cortona's drawings which he obviously did not see himself. He had knowledge of them through Albrecht von Haller's *Bibliotheca anatomica* of 1774, but believed them not to be related to the plates or possibly not even made by Pietro da Cortona.

47 Felfe, R., "Collections and the Surface of the Image: Pictorial Strategies in the Early-Modern Wunderkammern", in Schramm, H., Schwarte, L., Lazardzig, J. (eds.), *Collection, Laboratory, Theater: Scenes of Knowledge in the 17th Century*, Walter de Gruyter, Berlin, New York, 2005, pp. 249-50.

48 Dühme, p. 37 and Roberts & Tomlinson, p. 275.

49 Felfe, p. 263.

50 *Insuper nunnullarum Iconum inconcinna prorsus, atque inordinata in ipsarum potissimum areis describendis distributio, et a principe Figura insignis discrepantia.* Petraglia, pp. xiii-xiv.

51 Francesco Milizia, writing in 1797 in his *Dizionario di belle arti*: "Borromini in architecture, Bernini in sculpture, Pietro da Cortona in painting [...] represent a diseased taste – one that has infected a great number of artists."

52 Ogilvie, pp. 201-2.

53 Carlino, A., "Frammento, artificio e ricomposizione: l'anatomia del particolare e la medicina dell'età barocca", in Carlino, A., Ciardi, R. P., Luppi, A., Petrioli-Tofani, A., *Visioni anatomiche. Le forme del corpo negli anni del Barocco*, Silvana Editoriale, Milano, 2011, pp. 13-21.

54 Hillman, D., Mazzio, C., "Individual Parts", in Hillman, D. & Mazzio, C. (eds.), *The Body in Parts. Fantasies of Corporeality in Early Modern Europe*, Routledge, New York, London, 1997, p. xiv.

55 Kusukawa, 2012, pp. 210-11.

56 The only one who tries to give a sense to this understanding of the framed images is David Packwood in a conference paper from 2010 at the University of Durham, "Specular Visuality and Artistic Self-Reflexivity in Pietro da Cortona's Drawings of the Tabulae Anatomicae of 1619" [sic!], published on the author's account page on Academia.edu. He understands self-reflexivity in a different sense than I do, and our arguments do not overlap.

57 Marin, L., "Du cadre au décor ou la question de l'ornement dans la peinture", *Hors cadre*, 2, 1984, pp. 180-2.

58 Stoichiță, V. I., *The Self-aware Image. An Insight into Early Modern Meta-Painting*, Cambridge University Press, Cambridge, New York, 1997.

59 *... l'espace de présentation où le tableau se présente représentant*. Marin, 1984, p. 185.

60 Jordanova, L., "Happy Marriages and Dangerous Liaisons: Artists and Anatomy", in Petherbridge & Jordanova, p. 101.

61 *L'instauration du tableau...* is the original title of Stoichiță's book, first published in French in 1996.

62 Dr. Harvey Cushing, *apud* Spielmann, M. H., *The Iconography of Andreas Vesalius, Anatomist and Physician (1514-1564)*, John Bale, Sons & Danielsson, London, 1925, p. 152. The image is available at http://catalogue.wellcomelibrary.org/record=b1657611 (last accessed June 3rd, 2014).

63 Dackerman, S., "Prints as Instruments", in Dackerman, S. (ed.), *Prints and the Pursuit of Knowledge in Early Modern Europe,* Yale University Press, New Haven, London, 2011, p. 24.

64 Dackermann, p. 24.

65 Dackermann, pp. 30-2.

66 From Vesalius' letter to Johannes Oporinus, the printer, published at the beginning of the *Fabrica*. Translation from http://vesalius.northwestern.edu/, Printer's note to the reader (last accessed June 1st, 2014).

67 Juan Valverde, apud Kemp, M., "*The mark of truth*: looking and learning in some anatomical illustrations from the Renaissance and eighteenth century", in Bynum, W. F., Porter, R. (eds.), *Medicine and the five senses*, Cambridge University Press, Cambridge, 1993, p. 101.

68 For the theoretisation of the transitive / reflexive dimension of the image, see Marin, L., *On representation*, Stanford University Press, Stanford, 2001, pp. 352 ff.

69 *... ouverture de l'invisible dans le visible même*. Marin, L., "L'opaque", in *L'Art, effacement et surgissement des figures: hommage à Marc Le Bot,* Publications de la Sorbonne, Paris, 1991, p. 29.

70 Felfe.

71 Kusukawa, S., "The Uses of Pictures in the Formation of Learned Knowledge: The Cases of Leonhard Fuchs and Andreas Vesalius", in Kusukawa, S., Maclean, I. (eds.), *Transmitting Knowledge. Words, Images, and Instruments in Early Modern Europe*, Oxford University Press, Oxford, 2006, p. 86. Harcourt, G., "Andreas Vesalius and the Anatomy of Antique Sculpture", *Representations*, No. 17, Winter 1987, pp. 28-61.