The academization of art

*A practice approach to the early histories of the Accademia del Disegno and the Accademia di San Luca*

Jonker, M.J.

Citation for published version (APA):

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Chapter Nine

Conceptions and Practices of disegno in Artistic Treatises and Academies

9.1. Artists as intellectuals: authorship of artistic treatises

Shortly after the foundation of the Accademia del Disegno and the Accademia di San Luca, several of their members composed theoretical texts, in which the concept of disegno occupied a central place. As discussed, disegnare could refer both to the practical activity of drawing and to the intellectual process of making a design; accordingly, disegno could stand for a physical sketch or drawing and for a mental design. Although working from within the same conceptual framework, in their treatises the artists presented different accounts of both aspects of disegno and the relation between them. When analyzing these treatises and comparing them with each other from a practice-theoretical perspective, it becomes clear that they functioned in two distinct social practices, those of art education and of literary production. What is more, their authors disagreed about the manner in which these practices were to function and to develop within the art academies. The differences were derived, at least in part, from the conflicting goals pursued in these practices. Furthermore, the treatises show that it was possible to express dissenting views, not only with respect to the long-established status of the visual arts in society, but also to the opinions of the political rulers and the tradition of the ‘demotion of practice’.

One important issue that is present on the background of these treatises and discussions is the question whether artists should be content with producing works of art or whether they should also engage in theoretical debates about their professions. The opinions of two letterati on this issue are pertinent here, because of their connections to the artistic community and function within the Accademia del Disegno. These letterati are Benedetto Varchi and Vincenzo Borghini. In 1547, Varchi delivered a lecture in the Accademia Fiorentina, in which he discussed the relative nobility of painting and sculpture and for which he solicited the opinions of practicing artists. After the funeral of Michelangelo in 1564, this debate was re-ignited in the Accademia del Disegno and it evoked a response from Borghini, who was at that moment the lieutenant of the institution.
9.2. Reasoning or doing? The paragone in Varchi and Borghini

The clearest example of Benedetto Varchi’s vicinity to the Florentine artistic community around the middle of the sixteenth century is his *Due lezizioni* (‘Two Lectures’), published in 1550. Varchi delivered the two lectures three years earlier during public meetings of the Accademia Fiorentina in Santa Maria Novella. It has been argued that these lectures were instrumental in elevating the status of the arts of painting and sculpture and that they, thereby, laid the conceptual groundwork for the foundation of the Accademia del Disegno in 1563.\(^{1007}\) Moreover, the lectures provide the most forceful piece of evidence of the growing overlap between artistic and literary practices in sixteenth-century cultural academies.

The first lecture was a commentary on a poem by Michelangelo, written ten years earlier. Varchi interpreted Michelangelo’s sonnet about love as a description of the artistic process. For this reason, this lecture has been interpreted as a significant contribution to the formation of an autonomous theory of the visual arts.\(^{1008}\) The second lecture, however, is more important in the context of this study. Varchi delivered his second speech a week after the first, on March 13, 1547. Even more than the first, this talk has been seen as a milestone in the history of art theory, because of its contribution to the so-called *paragone* tradition, i.e. the comparison between the arts, in which Leonardo da Vinci played a foundational role.

The published version consists of three parts, preceded by a short *proemio*, in which Varchi places the arts in an Aristotelian ontological and psychological framework.\(^{1009}\) On the ontological level, Varchi first distinguishes eternal from non-eternal things. The former are celestial and divine, have neither end nor beginning, and therefore no efficient cause. These things are studied in metaphysics. The non-eternal things are divided in natural and artificial things. They do have an efficient cause. For natural things, which include human beings, the efficient cause is God. They are studied in physics or natural philosophy. For artificial things, the efficient cause is man. According to Varchi, they are much less worthy than the natural things, as the natural things are infinitely less

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\(^{1007}\) See Quiviger 1987, 221.

\(^{1008}\) Mendelsohn 1982, 91.

\(^{1009}\) In the short *Proemio*, Varchi refers three times to Aristotle (once through his Arabic commentator Averroës) and once to Pliny the Elder.
perfect than the divine things. However, they are the sources of great pleasure and very useful for moral life.1010

On a psychological level Varchi discusses the five habits of the human intellect (abiti dell’intelletto) as distinguished by Aristotle.1011 A first division exists between particular reason and universal reason. As the name suggests, particular reason only knows particular things, that is, material things that come into being and decay. Universal reason, on the other hand, only deals with things that are stripped from all matter, that is, the incorruptible and universal Forms inherent in, but conceptually distinguishable from, material things.

Universal reason itself is distinguished in Superior and Inferior reason. Superior reason, also called the speculative or contemplative intellect, comprises three of the five habits of the intellect. The first, itself somewhat confusing called ‘intellect’ (intelletto), knows of the first principles.1012 The second is called ‘wisdom’ (sapienza) and the third ‘science’ (scienza). The latter consists of knowledge of universal, necessary and eternal things, which is achieved by means of demonstration. Wisdom does not have a specific or proper object of knowledge, but it comprises both ‘intellect’ and ‘science’, although Varchi adds that it is different from both.1013

The two remaining habits of the intellect belong to Inferior reason, which is also called the ‘practical’ or ‘active’ intellect. The fourth habit is called ‘prudence’ (prudenza) and the fifth ‘factive’ (fattibile). Whereas prudence comprises moral virtue, the factive habit contains all the arts.1014 The objective of this part of the soul is not to know but to make and operate (fare et operare). Finally, as the terms Superior and Inferior reason indicate, Varchi states that three habits of the intellect that belong to the former are more noble than the two habits of the latter. He concludes the Proemio by comparing the arts and sciences on the point of their nobility. He holds that all the sciences, having contemplation as their goal, are nobler than all the arts, because their objective is to operate.1015

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1010 Varchi 1960, 5-6.
1011 Varchi (ibidem, 8) here explicitly refers to Aristotle’s Nicomachean Ethics, Book 6, Chapter 4.
1012 According to Summers (1981, 204-205), three meanings of intelletto can be distinguished in Varchi’s writings: it can stand for the human soul in general; it signifies the part of the soul that deals with intelligible things; and it can stand for fantasia (‘fantasy’). In this passage under discussion the first two meanings are in play.
1013 Ibidem, 7. The corresponding terms used by Aristotle are nous (‘understanding’), sophia (‘wisdom’), and episteme (‘science’), respectively.
1014 These terms correspond to Aristotle’s phronesis (‘practical intelligence’) and techne (‘craft-knowledge’).
1015 Varchi 1960, 7-8.
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In the first part of the lecture, Varchi discusses the nobility of the arts (arti) in general. He argues that medicine is the noblest of the arts, because its goal is maintaining or recovering the health of man. Architecture is ranked second not only because of its necessity and utility for man, but also because it uses of other sciences such as geometry. Painting and sculpture are placed below architecture because they are not necessary and because, as decorations for buildings, they are dependent on architecture.

The second part of the lecture is the paragone (‘comparison’) between painting and sculpture. Varchi does not use the term paragone but disputa, thereby referring to the Scholastic form of argument, the disputatio, which also served as the model for the debates in cultural academies. Varchi starts the disputa by admitting that he knows little of both arts. Nonetheless, he states that as a philosopher he feels entitled to make his comments about painting and sculpture. This implies that Varchi conceives of the discussion as a philosophical one. However, in order to make up for his lack of knowledge of painting and sculpture he had asked several artists to give their views on the matter. The responses of eight of these artists are published as an appendix to the lecture. The artists are Vasari, Bronzino, Pontormo, Francesco da Sangallo, Tasso, Tribolo, Cellini, and Michelangelo. Five of these artists were members of the Accademia Fiorentina: Bronzino, Sangallo, Tribolo, Cellini, and Michelangelo. On Vasari, Tasso, and Pontormo there is no information in the documents in the archive of the literary academy.
Varchi divides the artists in question into two categories. In the first, there are ‘all the most excellent sculptors and painters who can be found today in Florence’ (tutti gli scultori e pittori più eccellenti che oggi in Firenze si ritrovino). Varchi had asked for their opinion in preparation of his lecture and states that he found their responses both useful and pleasant. He adds that this shows that they do not only know how to use the chisel and brush but also the pen, and that thereby they show themselves as followers of ‘their Master’ (il Maestro loro).\textsuperscript{1020} This ‘Master’ is, of course, Michelangelo, to whose sonnet Varchi had devoted the first lecture for the Accademia Fiorentina. This means that Michelangelo comprises a category of his own. In contrast to the opinions of the other artists, which were solicited and gathered before delivering the lecture, Varchi had sent Michelangelo the written version of the lecture afterwards and had asked for his judgment and commentary.\textsuperscript{1021}

Not surprisingly, each artist favors his own art over the other. For instance, Vasari, Bronzino, and Pontormo argue that painting is nobler than sculpture because it requires more mental effort (fatica d’ingegno) rather than physical toil (fatica di corpo) and that it is more universal, i.e. that it can represent more aspects and phenomena of nature, such as colors, rain, fire, and clouds. The sculptors Tasso, Tribolo, Cellini, and Sangalio, on the other hand, argue that sculpture is nobler because it lasts longer – i.e. almost perpetually – and is, thus, more useful, and because it has to be perfect from all – eight – viewing points (vedute), whereas painting only from one, i.e. the front. In his short letter, Michelangelo argues for the primacy of sculpture, stating that good painting resembles relief, and bad relief resembles painting; and, moreover, that sculpture is

\textsuperscript{1020} Recall that in 1562 Varchi would praise Montorsoli in a similar fashion in their poetic exchange. See section 7.4.
\textsuperscript{1021} Varchi 1550/1960, 34-35. According to Mendelsohn (1982, 93 and 147-159), with the exception of Michelangelo’s, all letters are dated between January 28 and February 18, 1547. However, she suggests that the artists imitated the style and content of Varchi’s lecture on March 13, 1547. So, rather than concluding that Varchi used the arguments in the artists’ letters for his lecture, she assumes that the artists somehow knew of the content of the lecture before writing their letters. Although the latter is not impossible, the former seems to be more plausible.
the lantern of painting and that their relationship is that of the sun to the moon.\footnote{Varchi 1550/1960, 82.}

Varchi’s position on the artists’ contribution is highly ambivalent. On the one hand, he praises their writings and cites their arguments approvingly in his lecture. On the other hand, whereas Varchi cites Castiglione, Leon Battista Alberti, Pliny the Elder, Socrates, Plato, and Seneca as authorities, the names of the contemporary artists, who sent him their letters, are not listed in the lecture itself. More importantly, he makes clear that their assertions do not touch upon the core of the question at hand. That is to say, when looking from a philosophical perspective (procedendo filosoficamente), the artists’ arguments do not deal with the essence or substance (sostanza) of the arts of sculpture and painting, but with their accidents (accidenti).\footnote{Ibidem, 43-45.}

In the first disputa, Varchi had argued that in order to decide which art is nobler, one has to look at their goals. According to him, the goals of painting and sculpture are the same, namely the ‘artificial imitation of nature’ (artifiziosa imitazione della natura), and that, for this reason, they are actually one art. Furthermore, not only do painting and sculpture have the same goal, but they are also derived from the same principle or source, namely disegno (disegno è l’origine, la fonte e la madre di amende loro).\footnote{Similar descriptions of disegno as the foundation or mother of the arts were given by Vasari, Sangallo, and Pontormo in their letters. See Ibidem, 62, 68, and 73.} The fact that an established and popular letterato like Varchi identified disegno as the common principle of painting and sculpture was an important moment in the academization of the visual arts, because it conceptually legitimated their coupling.

Even though Varchi argued that painting and sculpture are essentially the same art, he clearly favored the latter. At the end of the second disputa he agrees with one of the arguments put forward by the sculptors, in which the difference between painting and sculpture is described as equal to the difference between appearing and being.\footnote{Ibidem, 42: ‘gli scultori dicono che la loro arte è vera e la pittura dipinta, e che vi è tanta differenza quant’è dall’essere al parere.’} Whereas painters make seem what is not through their ingenuity and artificiality, the products of the sculptors are truer.\footnote{Ibidem, 50: ‘Onde, se bene gli artefici della pittura fussero più ingegnosi et avessero bisogno di maggiore artifizio, gli scultori non di meno sarebbero più veri (…).’} Varchi’s arguments about the identical goals and the sources of painting and sculpture, as well as those in favor of the latter, derive from Castiglione’s Il libro del Cortegiano (1528).\footnote{Castiglione 1965, 81-83: ‘E benché diversa sia la pittura dalla statuaria, pur l’una e l’altra da un medesimo fonte, che è il bon disegno, nasce (…) Ed a mi pare bene, che l’una
are embedded. Whereas Castiglione brings his arguments forward in a courtly dialogue, Varchi places them in a philosophical system that he presented at the Accademia Fiorentina.

Thus, on the one hand the visual arts are deemed worthy and noble enough to be the subject of a *disputa*. Moreover, in the lectures, painting and sculpture are attributed a certain theoretical and intellectual status by being placed in a familiar – Aristotelian – philosophical framework. Finally, the fact that the responses of eight artists are published as appendices to the lecture heightens the importance Varchi that attached to their opinions. This was an innovative approach, by which he elevated these artists to authorities on theoretical matters, although he did not grant them the same status as the classical authors and philosophers. On the other hand, painting and sculpture receive from Varchi the lowest place within his Aristotelian framework of the arts and sciences. And Varchi clearly conceives the artists’ philosophical and literary status, as well as the quality of their arguments, as lower than that of the authorities he explicitly mentions by name in his lectures.

Another important *letterato* with contacts in the Florentine artistic community was the first *luogotenente* of the Accademia del Disegno, Vincenzo Borghini. In a speech delivered on the occasion of the feast of San Luca in 1564 before the academy, Borghini also addressed the subject of the *paragone* and the role of the artists in this debate. In the preparation to, and aftermath of, the obsequies for Michelangelo in July 1564, fierce disputes had erupted among the academicians about the position of the statues personifying the arts of painting and sculpture on the catafalque. The disagreement boiled down to the question of the *paragone*. Especially Cellini was adamant to defend the honor of sculpture against painting. In a draft for a speech that Borghini wrote on the occasion of the celebration of the feast of Saint Luke in 1564, he argues that in engaging in this debate the artists ‘leave the house, where [they] are masters and enter the house of philosophers and rhetoricians, where [they] do not have much to say’. Moreover, he characterizes the

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1028 Lorenzoni 1912, 12: ‘(…) come voi entrerete a disputare, voi uscite di casa vostra, dove voi siete patroni et entrate in casa [d]i filosofi et Retori, dove voi havete non troppo gran parte e dove noi siam patroni (…).’
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institution as an *Accademia di FARE, non di RAGIONARE* (‘an academy for DOING, not for REASONING’).\(^{1029}\)

Borghini also commented on the *paragone* published by Varchi in notes that date from the same period. The lieutenant of the art academy criticizes and ridicules most of the artists’ contributions to the debate, including that of Michelangelo.\(^{1030}\) As in the notes for the lecture for the feast of San Luca of 1564, Borghini holds that instead of engaging in theoretical matters, the artists should do what they know best, that is produce works of art.\(^{1031}\) Although in his speech and notes the *luogotenente* first and foremost admonished the academicians to refrain from undertaking further discussions that might undermine the unity of the institution, his remarks could easily be understood as discouragement to professional artists from embarking upon art theoretical endeavors in general.\(^{1032}\) In any case, compared to Varchi, Borghini was much more cynical about the desirability and feasibility of the participation of artists in theoretical matters.

9.3. Vasari’s definitions of disegno

Vasari wrote his *Vite* with two types of audience in mind. On the one hand, the book was directed at his colleagues and future generations of professional artists. With his advice in the biographies and in the technical and theoretical introductions Vasari aimed to maintain the level of artistic perfection that had been achieved by the artists of his time, and especially by Michelangelo. The critical descriptions of the works of art of individual artists and of the three periods, in which he divided ‘modern’ art history, would help students to discriminate between good

\(^{1029}\) The draft of the lecture is housed in the Archive of the Spedale degli Innocenti (Arch. Innocenti, F. 30, c. 243ab) and is transcribed in Lorenzoni 1912, 10-14.

\(^{1030}\) In fact, only Vasari’s letter escapes from Borghini’s criticism.


\(^{1032}\) In the past, Borghini’s remarks have, indeed, been interpreted as such. See Kemp 1974, 236 and Goldstein 1996, 25 for this interpretation. Hughes (1986a, 9), however, does a much better job contextualizing Borghini’s remarks, both with respect to the rest of the draft and with respect to the events in 1564. Hughes correctly states that in his speech Borghini admonishes the members of the academy to refrain from internal strife and that he connects this to the *paragone* debate, in which the superiority of painting versus sculpture was disputed. Rather than seeing this as a categorical rejection of the desirability of artists engaging in theoretical disputes, Hughes argues that it should be understood from the context of the ‘bitter disputes occasioned by Benvenuto Cellini over the place allotted to the allegorical figure of Sculpture’ on catafalque for Michelangelo’s obsequies in July 1564. Therefore, Borghini’s admonition should be understood primarily from his role as *luogotenente* and controller of the academy. See Wittkower/Wittkower 1964, 19-21 about Cellini’s role in the organization of the obsequies.
and bad art and show them the right path. On the other hand, the various literary genres that Vasari employed and the help he solicited from letterati such as Annibale Caro, Paolo Giovio, and Vincenzo Borghini show that the Vite also was addressed to gentlemen and amateurs. The biographies of the artists improved their general knowledge and constituted suitable topics for courtly conversation.\footnote{Van Veen 1990, 7-14.}

In the edition of 1550, Vasari divides the history of ‘modern’ art into three periods. Art was reborn in the work of Cimabue and Giotto – who are described as ‘the first lights’ (i primi lumi) – and had its childhood from mid-thirteenth to late fourteenth century. According to Vasari, in this period the objective of art became the imitation of nature. The fifteenth century was the age of adolescence, which saw artists such as Piero della Francesca (c. 1415-1492) and Paolo Uccello (1397-1475). In this period the arts improved through the systematic use of mathematics, perspective, and anatomy, with the help of which it was possible to create more realistic images. Finally, the visual arts reached adulthood in Vasari’s own age, which started with Leonardo and culminated with ‘the divine’ Michelangelo.\footnote{Ibidem, 13.} Characteristic for the artists of this period is that they superseded the art of the previous stage – which Vasari characterizes as rather ‘dry’ – because they imbued their works with grazia (‘grace’) and facilità (facility).\footnote{Vasari’s famous example of the facilità of the artists of the modern age is that his contemporaries can produce six paintings of high quality per year, whereas in earlier periods it took a painter six years to finish one painting.} In other words, the artists of the third age were able to go beyond the rules of art that were based on mathematics and anatomy with the help of unfathomable qualities, i.e. non so che.\footnote{Rud 2011, 160-162 and Williams 1997, 44.}

In the proemio of the third and final part of the book, Vasari describes five theoretical notions that govern his interpretation of the works and style of the artists he discusses. These notions are regola (‘rule’), ordine (‘order’), misura (‘measure’), disegno, and maniera (‘manner’). Whereas the first two concepts pertain only to architecture, the last three are ‘universal’, that is they concern all three visual arts. Misura deals with producing correct and well-proportioned bodies and figures; disegno is here defined as ‘imitating the most beautiful [parts] of nature in all the figures, both in sculpture and in painting’ (lo imitare il più bello della natura in tutte le figure così scolpite come dipinte); and maniera is related to disegno in this sense, because, as Vasari argues, the former became beautiful due to the fact that artists frequently rendered (ritrarre) the most beautiful parts in nature and, subsequently, combined

\begin{itemize}
\item regola
\item ordine
\item misura
\item disegno
\item maniera
\end{itemize}
them in a single figure or body.\footnote{Vasari 1966-1987, IV, 4. According to Van Veen (1986, 22-23), \textit{disegno} here means the ‘assembly of perfect parts in a perfect figure’.
} This entails that for Vasari \textit{maniera} refers to a style that can belong either to an individual artist or to a period as a whole. For instance, according to him, the \textit{maniera} of the third period was more beautiful than that of the first and second, because artists had become accustomed to drawing the most beautiful parts of nature.\footnote{According to Kempers (1992, 294-295), this concept was closely connected to Castiglione’s \textit{sprezzatura}, i.e. a form of graceful conduct that was ‘the epitome of courteous behavior’. Therefore, Kempers argues, Vasari’s use of the concept of \textit{maniera} to denote the artistic progression in his age was particularly well chosen because it underscored the artists’ attempt to become part of courtly circles. See also Castiglione 1965, 44. See Miedema 1978-1979 for a discussion of the term \textit{maniera} in reflections on art from the sixteenth century onward. Miedema (1978-1979, 32-37) interprets the term as ‘working method’. Focusing specifically on Vasari’s use of the term, Van Veen (1986, 24-25) criticizes the interpretation of Miedema (and others) for failing to acknowledge that \textit{maniera} was intimately connected to \textit{disegno}. Van Veen argues that for Vasari the qualification ‘working method’ pertained more to \textit{disegno} than to \textit{maniera}.
} In order to be able to select these most beautiful parts, that is, to perfect one’s \textit{disegno}, the artist had to have \textit{giudizio} (‘judgment’). Moreover, according to him, \textit{disegno} and \textit{giudizio} develop together in and through experience.\footnote{Williams 1997, 44-45.}

In 1568 Vasari published the second edition of his \textit{Vite}. One of the most important changes compared to the first edition of 1550 concerned the greater emphasis on \textit{disegno}.\footnote{See, for an elaborate enumeration of the differences between both editions, Williams 1997, 31-33.} The increased focus on \textit{disegno} is manifested in various ways. In the first place, Vasari inserted at the end of many of his biographies brief discussions on the artists’ drawing style. He based his observations on sketches by their hands that he had collected in his \textit{Libro dei Disegni} (‘Book of Drawings’).\footnote{Ragghianti Collobi 1974.} Second, the 1568 edition of the \textit{Vite} contains two letters that are addressed to the \textit{artifici del disegno} (‘artisans of \textit{disegno}’), in which he thanks his fellow artists for helping him in artistic matters and he displays modesty as to his literary abilities.\footnote{Vasari 1966-1987, I, 175-176 and VI, 409-413.} Third, in the second edition Vasari devoted a special chapter to the members of the Accademia del Disegno. In this chapter he briefly discusses the lives, works, and workshop affiliations of no less than forty academicians, most of who were in the early phases of their careers. Vasari justifies the inclusion of their biographies in his book by stating that they show great promise. In
addition, he states that he inserted the accounts of their works in the second edition in order to promote the Accademia del Disegno.\footnote{Ibidem, VI, 231-255.}

In none of the modifications to the first edition discussed thusfar does Vasari explain his conception of \textit{disegno}. In order to find out what he meant with this term in the second edition, it is necessary to turn to a fourth addition, namely to the five paragraphs that he prefixed to the first chapter of his Introduction to the art of painting. It has been shown that Vasari wrote these extra paragraphs in the summer of 1564.\footnote{See for the dating of these paragraphs Barocchi 1971-1977, II, 1900 and Williams 1997, 32. This means that they were written just before the first volume of the second edition of the \textit{Lives}, of which the Introduction is a part, went to the publisher. On the publication of the first two parts of the second edition see also Rud 2011, 62.} The title of this chapter is ‘What is disegno, and how good paintings are made and recognized; and of the invention of history paintings’.\footnote{Vasari 1966-1987, I, 111: ‘Che cosa sia disegno, e come si fanno e si conoscono buone pitture et a che; e dell’inventione delle storie’. In the 1550 edition of the \textit{Vite} the title of the chapter had been ‘Come si fanno e si conoscono le buone pitture et a che; e del disegno et inventione delle storie’.}

The Introduction to the art of the painting belongs to the Introduction to the Three Arts of Disegno (\textit{Introduzione alle tre arti del disegno}), which Vasari prefixed to the biographies and which consists of thirty-five chapters in total. He refers to these chapters as the ‘theoretical part’ (\textit{parte teorica}) or ‘theoretical chapters’ (\textit{capitoli delle teoriche}) of the book. In these chapters Vasari deals mainly with techniques, materials, and how to make a work of art.\footnote{This means that this part of the \textit{Vite} is still reminiscent of the medieval tradition of practical handbooks, to which also Cennino Cennini’s \textit{Libro dell’arte} of around 1400 belongs. Vasari’s Introduction is, indeed, connected to Cennini in Brown 1960, 6, Ciardi 1971, 271, and Barocchi 1971-1977, II, 1899.} It has been observed that ‘one of the chief values of Vasari’s Technical Introduction is its insistence on artistic practice in general, as distinct from the doings of individual artists’, which he described in his biographies.\footnote{Brown 1960, 17.} The fact that Vasari was a practicing artist is most clearly shown in this technical part of the \textit{Vite}. His elaborate discussions of the handling of various materials and the processes of art production reveal his firsthand knowledge, especially in the chapters on architecture and painting, arts that he practiced professionally.\footnote{For this reason Benvenuto Cellini’s \textit{Sopra l’orefice e la scultura} can be seen as complementary to Vasari’s Introduction in its focus on the technical aspects of sculpture. Vasari’s own chapters on this art lack such an intimate knowledge. See ibidem, 7. See below for a discussion of another text by Cellini, i.e. \textit{Sopra i principii e ’l modo d’imparare l’arte del disegno}.}
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The first art that is discussed in the Introduction is architecture. Vasari calls it the ‘most universal, most necessary, and most useful of human arts’.\textsuperscript{1049} This part consists of seven chapters, in which he deals with the different types of stones used in buildings and decorations, the five architectural orders of Antiquity, and ideal architecture. In the part on sculpture, which is also comprised of seven chapters, Vasari describes the different techniques and tools for working in marble and making models in wax or clay. In addition, he discusses the procedures for making reliefs and casting bronze sculpture. In the final chapters Vasari discusses the use of other metals, plaster cast, and wood.

The third and final part of the Introduction deals with painting. Consisting of twenty-one chapters, it is three times as long as the other two parts and it covers a large variety of subjects, such as cartoons, drawings, perspective, foreshortening, fresco painting, grotesques, gilding, glass mosaic, and oil painting. As mentioned, Vasari’s conception of disegno can be found at the beginning of this part. The first paragraph of the opening chapter merits a lengthy quotation:

Because disegno, father of our three arts of architecture, sculpture, and painting, proceeding from the intellect, extracts from many single things a universal judgment, it is like a form or idea of all the objects in nature, which is very singular in its dimensions; for not only in the bodies of men and of animals, but also in plants and buildings, and sculptures and paintings, it knows the proportion of the whole to the parts and of the parts to the whole; and from this knowledge is born a certain conception and judgment, so that there is formed in the mind something which afterwards, when expressed by the hands, is called disegno; we may conclude that disegno is not other than a visible expression and manifestation of our inner conception and of that which others have imagined and given form to in their idea. And from this, perhaps, the proverb of the Greeks is derived ‘from the claw a lion’, when a certain intelligent man, seeing sculpted in a block only the claw of a lion, understands from this with his intellect the size and form of the parts of the whole animal and then the whole together, as if he had it present before his eyes.\textsuperscript{1050}

\textsuperscript{1049} Brown 1960, 5.
\textsuperscript{1050} Vasari 1966-1987, I, 111: ‘Perché il disegno, padre delle tre arti nostre architettura, scultura e pittura, procedendo dall’intelletto cava di molte cose un giudizio universale simile a una forma overo idea di tutte le cose della natura, la quale è singolarissima nelle sue misure, di qui è che non solo nei corpi umani e degl’animali, ma nelle piante ancora e nelle fabbriche e sculture e pitture, cognoce la proporzione che ha il tutto con le parti fra loro e col tutto insieme; e perché da questa cognizione nasce un certo concetto e giudizio, che si forma nella mente quella tal cosa che poi espressa con le mani si chiama disegno, si può conchiudere che esso disegno altro non sia che una apparente espressione e dichiarazione del concetto che si ha nell’animo, e di quello che altri si è nella mente imaginato e fabricato nell’idea. E da questo per avventura nacque il proverbio de’ Greci Dell’uña un leone, quando quel valente uomo, vedendo sculpita in un masso l’uña sola
Without explicitly saying so, Vasari attaches three distinct meanings to the term disegno in this passage. In the first place, he reiterates the familiar idea that disegno is the principle or father of architecture, sculpture, and architecture – an idea that he had already put forward in the first edition of the Vite and in his letter to Varchi for the latter’s paragone lecture.  

Second, Vasari seems to identify disegno with a mental capacity that can form ‘universal judgments’ about separately experienced things. What Vasari describes here in very brief and schematized form in terms of disegno, is the process of inductive reasoning or the acquisition of knowledge of the natural world, as it has been conceived since Antiquity, and particularly in Aristotle’s De Anima. This is the process, in which the ‘forms’ of the things in the outer world are transferred to the human intellect with the help of the senses. However, unlike Aristotle, for whom the knowledge gained in this way consists of what something is (i.e. its essence or substance), Vasari thinks here more of the knowledge of the proportions of the things in nature. This is confirmed by the example that he gives of the Greek proverb about the claw that is carved in a stone, and with the help of which the mind imagines the proportions of the whole lion. Therefore, notwithstanding the use of the term ‘universal judgment’ (giudizio universale) this meaning of disegno is at odds Aristotle’s theory. Furthermore, this signification of disegno and its relation to giudizio differs from the one Vasari used in the proemio to the third part of the Vite. As discussed, there giudizio was the faculty that helped disegno to select the most beautiful parts of nature.  

Finally, in the passage quoted Vasari attaches a third meaning to disegno: ‘we may conclude that disegno is not other than a visible expression (apparente espressione) and declaration of our inner conception and of that which others have imagined and given form to in
their idea.’ In terms of formulation, this is where Vasari comes closest to a definition. Here he identifies *disegno* as a physical drawing or sketch on paper that is based on a mental picture or concept. It should be noted that Vasari, thus, alters his earlier definition, in which he called *disegno* itself such a mental concept or picture. In the remainder of the chapter, the term retains this third, more practical meaning, which suggests that for Vasari *disegno* predominantly referred to something physical and external, i.e. a drawing, sketch, or outline.

Other scholars have presented a substantially different reading of this passage. This has to do with the fact that they translate the term *apparente espressione* not as ‘visible expression’ but as ‘apparent expression’. The consequence of this translation is that *disegno* is understood as only an *apparent expression* of the universal form in the mind of the artist, instead of a real one. According to this interpretation, the reason that it is only apparent is that the form in the intellect is non-material. The *disegno* expressed by the hands and the pencil or chalk, however, always has some materiality. Therefore, it is argued that Vasari understood *disegno* as being similar to ‘the figures of geometry, which are intended to prompt consideration of universal truths (...). They are suggestive of the forms of nature but must not be taken for the forms themselves, given that they are emmattered (...).’

The main problem with this interpretation is that it is not borne out by Vasari’s text. In the first place, *apparente espressione* can be, and has been, translated as ‘visible expression’. The word *apparente* is then used as ‘appearing’ in the sense of visually perceptible. This reading is also suggested by the use of the word *dichiarazione* (‘manifestation’ or ‘demonstration’), with which Vasari conjoins the terms *apparente espressione*. Furthermore, the contradiction between *apparent* and *real* expression is nowhere to be found in the text. For example, the word ‘only’ (*sola*) is not written before apparente expression. Rather, Vasari writes that *disegno* is the expression by the hands of the concept or judgment that is formed in the mind.

What is more, as mentioned, in the remainder of the chapter *disegno* retains this practical and physical meaning. In the final part of the chapter, which contains a brief outline for an artistic curriculum, Vasari reserves the term for the ‘encompassing lines that surround the figure’ (*linee girate circondando la figura*) on a plane. These outlines drawn by pen, chalk, or other utensil are the basis of the arts of *disegno* and the student should start by continuously practicing them. According to

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1055 See Luisa Machlehose’s translation in Vasari 1960, 205.

Vasari, in order to become a good artist, that is to say, to be able to ‘thoroughly express in drawing the conceptions of the mind and anything else that pleases him’, the student should first learn how to draw the outlines; subsequently he has to copy reliefs or sculptures; and finally, the pupil should learn how to draw from nature, especially men and women from the nude.\footnote{1057} After much study and exercise (\textit{studio et essercizio}), the artist is able to draw the figures from memory (\textit{memoria}), fantasy (\textit{fantasia}), or ‘from himself’ (\textit{da sé}).\footnote{1058} This is the objective of the artistic training. In short, according to Vasari, the young artist should start by practicing drawing the outlines of things, then move on to copying reliefs and sculptures, and, finally, learn to draw the nude well. Concerning his understanding of \textit{disegno}, this entails that the concept remains connected to what is in the mind, and especially to the \textit{giudizio} (‘judgment’), \textit{invenzione} (‘invention’ or ‘resourcefulness as to the composition and design of the drawing’), and \textit{fantasia} (‘fantasy’) of the artist.\footnote{1059} Vasari here even initiates what can be called a theory about the creative or artistic process. However, he refrains from calling this inner process and these mental pictures themselves \textit{disegno}.

Yet, scholars have tended to focus only on the first part of the chapter. This has led them to suggest that Vasari primarily, or even exclusively, understood \textit{disegno} as an intellectual or mental capacity.\footnote{1060}

\begin{footnotes}
\footnote{1057}{Vasari 1966-1987, I, 112: ‘Chi dunque vuole bene imparare a esprimere disegnando i concetti dell’animo e qualsivoglia cosa, fa di bisogno, poi che averà alquanto as[s]uefatta la mano, che per divenir più intelligente nell’arti si eserciti in ritrarre figure di rilievo, o di marmo o di sasso overo di quelle di gesso formate sul vivo overo sopra qualche bella statua antica, o si veramente rilievi di modelli fatti di terra, o nudi o con cenci interrati addosso che servono per panni e vestimenti.’}
\footnote{1058}{Vasari 1966-1987, I, 114-115.}
\footnote{1059}{See Van Veen 1986, 21-42 for a more elaborate discussion of how the concepts of \textit{disegno}, \textit{invenzione}, \textit{istoria} (‘history (painting)’), and \textit{maniera} are connected to each other in the first edition of the \textit{Vite}. Van Veen also shows how Vasari adopted and adapted similar concepts from Leon Battista Alberti and Paolo Pino. However, Van Veen’s interpretation of \textit{disegno} does not include its expanded meaning in the second edition of the \textit{Vite} and Vasari’s more intellectualizing account of the artistic process in the five paragraphs that he prefixed to the first chapter of his Introduction to the art of painting.}
\footnote{1060}{See especially Goldstein 1996, Williams 1997, and Barzman 2000. But also Kempers (1992, 295) holds that with the term \textit{disegno} Vasari emphasized the intellectual aspects of the arts ‘rather than qualities of craftsmanship’. Goldstein’s (1996, 14) interpretation, however, is most extreme. He holds that the phrase containing the term ‘apparente espressione’ shows that, according to Vasari, ‘\textit{disegno} (…) is an ineluctably intellectualizing activity far different from, and not to be confused with, descriptive drawing.’ This interpretation is puzzling because, as argued, not only \textit{does} Vasari confuse \textit{disegno} as an intellectual activity or mental picture with descriptive drawing, he emphasizes the latter meaning, rather than the former. To reiterate, this is not to say that Vasari does not connect \textit{disegno} to an intellectual or cognitive process, but that his primary understanding of the term is practical and related to craftsmanship.}
\end{footnotes}
That this reading is problematic becomes clear from the fact that in defending this interpretation commentators elaborately discuss the process of knowledge acquisition according to Aristotle and Varchi but do not cite corresponding passages in Vasari’s texts – apart from the few sentences quoted above.\textsuperscript{1061} Therefore, although it has been convincingly argued that Varchi’s Aristotelian considerations about the visual arts formed the backdrop of Vasari’s definition of \textit{disegno} in the second edition of the \textit{Vite}, it seems that modern scholarship has overestimated the author’s understanding of, and interest in, these theoretical ideas. In any case, Vasari’s attempt to add a more intellectual and theoretical content to the practical notion of \textit{disegno} in the 1568 edition results in a confused (and confusing) passage, in which he presents three different definitions without clearly or explicitly distinguishing them.\textsuperscript{1062} Notwithstanding these conceptual problems, Vasari’s \textit{Vite} constituted a model for later art theorists and historians because of his theoretical underpinning of the history of the profession with the help of notions such as \textit{maniera}, \textit{giudizio}, \textit{invenzione} and \textit{disegno}.

9.4. \textit{Danti’s Primo libro}

Another treatise, in which the notion of \textit{disegno} plays a central role and that was published by an academic artist shortly after the foundation of the Accademia del Disegno, is Vincenzo Danti’s \textit{Il primo libro del trattato delle proporzioni di tutte le cose che imitare e ritrarre si possano con l’arte del disegno} (‘The first book of the treatise of the proportions of all the things that one can imitate and portray with the art of \textit{disegno}’) from 1567.\textsuperscript{1063} Danti, who composed the treatise around 1565, was a founding and very active member of the Accademia del Disegno. His

\textsuperscript{1061} Williams 1997, 34-39.

\textsuperscript{1062} To a certain extent Vasari’s lack of understanding of the theoretical background of Varchi’s notion of \textit{disegno} is recognized by Williams (1997, 33 and 51), when he writes that Vasari expressed his theoretical ideas in the drafts for the second edition in an ‘awkward way’, that he was ‘out of his depth in dealing with them’, and that he probably had some help from his friend and lieutenant of the Accademia del Disegno, Vincenzo Borghini in their final formulation. However, as argued, this ‘awkwardness’ is still present in the published form of these ideas in the \textit{Vite} of 1568. Barocchi (1971-1977, II 1899-1900) connects Vasari’s attempt to add a more theoretical content to the notion of \textit{disegno} to the dispute about the nobility of the arts that had erupted between academic artists after Michelangelo’s funeral. Like Williams, Scorza (2015, 43) holds that Borghini assisted Vasari in the formulation of the theoretical parts of the second edition of the \textit{Lives}, and specifically of the passage quoted above.

presence in the institution is documented from 1563 until 1572, during which time he held several offices, including three times a consulship; and, together with Zanobi Lastricati, he was elected as superintendent of the construction of the academy’s headquarters in Cestello in 1567.\textsuperscript{1064} Danti produced the statue of \textit{San Luca} for the Cappella della Santissima Trinità in Santissima Annunziata (see fig. 43).

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{danti_color_0075.png}
\caption{Vincenzo Danti, \textit{Saint Luke}, 1571, Cappella della Santissima Trinità, Santissima Annunziata, Florence (photo: author)}
\end{figure}

Compared to the treatises of his fellow artists and academicians, Danti’s \textit{Primo libro} stands out for its clear and systematic structure, its comprehensiveness, and its philosophical approach. In the Preface to his treatise, Danti displays modesty and defends himself against future critics when he writes that because he has little practice in philosophy and the ‘superior sciences’ (\textit{migliori scienze}), he has asked help from others.\textsuperscript{1065} It has been shown that his friend Varchi, indeed, aided Danti in the composition of the theoretical parts of the treatise.\textsuperscript{1066}

Danti follows Varchi by stating that the objective of the arts is to imitate nature. However, what should be imitated is not nature as it presents itself to the senses, but nature as it is intended by nature. Although nature always intends to produce perfect things, in actuality many imperfections arise due to the weakness of matter, unfavorable living conditions, and bad conservation.\textsuperscript{1067} The difference between

\begin{flushright}
\textsuperscript{1064} See section 4.2.1.
\textsuperscript{1065} Danti 1960-1962, I, 213-214.
\textsuperscript{1066} See, for instance Paola Barocchi’s notes in Danti 1960-1962, I, Summers 1981, 23 and 215, and Davis 1982, 72 \textit{et passim}.
\end{flushright}
perfect and imperfect nature is intimately connected to the central distinction in the *Primo libro*, which is that between *ritrarre* (‘to portray’) and *imitare* (‘to imitate’). As discussed in the previous chapter, *ritrarre* referred to the observation and description of nature by copying an object onto a piece of paper. The result would be a literal copy. *Imitare*, on the other hand, meant to imitate the intentions of nature, which includes perfecting it where necessary, i.e. where it is imperfect.

According to Danti, imitation involves philosophy and speculation, because the intention of nature is only understood if the ‘form’ (i.e. what something is) of an object passes from the external senses to the internal senses and, from there, to the intellect, where a universal concept or judgment is constructed. To portray (*ritrarre*), on the other hand, does not involve this speculative or philosophical activity, because it either directly copies what the eyes see, or it renders that particular image, as it is stored in the memory. It should be noted that Danti’s description of *disegno* as imitation is a more elaborate and precise version of the Aristotelian conception of knowledge acquisition than that of Vasari.

Danti clarifies his distinction between *imitare* and *ritrarre* by comparing it to the Aristotelian difference between poetry and historiography. Whereas the historiographer recounts the things and events as they happened, the poet expresses how they should have happened. Therefore, as the poet (*il poeta*) is nobler than the historiographer (*l’istorico*), so the artist (*l’artefice*) who employs imitation is nobler than the artist who only portrays. In conclusion, Danti claims that there are two ways of correctly practicing *disegno*: *ritrarre* of the perfect things of nature and *imitare* of the imperfect things.

This distinction constitutes an elaboration on, and division within, Vasari’s definition of *disegno* in the *proemio* of the third part of the *Vite*. As discussed in the previous section, Vasari defines *disegno* as ‘the imitation of the most beautiful of nature in all figures, both in sculpture and in painting’ (*lo imitare il più bello della natura in tutte le figure così scolpite come dipinte*). However, unlike Danti, Vasari does not define *imitare* as imitating the intentions of, or as perfecting, nature, but he equates it with *ritrarre*. For, he holds that the artists of the third age have arrived at a beautiful style (*bella maniera*) by frequently...

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1068 See section 8.5.
1070 Ibidem, 266.
1071 Ibidem, 266. See also Rossi 1980, 132-134.
rendering (ritrarre) the most beautiful things in nature and combining them in a single figure.\textsuperscript{1072}

The hero of the Primo libro is the same as in Vasari’s Vite: Michelangelo. Danti suggests that what he presents in his treatise is nothing less than Michelangelo’s method or maniera by which the latter achieved perfection in the art of disegno. This method consists in diligently and for many years studying human anatomy, which Danti characterizes as the most difficult object that can be imitated by the artist.\textsuperscript{1073} In order to strengthen his credibility, the author boasts that he himself has ‘anatomized’ eighty-three human bodies and that he witnessed many more dissections performed by others.\textsuperscript{1074}

The emphasis on human anatomy in learning disegno is even stronger when the remaining books of Danti’s treatise are considered. As the title of the published text suggests, it only constitutes the first book (Primo libro) of a larger work. Danti planned for the whole treatise to consist of fifteen books, the titles of which are enumerated at the end of the Primo libro. Nine books were supposed to deal with anatomical subjects (bones, muscles, and movements of the limbs), and the remaining books covered the passions, composition, landscapes and animals, proportions in architecture that are based on the human body, and the practice of the arts of disegno in universale (‘in general’).\textsuperscript{1075}

Although the remaining fourteen books were never published and are now lost, there is some evidence that they were written. In 1577 Vincenzo’s brother, Ignazio, published Le scienze matematiche ridotte in tavole (‘The mathematical sciences reduced in tables’), which included a table that appears to be a schematic representation of Vincenzo’s complete treatise, and especially of the last book, which bears the somewhat enigmatic title della pratica di questa arte in universale (‘Of the practice of this art in general’) (fig. 44).\textsuperscript{1076} On the basis of Vincenzo’s Primo libro and the table in Ignazio’s treatise, it has been argued that this final book would have consisted of a discussion of the

\textsuperscript{1072} Vasari 1966-1987, IV, 4. See also Van Veen 1986, 22-23.
\textsuperscript{1073} Danti 1960-1962, 211-212, 222, and 240-241. Because of this claim, some scholars have taken Danti’s treatise as one of the sources for reconstructing Michelangelo’s theory of art, which the artist never composed himself. See, for instance, Summers 1981 and Rossi 1980, 124.
\textsuperscript{1074} Danti 1960-1962, I, 209.
\textsuperscript{1075} Ibidem, 268-269.
\textsuperscript{1076} For a discussion of the table in Ignazio Danti’s book in relation to his brother’s treatise, see Davis, 1982, 64-68 and 76-77. Furthermore, Vincenzo’s Primo libro contains internal clues that the other books were finished. See, Davis 1982, 83, n. 106, for the page references. Finally, Raffaello Borghini (1584/1807, IV, 84) writes in his Il Riposo that he hopes that Vincenzo’s brother Ignazio would publish the remaining books after Vincenzo’s death in 1576, which also suggests that Vincenzo completed his treatise.
arts of painting and sculpture, in which the notion of practice (essercitio) played an important role by giving the theoretical notions of imitare and ritrarre a more practical orientation. In particular, Book Fifteen of Danti’s treatise would have argued that the correct way of imitating and portraying nature could be achieved only through exercise and practice.1077

Figure 44. Ignazio Danti, Le scienze matematiche ridotte in tavole. Bologna, Compagnia della Stampa, 1577, 56, table 44 (from: Davis 1982, 65)

Until now, historians of the Accademia del Disegno have connected Danti’s treatise only very loosely and generally to the

1077 Davis 1982, 75-77.
Florentine art institution.\textsuperscript{1078} This is due to the theoretical nature of the \textit{Primo libro}, which includes discussions of Aristotelian natural philosophy and the four elements. Indeed, Danti’s philosophical approach in the published book seems to be far removed from artistic practice.\textsuperscript{1079} Moreover, the fact that on September 26, 1565, i.e. around the time of the treatise’s composition, Danti was admitted to the Florentine literary academy suggests that it should be understood from the point of view of contemporary literary practices. In fact, it has been argued that the \textit{Primo libro} might have functioned as an admission piece for the Accademia Fiorentina.\textsuperscript{1080}

The interpretation of Danti’s treatise from the point of view of the theoretical and literary practices of the Accademia Fiorentina is compelling. However, it should not obscure its possible role in the educational practices of the Accademia del Disegno. For, in his dedication to Cosimo I, Danti claims that he wrote the treatise ‘for the benefit and delight of the professors of the art of disegno’, that is, for the teachers of the art academy.\textsuperscript{1081} This suggests that with his treatise Danti aimed to elevate the theoretical level of the educational practices in the Accademia del Disegno. Furthermore, the focus on anatomy in the remaining books and the more practical orientation in the final book about painting and sculpture show that the author did not obscure the practical side of the profession. This means that the whole treatise could have functioned in the educational practices of the Accademia del Disegno.

\textsuperscript{1078} Waźbiński (1987, I, 183-186) and Barzman (2000, 168) only very briefly discuss the \textit{Primo libro} in order to show that anatomy was important for the academicians as a basis for learning disegno. Reilly (2004, 31-33 and 42-43) connects the \textit{Primo libro} to Allori’s and Cellini’s treatises (see below) about disegno. She considers all three texts as admission pieces for the Accademia Fiorentina, but she does not ask how they texts might have functioned in the Accademia del Disegno. Rossi (1980, 123-143) understands Danti’s treatise neither from the practices of the Accademia Fiorentina nor from those of the Accademia del Disegno, but he places it in an almost autonomous history of art theory (like Panofsky 1924/1968). In Rossi’s interpretation, the history of art theory is not quite autonomous because he sees it as a superstructural reflection on, and justification of social relations. However, it is an almost autonomous history because he does not show how the transformations in social relations and the developments in art theory in the sixteenth-century are related to each other in practice. In other words, Rossi does not explicate how these parallel histories interact with each other.

\textsuperscript{1079} Davis 1982, 76.

\textsuperscript{1080} Reilly 2004, 31 and 42.

\textsuperscript{1081} Danti 1960-1962, I, 210: ‘(…) questa mia fatica sia per arrecare giovamento e diletto ai professori di tal arte del disegno (…)’
9.5. Allori’s Ragionamenti

A third treatise that was written in 1564-1565 by an academic artist is Alessandro Allori’s Ragionamenti delle regole del disegno (‘Discussions on the Rules of disegno’). Allori composed two different versions of the Ragionamenti in six drafts. None of the drafts is completed.\footnote{1082} It is therefore, that it took until the second half of the twentieth century for one of the drafts to be integrally published. This is the most advanced draft of the second version, written in a neat hand with decorated initials and black pencil drawings (figs. 45-47).\footnote{1083}
The *Ragionamenti* is written in the form of a dialogue, in which the protagonists bear the names of existing persons, including Allori himself.\(^{1084}\) The central idea of the treatise is the same in both versions. Allori teaches the basic principles or rules of drawing from his master, Agnolo Bronzino, to several scions of Florentine patrician and noble families.\(^{1085}\) These men are Cavalier Andrea di Ruggieri Minerbettì, Cavalier Vincenzo Acciauoli (1543-1572), Simone di Donato Tornabuoni (d. 1571), Alessandro di Giammaria Segni (d. 1602), Cosimo di Palla Rucellai, and Tommaso d’Agostino del Nero (1545-1572).\(^{1086}\) It is

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\(^{1084}\) The use of the names of existing people for fictive dialogues was a common feature of sixteenth-century learned treatises. Famous examples are Baldassare Castiglione’s *Il Cortegiano* (1528), Ludovico Dolce’s *L’Aretino* (1557), and Raffaello Borghini’s *Il Riposo* (1584/1807).

\(^{1085}\) Bronzino, whose real name was Agnolo Allori, was more than Alessandro’s master. He adopted Alessandro at the age of five when his father died. The boy became the master’s favorite pupil and he later took Agnolo’s last name. Vasari 1966-1987, VI, 238; Allori 1973, 1943 (‘che t’ho in luogo di figliuolo’) and 2347.

\(^{1086}\) It should be noted that this is the list of amateurs in the final draft of the second version of the treatise. Earlier drafts contain small variations. For example, Allori changed Donato di Ruggiero Minerbettì into Andrea di Ruggiero Minerbettì and the name of
possible that some or all of these young noblemen learned the principles of disegno from Allori in real life.\textsuperscript{1087} Furthermore, it is relevant that at least three of them were members of the Accademia Fiorentina and that Tommaso del Nero became vice-lieutenant of the Accademia del Disegno in December 1571.\textsuperscript{1088}

\textbf{Figure 46. Alessandro Allori, Page from Ragionamenti delle regole del Disegno, BNCF, Palatino E.B. 16.4, 7v (with permission of the Ministero dei Beni e delle attività culturali e del Turismo, prohibition of further reproduction or duplication by any means; photo GAP s.r.l. ASF)}

Alessandro Segni is only mentioned in the last draft of the second version. See Allori 1973, 1941, n. 1.\textsuperscript{1087} Reilly (2004, 32) entertains this idea.\textsuperscript{1088} On the membership of the young noblemen of the Accademia Fiorentina, see Reilly 2004, 31. She adds that two of them even joined the literary academy on the same date as Allori and Danti. Unfortunately, she gives no names but only refers to the archive of the literary academy (Annali dell'Accademia degli Umidi poi Fiorentina, Biblioteca Marucelliana, Florence, MS B. III. 54, vol. III, fol. 15r). See, for more information concerning these figures, Ciardi 1971, 277, n. 37. See, for Tommaso del Nero’s membership of, and official function in, the Accademia del Disegno, ASF, AD 25, 16r and 20v. In 1569 Del Nero and Vincenzo Acciaiuoli, together with several friends, most of whom were also members of the Fiorentina, founded another literary group, which they called the Accademia degli Alterati (Academy of the Altered). Moreover, of Allori’s students in the Ragionamenti also Cosimo Rucellai was a member of this academy. See Weinberg 1954a (list of members on 176-177, n. 1) and 1954b and Van Veen 2006, 226, n. 56.
The main body of the *Ragionamenti* consists of the explication of basic rules and practical guidelines for drawing the human figure. Contrary to most other authors of contemporary treatises on visual art and *disegno* of the time, Allori is almost completely silent on the philosophical, psychological, and theoretical aspects of the arts. Another unique feature of the treatise is the inclusion of many drawings of the human figure, which function as examples for the students (figs. 47-49). According to Allori, these examples occupy an important place in the instruction because, ‘our profession … is more in need of demonstration than of persuasion’ and it is better to learn how ‘to express well our ideas on canvas or in marble … than with many words.’ This is a clear echo of the remark made by the first lieutenant of the Accademia del Disegno, Vincenzo Borghini, in a speech on the occasion of the feast of San Luca in 1564.

Furthermore, Allori indicates that he will not discuss philosophical issues, for instance, about how the *spetie* (‘accidents’) of the things are transferred into the intellect with the help of the senses. He leaves such matters for the young gentlemen to decide because they ‘are
students of philosophy’. It should be recalled that Danti and Vasari did attempt to connect this aspect of Aristotle’s philosophy and psychology to the concept of *disegno*, although the latter did so only very briefly and superficially.

However, Allori does not manage – or does not desire – to escape from one of the traditional ingredients of the philosophical treatise, i.e. the Aristotelian rule that before explaining something one should define its name. In the first place, the architectural meaning that *disegno* had among the Greeks and Romans is considered. It is stated that in Antiquity the term stood for the groundplan, the design of the elevation, and the

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1089 BNCF, MS Palatino E.B.16.4, 35v-36r: ‘(…) ben che questa nostra professione come tutti sapete, [h]a più bisogno di dimostrazione che di persuasione, vedendosi manifestamente ‘nostro più’ importare lo esprimere bene i concetti nostri, in su tavola o in marmo o qualsivoglia altra materia, con scarpello o penello, che lunghezza di parole, e molte più importa l’accordar gl’occhi i quali son necessarij ad apportare le spetie delle cose all’intelletto, che li giudichi, si come gli altri sensi, che gl’orechi di chi ascolta; ma queste dispute le lascierò decider avvoi altro, che attendete agli studi della filosofia, e così tutte quelle, che occorrano alla giornata.’

1090 In the first version of the treatise (BNCF, MS Palatino E.B.16.4, 36v), Tommaso del Nero explicitly refers to Aristotle in this context.
perspective view of a building.\textsuperscript{1091} A representation of \textit{disegno} in this sense can be found in Santi di Tito’s fresco in the artist’s chapel in Santissima Annunziata, where an angel is seen holding the groundplan of the temple of Jerusalem (fig. 49). Given the significance of the notion of \textit{disegno} in the iconographic program of the decorations of the chapel, it is clear that this groundplan refers to the ancient meaning of the concept discussed by Allori.\textsuperscript{1092}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{santi_di_tito_solomon_building_the_temple_in_jerusalem_detail_of_the_groundplan_of_the_temple_1571_cappella_della_santissima_trinita_santissima_annunziata_florence_photo_author}
\caption{Santi di Tito, \textit{Solomon Building the Temple in Jerusalem} (detail of the groundplan of the temple), 1571, Cappella della Santissima Trinità, Santissima Annunziata, Florence (photo: author)}
\end{figure}

Although this ancient definition is not rejected in the \textit{Ragionamenti}, a more abstract one is preferred. This is the definition of \textit{disegno} as ‘all that can be formed by means of simple lines’ (\textit{tutte quelle cose che si possono formare con il valore o forza della simplici linee}). ‘Lines’, in turn, are described as the ‘surroundings of the things and (…) everything that has neither shadow nor light’ (\textit{i dintorni delle cose et … tutte quelle cose che non hanno né ombre né lumi}).\textsuperscript{1093} It should be noted

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\textsuperscript{1091} According to Barocchi, this description of \textit{disegno} coincides with the Vitruvian definition of the Latin \textit{dispositio} and the Greek \textit{idea}. Vitruvius distinguished three figures of \textit{dispositio}, namely the ‘	extit{icnografia}’ (‘pianta’ or ‘plan’), the \textit{ortografia} (\textit{alzato} or ‘elevation’), and the \textit{scenografia} (\textit{disegno prospettivo} or ‘perspective design’). All three figures are derived from the rational faculties in the mind, i.e. \textit{cogitatio} (‘thought’ or ‘reflection’) and \textit{inventio} (‘invention’) and they are produced with the help of the compass and ruler. Allori 1973, 1944, n. 1.

\textsuperscript{1092} See Jonker 2017.

\textsuperscript{1093} BNCF, MS Palatino E.B.16.4, 37r; Allori 1973, 1944.
that Allori’s definition of disegno concurs with the main definition in Vasari’s Introduction to the Three Arts of Disegno. Like Allori, Vasari uses the term to describe the outlines of the figures in a drawing or sketch. However, as mentioned above, an important difference is that the mental aspect of the artistic process, i.e. the formation of the design in the artist’s mind, which precedes the work of the hands in Vasari’s definition, is absent from Allori’s treatise. This means that the practical conception is emphasized even more in Allori’s Ragionamenti than in Vasari’s Vite.

Turning to the main part of the treatise, Allori shares Danti’s opinion that for painters and sculptors the imitation of the human body is the most beautiful and most noble part of their arts. Therefore, this is the principle subject of the drawing exercises in the Ragionamenti. Allori adds that it is important to not just stay on the surface, i.e. the skin, but also learn the foundations, i.e. skeleton and muscles with tendons or, what he calls, the bone structure (ossatura) and anatomy (anatomia), respectively. However, rather than working from the inside out according to the scheme bones-muscles-skin (ossa-muscoli-pelle), which was the usual sequence for beginning artists, as laid out by Leon Battista Alberti in his Della pittura, Allori proposes to begin the instruction of disegno with the human body with its flesh and skin. His reason for changing the order is that beginning the exercises with something as melancholic (maninchoniche) as the bones would be unpleasant (spiacevole) for these gentlemen (questi signori). Therefore, in order not to disgust and concern his students Allori commences by teaching them how to draw the human head including its flesh.

Although it was Allori’s intention to deal with the entire human body, in the existing drafts of the Ragionamenti he does not advance beyond the head. The main body of the treatise consists of a step by step explanation, including graphic examples, of the rules for drawing the human head from three perspectives: en profile, en face, and a half-way view, i.e. what Allori calls mezz’occhio (‘half eye’) (fig. 47). For each view, the different parts of the face, i.e. eye, nose, mouth, ear, are treated separately (fig. 46). Moreover, for the en profile view, which is the first one he discusses, Allori shows how each part of the face is constructed step by step and almost line for line. For example, in the case of the eye,
first the upper eyelid is drawn, then the eyeball and lower eyelid are added, and finally the eyebrow.  

It merits noting that Allori’s method resembles the procedure by means of which children in the early modern period learned other basic skills and principles, such as how to read and write and the precepts of the Catholic faith. In the sixteenth century children were taught the letters of the alphabet and the fundamental dogma’s of Catholic faith with the help of a Hornbook (la tavola or la carta), a primer or psalter (il salterio), and a summario. This latter type of manual was used by the Compagnie della Dottrina Cristiana. It consisted of a combination of a primer and a list of principles of Catholicism. It commenced with the alphabet and continued with prayers and Catholic precepts. The building blocks of reading, writing, and Christian Doctrine, i.e. letters, syllables, prayers, and precepts, were memorized through singing and chanting. Instead of through singing, Allori had his students memorize the rules of disegno, by repeatedly drawing the lines of the parts of the face.

The term *regole* (‘rules’) from the title of the treatise refers, in the first place, to the drawing of the lines that compose the body parts in the correct sequence. The students have to follow these rules and uphold the right order because this facilitates the drawing process and reduces the chances of mistakes. What is more, the term *regola* not only refers to the correct order but also, and more importantly, to the manner in which the lines have to be drawn. For example, Allori gives as a rule that the upper eyelid should be less curved than the lower eyelid.

He does not justify this rule immediately, but he promises that he will explain its underlying cause (la cagione) when he discusses the anatomy of the eye, i.e. the muscles and tendons beneath the flesh. However, because Allori never completed the anatomical part of the treatise – in fact, it was only barely begun – his rules for drawing are both literally and figuratively superficial. They function as ‘rules of thumb’. For this reason Allori’s method of instruction has been characterized as

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1099 In a side note, Kemp (1979, 127) also remarks that Allori’s method seems to have been modeled on the contemporary instruction of reading and writing.
1100 Grendler 1989, 142-161 and 344.
1101 A third connotation for the term *regola* appears only in the second version of the *Ragionamenti*. There Allori explains to his students how they should combine the different parts the face, and estimate their mutual distances, with the help of a grid consisting of nine squares. In this sense the term ‘rule’ (regola) is almost synonymous with ruler (righello). Allori 1973, 1960-1964.
1102 BNCF, MS Palatino E.B.16.4, 42r: ‘(...) considerate quanto il dintorno che fate di sotto del ochio sia più ritondo che quel di sopra il quale va più piano come al suo luogo vedete gl’ochi in faccia insieme ne sapete la cagione perché sarà necessario mostrarvi prima la anatomia e di poi come sia ricoperto della pelle (...).’
one of reduction or simplification. This students do not learn to render the features of actual people and objects as realistically as possible. Instead, they copy schematized parts of the anatomy, which they subsequently have to bring together in a drawing of the human head as whole.

What Allori omits from his explanation and examples is telling in this respect. In the first place, he only describes and shows how his students should draw a beautiful young man but he leaves out how they can render old and ugly people. The reason he gives for this is that beautiful young men and women are well proportioned and their features are, therefore, subjected to rules. This does not hold for old and ugly people, because they have wrinkles and asymmetric faces. For a similar reason Allori omits from his treatise an instruction for how to render the expression of emotions such as joy, anger, and sorrow. According to him, a smile or cry alters the measurements of the face and in order to convincingly represent these features it is necessary to possess a ‘judgment beyond the rules’, which is arrived at only by the most excellent men of art through ‘long practice and observance [of the rules]’.

Finally, the same holds for shadows and (facial) hair, as Allori repeatedly stresses. Although in his graphic examples he represents eyebrows, eyelashes, hair, and some shadows around the eyes and mouth, he does not explain in the Ragionamenti how to draw these things. His reason for this omission, in the case of the hair, is that it admits many variations, e.g. long, short, curled and straight, which all can be gracious in their own way. What the artist needs to be able to draw the hair with a certain grace (grazia) is, again, a long practice. Therefore, in order not to complicate matters, Allori states that he has drawn the hair fairly short and with very little curl (fig. 47). In the case of the eyelash (ciglio) – and presumably also the eyebrow – the problem is not so much the different

1105 Ciardi 1971, 280.
1106 Allori 1973, 1956: ‘(…) non sono di parere in questo mio trattamento trattare del riso, sendoché si il riso come il pianto o il grido altera le misure, che nel farle voglion giudizio fuori delle regole, al quale si viene con la lunga pratica et osservanza che fanno i periti dell’arte.’
1107 Allori 1973, 1965: ‘E se bene non ho mai trattato ce’ capelli così distintamenta come ho fatto dell’altre parti, è stato perché in vero di essi non si può dar quella regola che si è fatto di quelle, sendo che per lo più consistano in una certa grazia, la quale si va facendo con la lunga pratica, perciòché possono essere lunghi e corti (…)’. 
types, but the variations due to mood and emotions or, as Allori phrases it, the passions of the soul (le varie passioni dell’animo).\textsuperscript{1108}

One element of these passages about the omissions is most relevant for the argument of this chapter. This is the distinction that Allori draws between, on the one hand, the rules (regole) that he is able to teach his amateur students and, on the other, the judgement (giudizio) and grace (grazia) that the professional artist can only achieve after long practice (lunga pratica). With this distinction Allori clearly places a limit on the practical understandings of visual art practices that can be acquired by amateur artists and men of letters. Thereby, he also limits the extent to which visual art and literary practices can be integrated. However, it should be noted that this is not a matter of principle or of talent or aptitude, but it is a consequence of the amount of time the amateurs are able to practice the art of disegno.

As a literary product, the treatise belongs to the type of practices performed in the Accademia Fiorentina. Allori became a member of the literary academy on the same day as Vincenzo Danti, September 26, 1565. Although it is not certain on the basis of what literary product Allori was admitted, it is likely that this was the Ragionamenti. In the first place, the treatise was demonstratively composed in the same period. What is more, a connection between the literary practices of the Accademia Fiorentina and the treatise is suggested by the use of the dialogue form, which was a popular style for learned treatises in that period, but was not commonly used by visual artists who theorized about their professions.

Third, the social background of Allori’s students in the treatise should be mentioned in this context. To reiterate, at least three of the young patricians, who figure in the dialogue, were members of the Accademia Fiorentina. In the second version of the treatise, Allori states that the patricians want to learn disegno because it is part of their education as gentlemen. He, thereby, reiterates Castiglione’s advice to the courtier.\textsuperscript{1109} This can be connected to a passage in the first version, in which Allori states that the gentlemen want to learn how to draw ‘principally as their ornament’, implying that for them having practical

\textsuperscript{1108} Allori 1973, 1953. Ciardi (1971, 278) has suggested that Allori’s confidence in the rule and his dismissal from the instruction of disegno of all the particularities of the human body that cannot be reduced to it were the reasons why the Ragionamenti has remained incomplete. This argument is unconvincing because, if anything, relegating the more difficult aspects to practice would have made it easier, not harder, to complete the treatise.

\textsuperscript{1109} BNCF, MS Palatino E.B.16.4, 1r; Allori 1973, 1941-1942, n. 1.
understanding of disegno is not a fundamental part of their education, as it is for professional artists, but something to show off with.\textsuperscript{1110}

Finally, the connection of the treatise to contemporary literary practices and persons is also evident from Bronzino’s role in the text. Allori praises his master not only for his excellence in painting, but also for his poetry and the ‘goodness of his soul, tranquility of life, and modest customs’.\textsuperscript{1111} In other words, the treatise presents Bronzino as a gentleman-painter and as a letterato, which reflects his status in real life as a respected painter-poet in Florence, and a member of both the Accademia del Disegno and the Accademia Fiorentina. In addition, the letterati and members of the Accademia Fiorentina, Benedetto Varchi and Luca Martini, are also mentioned in the treatise in this context. At one point in the dialogue Allori writes that these men will come over to Bronzino’s house for dinner, during which they will discuss their noble ideas about disegno about the great poet Dante. By presenting Varchi and Martini as Bronzino’s friends, Allori not only emphasized his master’s status as a respected gentleman and letterato; he also heightened the status of his treatise, because he presented it as Bronzino’s method of art instruction.\textsuperscript{1112}

The content of the treatise, the rules of disegno that are laid out in it, indicate that the intended audience consisted, at least in part, of learned and noble men. As already mentioned, the change of the order of the treatment of the parts of the human body, starting from the outside instead of from the inside, points in this direction. Furthermore, the rules have been described pejoratively by one modern scholar as ‘nothing more than an ABC’s of drawing for the nonprofessional’.\textsuperscript{1113} It is suggested that the Ragionamenti was intended exclusively for gentlemen and

\textsuperscript{1110} BNCF, MS Palatino E.B.16.4, 39v: ‘[Q]uesto è quello che principalmente per lor ornamento desiderano questi gentiluomini.’
\textsuperscript{1111} BNCF, MS Palatino E.B.16.4, 33r; Allori 1971, 1941-1942, n. 1: ‘(…) vostro maestro, l’eccellenza del quale non solo sappiamo tenere oggi il primo luogo nella pittura, ma degno ancora di infinite lodi nella poesia, e aggiungendoci non meno la bontà del’animo, la quiete della vita, la modestia dei costumi (…)’ Vasari (1966-1987, VI, 237-238) equally praises Bronzino for his literary qualities and gentle manners.
\textsuperscript{1112} As discussed in Chapter Seven, Bronzino’s membership of the literary academy comprises two periods, 1541-1547 and 1566-1572. This means that at the time of the composition of the Ragionamenti and its Allori’s acceptance into the institution, his master was not a member of the Accademia Fiorentina. This means that Allori’s treatise could also have played a role in Bronzino’s readmittance to the Accademia Fiorentina. However, as discussed in section 7.4, Bronzino was officially readmitted to the Accademia Fiorentina after presenting his ‘Tre canzoni sorelli’ in praise of the Medici and Cosimo I to the academy. Parker (2000, 9 and 196, n. 10), Rossi (2010, 177-178), and Chiummo (2016, 258-259, 267-268). By contrast, there is no certainty as to the admission pieces of Danti and Allori.
\textsuperscript{1113} Reilly 2004, 34.
amateurs who were interested in the arts but who had neither previous experience nor future ambition in this field; in other words, that the treatise was intended for members of literary academies such as the Accademia Fiorentina.\footnote{1114 See Ciardi 1971 and Kemp 1979 for this interpretation.}

As far as the ‘ABC’-part is concerned, this qualification is justified. It is true that Allori’s method is reductive and simplified and his students only learn to draw idealized and schematic versions of the human body. Furthermore, the similarity of Allori’s approach with the methods for teaching both the religious and the linguistic ‘ABC’s’ has been mentioned. In short, it seems that Allori simplifies the practical aspects of the art of disegno in order for nonprofessional artists to be able to practice it. Thereby, he diverges from the argumentations developed by other art theorists and fellow academicians such as Vasari and Danti, who discuss and emphasize its theoretical aspects in order to elevate the status of the profession.

However, it is a mistake to interpret the Ragionamenti exclusively from the point of view of the literary practices of the Accademia Fiorentina and solely as directed to nonprofessional artists. In the first place, the author, title, and date of the treatise all suggest that it should also be understood from the context of the Accademia del Disegno. It is significant that Allori, who was a founding member and one of the first consuls of the art academy in 1563, composed this treatise about disegno, shortly after the foundation of the institution. These facts alone suggest that the Ragionamenti might be connected to the educational practices of the art academy.

Moreover, Allori’s discourse also contains references to people and events that were relevant in the art academy’s early years. In the first place, this was, of course, his master Bronzino, who, especially after Michelangelo’s death in 1564, was one of the leading figures of the Florentine art scene. Furthermore, as discussed Benedetto Varchi, who figures in the dialogue as Bronzino’s friend, was connected to the Accademia del Disegno in various ways: he provided the conceptual foundation for the institution in his Due lezioni; he lent his room in Santa Maria degli Angeli as storage space to the academy; he supported the presence of the academicians in that convent; and he delivered the speech at the funeral for Michelangelo that had been organized by the academicians.

The role of the surgeon Alessandro Menchi from Montevarchi in the Ragionamenti should also be mentioned in this context. Menchi was Benedetto Varchi’s nephew. More importantly, he also was the first
physician of the Accademia del Disegno.\textsuperscript{1115} In the treatise Allori writes he owes all his knowledge of anatomy to Menchi.\textsuperscript{1116} If Allori, indeed, received anatomical instruction from the physician of the art academy, this might also hold for his fellow academicians. Unfortunately, the archival documents are silent on any anatomical dissections carried out under the aegis of the Accademia del Disegno.\textsuperscript{1117} In addition to Menchi, Allori refers his students to the works of the famous contemporary anatomists Andreas Vesalius (1514-1564) and Juan Valverde (1525-1587) as possible sources for acquiring further knowledge about the human body.\textsuperscript{1118} He states that he will not elaborate on anatomy ‘because of the difference between us [artists] and the anatomists’.\textsuperscript{1119} Allori implies here that the anatomical knowledge necessary for the artist, including the amateur artist, is limited compared to the professional anatomist.\textsuperscript{1120} This means that rather than making a distinction between amateur and professional artists, the author distinguishes them both from professional physicians.

Allori nowhere states that the rules he teaches the patricians are fundamentally different from those he learned himself from his master. In fact, he argues that because all that he knows about the art he has learned from Bronzino, it is appropriate to turn to his master as guide in teaching the patricians.\textsuperscript{1121} This suggests that the rules Allori teaches his students are the same as he had learned himself, albeit treated in a different sequence.\textsuperscript{1122} This entails, in turn, that the statement that the Ragionamenti is ‘nothing more than an ABC’s of drawing for the nonprofessional’ is probably incorrect. After all, the reason why Allori deviated from the method traditionally used by artists, was not to exclude young students who desired to become professional practitioners, but because beginning with the bone structure would be unpleasant for the

\textsuperscript{1115} See Barzman 2000, 335, n. 93 for the identification of Menchi as Varchi’s nephew.
\textsuperscript{1116} BNCF, MS Palatino E.B.16.4, 36r.
\textsuperscript{1117} As discussed in Chapter Four, the incorporating statutes ordered that such dissection take place in the hospital of Santa Maria Nuova.
\textsuperscript{1119} Allori 1973, 1977: ‘(…) parendomi che questo basti, per la differenze che è tra noi e gli anatomisti.’
\textsuperscript{1120} According to Panofsky (1952, 86), there is a difference between artists such as Michelangelo and Allori on the one hand, and Leonardo, on the other. Whereas the former ‘placed anatomy in the service of art’, the latter, ‘placed art in the service of anatomy.’ Furthermore, Panofsky states that according to Leonardo a good anatomist had to be a competent draughtsman with complete mastery of perspective, as well as having a strong stomach, be perseverant, and ‘fearless in the presence of horrid corpses’.
\textsuperscript{1121} BNCF, MS Palatino E.B.16.4, 33v.
gentlemen. As discussed, Allori did not only plan to discuss the bone structure and the anatomy later on in the treatise, but he also made a beginning with this part.

Finally, the limit he places on the skill level that can be attained by amateurs, i.e. being able to master the rules (regole) but not the judgment (giudizio) and grace (grazia) of the professional artist, is a consequence not of any intrinsic or fundamental distinction but of the difference in time that they can invest (lunga practica). In other words, Allori suggests that the rules are the same for both amateurs and professionals, but only the latter have the time to transcend them and perfect their practical understandings of disegno. That Allori’s treatise was equally suitable for amateurs and professional artists is also stated by one of his contemporaries, namely by the letterato Raffaello Borghini (1537-1588) in his Il Riposo of 1584. In this dialogue, which systematically discussed the arguments of the paragone between painting and sculpture, Borghini stated that he hoped that Allori’s manuscript would be published soon because the detailed drawings of the human anatomy would be useful equally to students of the arts and to gentlemen who delight in disegno.\footnote{1123}{Borghini 1584/1807, IV, 212-213.} A final piece of evidence that confirms this interpretation can be found in Federico Zuccari’s outline for the educational curriculum of the Roman Accademia di San Luca in the 1590s. Zuccari urges young artists to follow a sequence in learning disegno that is very similar to Allori’s.

9.6. Cellini’s Principii
The fourth and final treatise that originated in the context of the Accademia del Disegno around 1565 is Benvenuto Cellini’s Sopra i principii e ‘l modo d’imparare l’arte del disegno (About the principles and the manner of learning the art of design). This short and unfinished discourse, which was not published during Cellini’s lifetime, is directed at two groups of readers: on the one hand, princes and lords who delight in the arts (principi e signori, che di tali arti vi dilettate) and, on the other, excellent artists and young students who are eager to learn.\footnote{1124}{Cellini 1973, 1934.} However, when reading the treatise, it becomes clear that the matters discussed in the Principii are primarily, or even exclusively, interesting for the second group, and especially for young art students.\footnote{1125}{Reilly 2004, 34.} This is evident not only from the content of the treatise but also because Cellini addresses the reader with the informal pronoun tu (‘you’).
Cellini agrees with the common opinion of his time that the most important thing in learning *disegno* is learning how to draw the male and female nude well. In order to do this, one should know by heart the foundation of the nude, which is the bone structure or the skeleton (*le ossa* or *ossatura*). Therefore, like Allori and Danti but contrary to Vasari, Cellini holds that learning the art of *disegno* should commence with human anatomy. Furthermore, he argues that because the most beautiful and marvelous part of the human body is the head, and the most beautiful and marvelous part of the head is the eye, knowing how to imitate the eye is the highest thing one can attain in the art of *disegno*. However, according to Cellini, the eye is also the most difficult part of the body and, therefore, it is unsuitable as starting point of the drawing instruction. Cellini admonishes masters who commence the teaching of *disegno* to ‘poor tender youths’ (*poveretti tenerissimi giovani*) by having them copy a human eye that they had placed before them. He adds that this was the way he himself was introduced into the art of *disegno*. As discussed, in his treatise Allori did use the human eye – albeit not an actual one – as the starting point for his drawing instruction. This means that Cellini’s criticism was most likely directed at his fellow academician, although Allori is nowhere mentioned in the *Principii*.1127

Instead of starting with the most difficult part and reducing it to simple signs, as Allori does in his treatise, Cellini commences with what he sees as the easiest part of the skeleton, the shinbone. Next, the student moves to the other bones of the legs and feet, followed by the torso, arms and, finally the head. Each bone should be drawn repeatedly and from different angles until it is memorized. After all the bones are learned by heart, the student can move on to the flesh and the skin (*carne e pelle*). Cellini urges the art student not to imitate other things during this program of anatomical drawing, because this would ‘aggravate his memory’. Like Danti, Cellini points to Michelangelo as an example. According to Cellini, Michelangelo’s works are famous and loved by all precisely because he followed this order of the skeleton (*per avere tenuto questo ordine delle ossa*).1130

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1127 Reilly (2004, 35-36) argues that Cellini’s remark about his experience with the human eye, as a young art student, is probably invented precisely in order to criticize Allori. According to Reilly, it is very unlikely that Cellini learned *disegno* in this way because this was not the standard anatomical practice of the time. Instead, she says, the dissection began with the organs in de abdomen and the chest.
1129 Cellini 1973, 1939: ‘Sarebbe il meglio che, in mentre che tu ritrai questa ossatura dell’uomo, che tu non disegnassi altra cosa di sorta alcuna, per non ti aggravare la memoria in altro.’
1130 Cellini 1973, 1940.
In short, like Allori, Cellini constructs a step-by-step program for the art student who wants to learn disegno. The objective of both authors is to systematize the instruction.\(^\text{1131}\) However, unlike Allori, Cellini has the student start with the inside of the human body, i.e. the skeleton. It has been argued that this difference in method is due to the distinct audiences, to which the treatises are directed. Whereas Allori addresses amateur gentlemen, Cellini directs his treatise primarily to young aspiring professional artists.\(^\text{1132}\) However, Cellini’s barely concealed criticism on Allori suggests that he saw his fellow academician’s method as a competitor to his own and, thus, that he conceived it as directed at the same audience.\(^\text{1133}\) Compared to the other treatises analyzed in this chapter, the Principii contains the most practical approach to the art of disegno, as the author makes no references to any philosophical or theoretical notions.\(^\text{1134}\) This is remarkable because, as discussed, in his designs for the seal of the Accademia del Disegno, Cellini understood disegno as a mental process or image or even as a movement between the realms of mind and hand, as alluded to by Vasari and, as will become clear below, also by Zuccari.\(^\text{1135}\)

9.7. Zuccari’s curriculum and disegno
During the first year of the existence of the Accademia di San Luca, in 1593-1594, its president Federico Zuccari presented his outline for the

\(^{1131}\) Kemp 1979, 124-125.
\(^{1132}\) Reilly 2004, 43. It has also been suggested that Principii might also have been intended as an admission piece for the Accademia Fiorentina, albeit an unsuccessful one because there is no record of Cellini as member of the literary institution after 1547. Although not impossible, it is unlikely that Cellini’s treatise was intended as a submission piece for the Accademia Fiorentina. The fact that the author directly addresses the young aspiring professional artist suggests, instead, that it was supposed to function in the educational practices of the Accademia del Disegno.
\(^{1133}\) Reilly (2004, 35-36) gives two different explanations for Cellini’s criticism on Allori, which she holds simultaneously to be true. On the one hand, she states that Cellini, who in one of his other writings conceived the artist as part of an almost occult community that centered on shared esoteric practical knowledge, was upset with Allori for disclosing trade secrets to nonprofessionals. On the other hand, Reilly argues that Cellini admonished his colleague for making concessions to his amateur students by teaching them a diluted and simplified version of what the professional artist had to learn. Of course, the problem with this line of reasoning is that these explanations are mutually exclusive.
\(^{1134}\) This also holds for Cellini’s Discorso sopra l’arte del disegno, in which he starts by explaining the various materials and instruments used to produce a drawing and subsequently defines disegno as the shadow of a relief. And he calls relief, in turn, the father of all drawings, thereby taking the perspective of a sculptor. Cellini 1973, 1929-1930.
\(^{1135}\) See section 7.5.1 for the discussion of Cellini’s designs for the seal of the academy.
theoretical and practical educational program. It is in the context of this educational program – recorded by Alberti and discussed in the previous chapter – that Zuccari also presents his conception of *disegno*. Therefore, Zuccari’s theory is interpreted here in relation to his proposals for the education of young artists. This is a different approach from the one usually adopted by scholars. They have focused primarily, if not exclusively, on another book when trying to understand Zuccari’s theory of art. This is *L’Idea de’ pittori, scultori et architetti* (1607). More than Alberti’s *Origine*, Zuccari directed the *Idea* to an audience of philosophers and theologians, as he elaborates here on his theoretical theses and defends them against objections by scholars.\(^{1136}\) However, by only looking at this treatise, the central theme of Zuccari’s theory of art, which is the relation between theory and practice, has not received sufficient attention. What is more, the practical consequences of his conception of *disegno* have been neglected. By understanding Zuccari’s theory from the context of Alberti’s *Origine*, these problems can be solved.

In the previous chapter, it was explained how, during the first meetings of the Accademia di San Luca at the end of 1593, the president divided the students in four groups according to skill level. In subsequent meetings Zuccari lectured on his conception of *disegno*.\(^{1137}\) Following the Aristotelian and scholastic method of presentation, he first discusses the necessity, definition, and attributes of *disegno*. Zuccari demonstrates the necessity of *disegno* with the help of analogies with God and the sun. As God is the necessary first cause and first motor (*primo motore*) of the universe, so is *disegno* the first motor of all human understanding and operating; and as the sun illuminates and gives life to all things on earth, so does *disegno* illuminate and give life to the human intellect.\(^{1138}\)

Before presenting his definition of *disegno*, Zuccari criticizes what other authors have said on this subject. His criticism of Vasari is

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\(^{1136}\) See Zuccari 1607/1961, 1-3. The lectures in Alberti’s *Origine*, by contrast, are directed to artists, scholars and potential patrons equally. For instance, there Zuccari excuses himself to the amateurs and *letterati* for talking ‘puramente con una semplice filosofia naturale senza molto artificio, & altezza’. He does this so that the artists present (‘fratelli’) have more chance of understanding it. Alberti 1604/1961, 17. See also Zuccari’s remark after his lecture on *disegno* (Alberti 1604/1961, 23): ‘In questo breve, & succinto discorso, così portato alle signorie vostre, le quali intendono più che io non so esprimere con questa mia balbettante voce, ò capire con una nuda Filosofia naturale, & con qualche altra intelligenza, se bene non di molta eccellenza…’ Zuccari’s display of modesty is similar to that of Danti in the latter’s Preface to his treatise on human anatomy. See section 9.4.

\(^{1137}\) The *amatori* and *letterati* were also present at the theoretical lectures and debates. It is not certain that they also participated in the practical instruction, although Alberti’s narrative contains some indirect evidence that they did.

most pertinent and relevant here. According to Zuccari, Vasari made a great mistake by defining \textit{disegno} as the appearing expression and declaration of the concept that was first in the mind. The error consists in the fact that Vasari here only defines \textit{disegno} as an exterior operation, i.e. disegno esterno in Zuccari’s terminology, and not disegno interno, which is a principle in, and an operation of the soul. Therefore, Zuccari argues that the fundamental meaning of \textit{disegno} is that it is a principle and object in the intellect. In this sense, he claims that it is comparable to what is called concetto (‘concept’) by metaphysicians and verbo (‘word’) by theologians. However, the president immediately adds that disegno is of two kinds, intellectual and practical, the one pertaining to the speculative intellect, the other to the practical intellect.\footnote{Alberti 1604/1961, 18-19.}

The attributes (attributi) of disegno turn out to be various descriptions and formulations of the concept. For instance, Zuccari states that disegno is a virtue in the human soul, which separates human beings from, and elevates us above the brutes; he also calls disegno a ‘divine spark’ (scintilla di divinità) and the supreme and formative light in the human mind.\footnote{Ibidem, 20 and 76 for a more elaborate enumeration of Zuccari’s attributes of disegno.} These and similar metaphorical reflections will lead Zuccari in the \textit{Idea}, with the help of a play of the three syllables of the term, to his description of disegno as the true segno di Dio (‘sign of God’) in us. This implies, according to Zuccari, that with the name disegno, God has placed his signature and seal, as it were, in the human mind and on the arts.\footnote{Zuccari 1607/1961, II, 83.}

After discussing the necessity, definition, and attributes of disegno, Zuccari turns to what is arguably the most important part of his lecture, and of his theory of art in general. This is the question of how disegno is formed. Like Danti and Vasari, Zuccari bases his explanation of the formation of disegno on Aristotle’s \textit{De Anima}. However, Zuccari’s explication is much more elaborated, consistent, and innovative. He describes how the human mind forms concepts and attains knowledge and understanding of the objects in the external world, and how it, in turn, intimates or causes our actions and products in that outer world.\footnote{Zuccari’s formulation here is similar to Cellini’s description of the meaning of his second design (representing Artemis) for the seal of the Accademia del Disegno, discussed in section 7.5.1, where disegno is called the ‘true mother of all human actions’.} This part of the lecture shows Zuccari’s adherence to an empiricist philosophy of knowledge.

The president starts by noting that there is nothing in the intellect that was not first in the senses. He calls the intellect a blank slate (‘tavola
According to Zuccari, people acquire knowledge, come to understand, or form a concept of something (e.g. animal, plant, or rock) with the help of their senses. These senses are their ‘instruments or ministers’. They contribute to the process of knowledge acquisition by receiving the ‘form’ of and from the thing and, subsequently, by transferring this form from the external to the internal (or secret) senses. In the internal sense, the form is ‘illuminated’ and given ‘colors’ by the intellect, and a mental image or concept is constructed. This is what Zuccari calls the *disegno interno speculativo*, the ‘internal speculative design’. The term *speculativo* refers here to the knowing faculty of the human mind (fig. 50).

At this point, Zuccari introduces another *disegno interno*. This is the *disegno interno pratico*, the ‘internal practical design’. It is also internal, because it is the model in the mind for people’s actions and products in the external world. Again the senses and bodies are described as instruments, but this time they are used for the production of the *disegni esterni*, ‘external designs’. The process of producing is, thus, the exact reverse and pendant of the process of knowledge acquisition (fig. 51).

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1143 Alberti 1604/1961, 21: ‘(...) crediamo Aristotele. Prima i sensi nostri esterni, come stromenti, ò ministri, apprendono, e conoscono tutte cose sensibile, le cui forme poi riponendo, e conservando, ne i più interni, & secreti sensi; l’intelletto nostro agente col lume suo spirituale quelle illumina, nel modo che il Sole illumina i colori, e così ne trae diverse forme, più spirituali, e quelle con modo meraviglioso dipinge nel nostro intelletto, poiché questo humano intelletto, si come è noto, non può senza queste forme, & instromenti ne intendere ne operare, essendo vero, come è verissimo, & volgarmente noto quello che Aristotele, e tutta la scola de Filosofi vogliono, che non sia cosa nell’intelletto, che prima non sia stata ne i sensi, essendo egli qual tavola rasa, se bene però atta e disposta à ricevere in se ogni immagine e figura di scienza, e pratica con i sudetti mezzi, che di altra maniera non sarebbe quel tavola rasa.’ This passage is comparable to those in Zuccari 1607/1961, I, 24-5 and 27-8, and II, 46. However, here the term ‘tavola rasa’ is not used.

1144 Alberti 1604/1961, 21-22. In fact, the matter is somewhat more complicated. Zuccari, following Aristotle (*De Anima*), distinguishes the active from the potential intellect, i.e. the intellect as principle or cause from the intellect as model or mental image. In *L’idea*, Zuccari (1607/1961, 23-37) discusses of the processes of concept formation and artistic production in a more complex and detailed way, but essentially in similar fashion.


1147 Ibidem I, 15.

1148 Ibidem I, 20.

1149 The form goes from the *disegno esterno* through the senses/body to the *disegno interno speculativo*, and from the *disegno interno pratico* through the senses/body to the *disegno esterno*. In *Idea* Zuccari distinguishes the *disegno esterno naturale*, which is created by God’s *disegno interno*, from the man-made *disegno esterno*, found in the work of art and the moral action through his *disegno interno pratico*. 

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The relation between the inner and the outer, mind and body is central to Zuccari’s conception of disegno. Whereas disegno interno speculativo is the end (and image) of the process of knowledge acquisition, disegno interno pratico is the beginning (and model) of the process of artistic production. Although the positions of the disegno interno speculativo and the disegno interno pratico are different in both processes, their contents can be identical. For instance, this is the case when after the formation of the concept of a lion this same concept is used as the model for the artistic product. However, often the content is not identical, namely when the artistic product is based on a mental image that is formed in the fantasy of the artist (e.g. when he mixes concepts or construes images that have no counterpart in reality), and thus not based on the direct observation of external reality. Typical contemporary examples are grotesques, which are painted decorations representing hybrid and mythological figures.

Zuccari’s main theoretical achievement and innovation consists in the fact that he subsumed the processes of knowledge acquisition and artistic production under the artistic term disegno. Hereby, he made Aristotle’s theory not only applicable to visual artists, but he even made painters, sculptors, and architects the professors, professori as he calls

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1150 Alberti 1604/1961, 22: ‘Ove essendo il disegno esterno prodotto da questo intelletto come mosto dall’interno disegno, se bene però per mezo del nostri sensi, e parti corporee, come veri instrumenti di lui: habbiamo necessariamenta à dire, ch’il disegno esterno sia effetto, e parto, per così dire, del disegno interno, che se bene nell’intelletto nostro speculativo e Pratico sì formano i disegno interni per mezo del disegni esterni prodotti dal primo, & principal Pittore Idio che sono queste cose create, le cui forme, come dicemo sono necessarie per intendere, nulladimeno i disegni esterni fatti da noi Pittori, Scultori, & Architetti che sono cagionati, e formati per virtù del disegno nostro speculativo, e Pratico’.


1152 This was already observed by Rossi (1974, 48) and Williams (1997, 148).
them, who are best equipped to carry out these processes of knowledge acquisition and artistic production.\footnote{Zuccari (1607/1961, I, 34) uses the term professori (or comprofessori) to refer to his fellow artists and presumably especially, or even only those, who are masters of design and have their own workshop. Moreover, he refers to painting, sculpture and architecture as professions, professioni.} According to him, in contrast to philosophers and theologians, on the one hand, and to artisans, on the other, artists combine and balance the equally necessary intellectual and practical sides of man.\footnote{Thereby, Zuccari also implied that artists are the human beings who bear the closest resemblance to God, insofar as their disegno reflects and resembles the unity of understanding and creation in God. However, Zuccari admits that metaphysicians and theologians contemplate higher and more divine things. See Alberti 1604/1961, 20-22, for Zuccari’s comparison of God to the human soul in general, and to that of the painter in particular. See Zuccari 1607/1961, II, 77-79, for his remark on the status of theologians and metaphysicians.}

It is now possible to reinterpret Zuccari’s educational program, discussed in the previous chapter, as being based on his double-layered notion of disegno.\footnote{After have given the definitions of painting, sculpture, and architecture, Zuccari asks the noble lords and worthy academicians present to defend this concept of disegno against opponents and to demonstrate its value and greatness with the good study of theory and of practice See Alberti 1604/1961, 45: ‘… lasciare queste diffinitioni à grandezza d’esso Disegno, per tanto nobilissimi Signori, e prestantissimi Academici, vi piacerà, come fedeli, e valorosi commilitoni, diffendere, e sostentare contra chi oppugnarli volesse, questi nostri discorsi, e nostre diffinitioni, prima con buono studio di theorica, e prattica mostrare il valore, e la grandezza di questo chiaro, e degnissimo disegno, e delle sue nobilissime professioni…’} The goals of the theoretical education, i.e. lectures and debates, are the training, forming or improving of the disegno interno of the artist. With regard to the practical education, the first three stages of disegno (taught in the first three capate) can now be understood as a step by step training program in which the students learned to obtain the forms from the objects in the external world with the help of their drawing pens – which were extensions of their senses (especially of sight). To reiterate, in these capate the students learned how to copy individual body parts, reliefs and plaster casts, and works by masters of the past, respectively. In terms of Zuccari’s conception of disegno, the students in first three stages learned how to obtain the disegni esterni from the objects in the outer world by copying them and turning them into disegni interni, so that they can be understood. In the fourth and highest stage, the students, in turn, practiced exteriorizing the disegno interno pratico with the help of their imagination (fantasia).\footnote{See Rossi 1974, 49-50: ‘Infatti solo i pittori, scultori ed architetti “di poca sostanza” e “ignoranti” non sanno disegnare o scolpire se non hanno un modello davanti agli occhi, mentre gli artisti eccezenti operano “sens’altra scorta di altra intelligenza” che non sia il loro Disegno Interno.’}
Similar graduated systems of practical training of drawing for artists already existed since the fifteenth century. However, Zuccari is the first to ground these practices in a philosophical theory and an epistemology, in which the relation between theory and practice, hand and mind, occupy and central place. As discussed in the previous chapter, archival documents and Alberti’s descriptions show that the practical training was carried out in the early decades of the academy’s existence. The theoretical discussions, however, seemed to have stopped after Zuccari’s presidency or were organized only irregularly.

9.8. Zuccari’s disegno in practice: natural history in the Accademia dei Lincei

In order to arrive at a fuller understanding of Zuccari’s complex conception of disegno, it is expedient to briefly discuss the use of drawings and images by the scientific Accademia dei Lincei in Rome. The Accademia dei Lincei (Academy of the Lynxes or Lynx-eyed) was founded in 1603 by the nobleman Federico Cesi (1585-1630) and three friends. They took the lynx as their symbol because this animal was thought to possess exceptional vision that could even perceive beneath the surface of things. The Accademia dei Lincei is often credited for being the first modern scientific academy. In their scientific projects the Linceans emphasized observation and experimentation; they conceived of science as a collective enterprise; they focused on the so-called ‘lesser known sciences’, such as mathematics, natural history, and natural philosophy; and they were supporters of Galileo, who became a member himself in 1611.

The most relevant characteristic of this academy in the context of this dissertation is the fact that its members commissioned thousands of drawings and prints from artists for their scientific projects. What is more, Cesi and his co-founders Johannes van Heeck (b. 1579) and Francesco Stelluti (1577-1652) were able amateur draftsmen. The functions of these artistic images in the academy’s practices of

1157 See for a similar graduated system Kwakkelstein’s (2011, 110) interpretation of Leonardo da Vinci’s curriculum for art students. Moreover, Leonardo also preceded Zuccari – and the other artists discussed in this chapter – in conceiving disegno as part of a creative process, in which the artist expresses the ideas he finds in his fantasia or memoria. Ladee 2016, 51-52. Zuccari’s analysis, however, is more developed because it includes the process of knowledge acquisition via the senses, hands, and instruments as a pendant and preliminary process.

1158 Gabrieli 1996, 67, n. 1 and Solinas 2009, 231-232. According to Solinas (2007, 126), being educated in the arts of design was not uncommon in the formation of children of the Roman aristocracy in this period. Of the first Linceans, only Cesi was of noble birth.
knowledge acquisition and divulgation can be seen as an illustration of Zuccari’s double-layered notion of disegno. Conversely, Zuccari’s theory can help to further the understanding of these functions in the scientific activities of the Lincei, which to this date have remained unclear. The central question is: how did these drawings – and the artists who produced them – aid the scientists in acquiring knowledge from the natural world?

The importance of artistic images in the Lincean projects can be demonstrated in two ways. In the first place, there are written testimonies in their correspondence and notes. For example, in a letter to his colleagues from 1605, Cesi writes that the employment of a sculptor and draughtsman (to produce engravings and figures) will be most useful for the Lincean projects, and that such an artist should always be in their service. ¹¹⁵⁹ Furthermore, from Cesi’s notebook of 1611 derives the

¹¹⁵⁹ See BAV, Vat. Lat. 9684, 64r-66v, transcribed in Gabrieli 1996, 59-70 (letter 24). April 10, 1605. Cesi’s letter contains the agenda for a tele-meeting between himself, Francesco Stelluti, and Anastasio De Filiis. The document also includes Cesi’s proposals for the issues addressed in the agenda as well as Stelluti’s and De Filiis’ responses. The relevant passage from the agenda, paraphrased in the text, reads: ‘Essendosi l’Illuminato in Dania provisto di un giovane scultore et disegnatore in rame per far stampe e figure, cosa utilissima alli componimenti di Lyncaei, quale pigliò con animo che servisse all’ordine et lo tiene seco, se debbia riceversi al servitio de’ Lyncaei per sempre.’ The l’Illuminato mentioned here is the Johannes van Heeck’s (all members had academic nicknames), who in this period was traveling through Northern and Eastern Europe. In a letter from December, 19, 1604 Van Heeck wrote that he had taken in his service a young engraver to record the most notable things of his trip. BAV, Vat. Lat., 9684, cc. 96-97 transcribed in Gabrieli 1996, 46 (letter 18): ‘Ho appresso di me un giovane, quale mi ha intagliato in rame tutte le cose più notabili di questo viaggio, et questo mi è servitore et compagno.’ Cesi’s proposal or advice concerning the issue of the draughtsman and engraver in the agenda is the following: ‘Utillissimo sarà il disegnatore in rame per il nostro ordine, poiché nel stampar i componementi delli Lyncaei la maggior spesa sarebbe nelle figure, onde avanzeremo questo et potremo figurare ogni nostra osservazione et capriccio, et per questo vogliamo riceverlo al servitio de’ Lyncaei, et quando l’Illuminato non lo possa trattener, lo mandi ch’io lo terrò nel Lynceo.’ According to Gabrieli (1996, n. 1, 67) and Freedberg (2002, 253), ‘capriccio’ refers here to the whims or games of nature (ludos naturae), and especially the latter uses this interpretation to argue that the Linceans in their early phase were much more interested in the extraordinary and monstrosities that could be found in nature than in the normal and essential, and that this had important consequences for their scientific results. However, this interpretation is not buttressed by this passage, as Cesi writes ‘nostra capriccio’ instead of, for instance, ‘capriccio della natura’. Moreover, in the beginning of the agenda Cesi writes almost the same phrase with one important difference, namely ‘libri’ instead of ‘capriccio’: ‘s’è provisto anco d’un giovane scultore in rame di figure, quale sarà molto a proposito ai Lyncaei per figurar le loro osservazioni et libri’ (Gabrieli 1996, 61). Thus the term capriccio refers here to the Lincean activities and products. In the Vocabolario della Crusca of 1612 the meaning of ‘capriccio’ is related to that of ‘pensiero’ (thought), ‘fantasia’ (fantasy), and ghibirizzo (whim), but also to the shivers one has because of seeing some horrific thing, or because of fever (‘quel tremore, che scorre per le carni, o
definition of *pittura filosofica*, philosophical painting. It reads: ‘Philosophical painting. Direction of painting, and its study, not only for simple delight, which is vain abuse, but [also] for the benefit of life and efficacious discipline and pleasure of many utilities.’ The term ‘filosofica’ refers to natural philosophy, or natural science and history dealing with the properties and essence of objects and organisms in the physical world.

A more direct way of understanding the importance attached to images by the Linceans is to analyze some graphic examples. There are thousands of drawings and engravings of plants, fungi, animals, minerals, fossils, and heavenly bodies that originated in the context of the Lincean scientific projects. For instance, an unpublished book with travel notes, collected by Van Heeck on his journeys through northern Europe, contains images drawn with pen and then colored with watercolor and...
varnished (fig. 52). The artist could have been Van Heeck himself, but also the draftsman he mentioned in one of his letters to his friends in Italy.\footnote{Van Kessel 1976.} Van Heeck not only wrote the Latin name at the top of the page, but also a description of the plants in Dutch and the precise location where they were collected. The handwritten notes on the sheets in the book show that the drawings were part of a process of analysis and identification. The combination of text and image made it possible to compare organisms with each other at different times and places (and even on different continents), without it being necessary for the specimens to be physically present.\footnote{See Freedberg 1993, 144-145, where this function of scientific drawings is discussed in general in the context of the Lincean projects. According to Freedberg, in their studies of the natural world the Linceans turned to accurate visual reproductions of the natural world because they realized that the purely verbal descriptions of ancient biologists, such as Aristotle and Theophrastus, were no longer sufficient. On the one hand, images were a much more precise and direct reflection of the organisms than words. And, on the other hand, there existed no ancient verbal descriptions of hundreds of species, which in this period were discovered in the New World. According to Panofsky (1952, 86), Leonardo was the first artist/scientist who produced documentary images. Panofsky argues that without these drawings the sixteenth- and seventeenth-century scientist it was impossible to test observations by checking them against others.} With the help of such disegni the Linceans developed a structured cataloging system.\footnote{Cadei 2002, 78.}

![Figure 52. Johannes van Heeck, Botanical Drawings, ms. H. 507, De Vegetalibis 1603-1605, cc. 126v-127r (from: Fructis itineris ad septentrionales, Montpellier, Bibliothèque de l’École de Médecine)](image)

Handwriting is also visible in the next example, representing two woodcuts of Mexican plants that were supposed to be included in the
enormous Lincean project of the so-called *Tesoro Messicano* (fig. 53). The pages bear the name in the native language (Nahuatl) of the specimens represented, and often also botanical annotations, which appear to be by Cesi’s hand. The note on the page on the right, probably a message destined for the engraver, reads: ‘these leaves have to be seen in the original, (because) I don’t like them and they are unwrapped and striped in the length.’

![Figure 53. ‘Piante medicinali messicane’: woodcuts with autograph annotations by Cesi, preparatory studies for the *Tesoro Messicano*, ca. 1612 (from: Morello 1986, 84 and 86)](image)

This is only one example of Cesi’s preoccupation with the quality and precision of images. The letters he exchanged with Galileo when they were working on the publication of the latter’s book on the Sunspots (*Macchie Solari*) are additional evidence that the Linceans wanted the images to represent nature exactly as observed and absolutely without artistic fantasies. In a letter to Galileo from 1612 Cesi writes that he does not yet send him the engravings for the book, because upon reviewing them together with the painter Lodovico Cigoli and the engraver Mattheus Greuter, some small defects were noted. Therefore,

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1165 This consisted of the publication of the manuscript about the plants, animals and minerals of Mexico, which had been observed, collected and represented in drawings by Francisco Hernandez, who was a doctor in the court of King Philip II.
1166 Morello 1986, 83-86. The Italian reads: ‘queste foglie bisogna vederle al originale, che no(n) mi piacciono e vanno scartocciate e striate per il longo.’
1167 See Baldriga 2002, 34-35. And see the letter from Fabio Colonna to Cesi form December 16, 1628 (Gabrieli 1996, 1190-1191, letter 984), in which he criticizes the images in one of Aldrovandi’s publications.
Cesi returned the copper plate and the originals to Greuter for reworking.\textsuperscript{1168}

The final examples come from Cesi’s unpublished \textit{Fungorum genera et species}. This mycological codex is considered to be the first study of mushrooms using a modern scientific approach. The images in the book document and fix the characters of the specimens, such as the floral symmetry, the number of cotyledons, and the function of the polls in reproduction (fig. 54). In this example, the five figures on the right represent different stages of development of the fungus: the largest thereof is a group of mature organisms. The groups on the lower right represent very young fungi, with some abnormal specimens. The unit underneath the big group to the left demonstrates the chromatic variability within the same species. The group to the lower left represents the fungi in the early stages of colonization. In this group also the vegetative substratum can be seen. The drawings show a remarkable high quality in terms of faithfulness to the original and color, which means that a professional artist must have produced them.\textsuperscript{1169}

\begin{flushright}
\textsuperscript{1168} Firenze, Bibl. Naz., Mss. Galil., VI, viii, cc. 170-171 transcribed in Gabrieli 1996, 283-4, (letter 176), Roma, November 3, 1612: ‘La sua delli 29 8bre mi capitò a punto hier sera, mentre stavo col s.r Cigoli et Greuter rivedendo i tagli delle macchie, quali, ancorchè forniti, non gli mando, havendoli al’istesso artefice riconsegnati con i rami e gl’originali istessi, acciò, riconoscedovi certi difettuzzi, li riduca alla perfettione de’ primi, e ciò fatto, le manderò le mostre impresse. Nel stamparle non sarà difficile far più negre quelle del mezzo, et io ci farò usar ogni diligenza, e le stamperà l’istesso Greuter.’ According to Baldriga (2002, 259-261), the letters that were written and sent in the context of the publication of Galileo’s \textit{Istoria e dimostrazioni intorno alle macchie solari} from 1613 show that the publication of this book was a painstaking process, amongst other things because of Cesi’s and Galileo’s concern for precision and correctness of the illustrations. According to Solinas (2009, 232), in this period the \textit{disegni} of natural objects and organisms became ever more accurate and this should be connected to the academic debates were the distinction between truth and lifelikeness (\textit{il vero e il verosimile}) and that between the natural model and the pictorial representation were debated.
\textsuperscript{1169} Cadei 2002, 84-85.
\end{flushright}
These examples show that Linceans used the drawings and engravings for the analysis, comparison and identification of the natural organisms that they studied and attempted to understand. Quality and lifelikeness were of the utmost importance to them. Both for the acquisition and the dissemination of knowledge they relied on disegni and disegnatori. Besides the already mentioned Mattheus Greuter, some of the other artists working for the Linceans were Francesco Villamena (1556-1624), Vincenzo Leonardi (1590-1650), Giorgio Nuvolostella, and Isabella Parasoli.

The archive of the Accademia dei Lincei contains the draft of a contract between Cesi and Nuvolostella from October 1619 for the production of the woodcuts for the *Tesoro Messicano*. The contract specifies that the artist receives a daily share (parte) of bread and wine; that he has to complete eight figures per month, for which he is paid 7 scudi and 25 baiocchi; and that his share of bread and wine will be taken away if one week passes without handing in a figure.\[1170\]

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\[1170\] Arch. Linc. 4, 372r-v. The previous sheet (Arch. Linc. 4, 371r) also concerns Nuvolostella’s work for Cesi. It contains various entries, the first of which is similar to the contract on the following page, only much shorter. It states that the artist arrived in Acquasparta on July 20, 1618 to make the woodcuts for the figures of the animals for the ‘Mexican book’. It also specifies that Nuvolostella has to finish 8 figures per month, for which he will receive 5 scudi ‘provisione’ (monthly salary) a ‘carlino il di di companatico’ and his share (‘parte’) of 2 pounds of bread and 3 flasks of wine. This means that the artist received a substantial raise the following year (from 5 to 7,25 scudi per month). On the rest of this sheet there are specifications of what Nuvolostella had
Zuccari’s conception of *disegno* in combination with his ideas for the curriculum for students in the art academy offers a more profound understanding of the function of the artistic images in the scientific projects of the Accademia dei Lincei. The skills acquired by the students in the first two stages of Zuccari’s training program corresponded to the skills that the Linceans demanded from their artists. The examples have shown that the latter were supposed to faithfully copy single organisms, or parts thereof. In terms of Zuccari’s theory of *disegno*, the Linceans used artists and artistic images to extract the *disegni esterni* from the organisms and to form *disegni interni* (*Speculativi*) in the minds of the scientists. In other words, the artists were the instruments of the scientists in their analysis and identification of the natural world. They were aids to, and in a certain sense improved versions of, the scientists’ senses and hands.

However, Zuccari and many of his fellow academicians would have thought of this type of artistic activity as a debasement of the profession. Whereas the exact imitation of nature was all that the Linceans desired from the artists and their products, for Zuccari this was only half of what an artist should be able to do. Instead, he urged artists to develop and exteriorize their own *disegni interni*. This is the process of artistic production and it corresponded to the highest stage in Zuccari’s curriculum.

This discrepancy between the functions required of art and artists in scientific and artistic practices can be related to the different goals pursued by the two academies. Whereas one of the main objectives of the Lincean academy was to increase the importance of the natural sciences in the hierarchy of the arts and sciences, the Accademia di San Luca aimed, among other things, to educate a future generation of excellent artists and elevate the social status of the artist.

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1171 In the context of the publication of the results the artists were used to transfer the *disegno interno pratico* from the minds of the scientists to paper.

1172 And Zuccari’s argumentation suggests that artists, who mastered it, were the ones who resembled God the most.

1173 The difference between these academies in terms of social status is also expressed by the different roles Cardinal Francesco Barberini, who was the nephew of Pope Urban VIII, had in both of them. Whereas he became *cardinale protettore* of the Accademia di San Luca in 1627, in 1623 he joined the Accademia dei Lincei as a member. Thus, apparently it was acceptable for a cardinal to participate in a scientific institution, but there remained a social distance to the members of the art academy.
CIGOLI’S MATHEMATICAL CONCEPTION OF DISEGNO

Nuvolostella’s contract, discussed earlier, is telling in this respect. The engraver was paid a fixed price for each woodcut he completed. Although contemporaries would have conceived this as better, in terms of social standing, than being paid per day (as journeymen), it was not what most ambitious artists were looking for, namely a fixed court salary, in addition to payments for their works. In terms of the discussion about the different painting practices in Rome in Chapter Six, this entails that Nuvolostella was more a pittore grosso than a valentuomo.

This might also be the reason why none of the artists that were used by the Linceans seem to have been a member of the Accademia di San Luca. However, later in the seventeenth century several academic artists such as Nicolas Poussin and Pietro Paolo Bonzi studied the scientific disegni in the Lincean archive, as well as in the archive of Cassiano dal Pozzo, who acquired most of the manuscripts and drawings after Cesi’s death in 1630. Although not qualifying as artistic products in Zuccari’s sense, apparently the scientific images could be used by these artists to interiorize the disegni esterni of objects in the natural world.

9.9. Cigoli’s mathematical conception of disegno

In the previous section the role of the painter and architect Lodovico Cigoli in the preparation of Galileo’s book on the sunspots was briefly mentioned. Cigoli is an interesting figure because, together with Zuccari, he was one of the few artists who belonged both to the Accademia del Disegno and to the Accademia di San Luca. Cigoli is documented in the Florentine academy from the late 1570s until the early 1600s. When

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1174 See Fumagalli 2014, 118 for the distinctions between methods of payments of court painters, journeymen, and artists whose works were appraised. Another way, in which ambitious painters attempted to increase the value of their paintings, was to refuse to put a price on them, especially if they were done for wealthy and high-placed individuals, as to suggest that they were gifts. In this way, the patron or commissioner had to come up with a return gift according to his own status and not that of the artists or to the value of the work itself. See also section 10.2.

1175 Only Villamena’s name turns up in the archival documents of the Accademia di San Luca. However, he is recorded only once as being present at a meeting of the institution, namely on October 31, 1593, only two weeks before the academic meetings under Zuccari’s presidency started. ASR, TNC, uff. 11, 1593, pt. III, vol. 27. 27, fols. 168r-v, 169r-v. Furthermore, Bernardino Parasoli, the son of Isabella Parasoli, who is said to have worked for Cesi, was present at a meeting of the Accademia di San Luca in 1624. According to Baglione (1642/1995, 394-395), Bernardino died young.

1176 Other artists, used the Lincean archive for their artistic studies are Rubens, Elsheimer, Bril, Gottfried de Wals, and Louis Finson. See Solinas 2009, 229-330.

1177 Or the drawings were seen as autonomous works of art, which could be studied by other artists. Thereby they could correspond to Zuccari’s third training level.
Cigoli was called to Rome to work for the pope in 1604, he joined the Roman art academy.\footnote{Cigoli joined the Accademia del Disegno in September 1578 (ASF, AD 101, 52r) and was elected as academician on October 18, 1581 (ASF, AD, 26, 23r). The oldest source for Cigoli’s membership of the Accademia di San Luca is the biography that was written by his nephew, Giovanni Battista Cardi (1913, 33), around 1628. See also Baldinucci 1681-1728, V, 33. It should be noted, however, that Filippo Baldinucci, who published his biography of Cigoli at the beginning of the eighteenth century, depends heavily on Cardi’s text. Cigoli’s membership of the Roman art academy at the beginning of the seventeenth century is confirmed by Missirini (1823, 464), who derived his information from documents from the archive of the institution (Registri) that are now lost. See also Matteoli 1973, 226-227.}

Giovanni Batista Cardi, who wrote Cigoli’s biography fifteen years after his death, mentions that in the early 1570s the painter had been a pupil of Alessandro Allori in Florence. According to Cardi, in that period Cigoli assisted his master in dissecting many human corpses and for long periods of time, including during the night.\footnote{Cardi’s account suggests that, after writing the Ragionamenti, Allori not only remained interested in anatomy, but he also carried out dissections himself – whereas, it will be recalled, in his treatise he had stated that all he knew about human anatomy he had learned from the physician Alessandro Menchi and the anatomists and authors Valverde and Vesalius.} The foul odors and the violent nature of this ‘melancholic’ activity aggravated Cigoli’s senses and he became so ill that he had to recuperate for a couple of years in his hometown (Cigoli) before he was able to return to Florence to continue his studies. Moreover, Cardi states that the illness, which affected his uncle’s memory, periodically returned and, at times, made it difficult for Cigoli to work.\footnote{Cardi 1913, 11-12 and Baldinucci 1681-1728, V, 33. It should be noted, however, that Filippo Baldinucci, who published his biography of Cigoli at the beginning of the eighteenth century, depends heavily on Cardi’s text. Cigoli’s membership of the Roman art academy at the beginning of the seventeenth century is confirmed by Missirini (1823, 464), who derived his information from documents from the archive of the institution (Registri) that are now lost. See also Matteoli 1973, 226-227.} Although these health problems had been provoked by dissections of human corpses, this did not prevent the painter from attending anatomical lectures from the Flemish physician, Teodoro Mayerne, in the hospital of Santa Maria Nuova in Florence at the end of the century.\footnote{It is likely that this man was the famous phycisian and anatomist Théodore de Mayerne (1573-1654/55), who was born in Geneve. This means that Cardi – and Baldinucci (see below) – was mistaken as to his place of birth.} What is more, Cardi writes that, on the basis of the drawings made by Cigoli during these dissections, the artist produced the famous wax statue of an ‘anatomized’ man (Lo scorticato) that was to aid students for many years in learning how to draw the human body (fig. 55).\footnote{Cardi 1913, 26, See also Baldinucci 1681-1728, V, 29, Waźbiński 1987, 179-196, and Cigoli 1992, 9.}
Unfortunately, Cardi does not disclose the context, in which the anatomical lectures by Mayerne took place. For instance, did the Accademia del Disegno sponsor these lessons in Santa Maria Nuova, as prescribed in the addenda to the incorporating statutes of July 1563, or were they organized primarily for students of medicine and were they also open to interested dilettantes, such as artists? That the latter was the case is suggested not only by the lack of documentary evidence in the archive of the Accademia del Disegno but also by Baldinucci in his biography of Cigoli. Baldinucci states that Mayerne was a celebrated Flemish anatomist and that he was hired to display his talents to the professors of medicine and interested amateurs of this art.

Cigoli was not only, and not even primarily, interested in human anatomy. Cardi discusses how his uncle was very much attracted to poetry and that he desired to be admitted to the literary academies of his time as a full member. Moreover, there is evidence that Cigoli wrote a treatise on painting – now lost – in which he focused especially on color. In 1603, Cigoli joined the Accademia della Crusca. His academic nickname was *il Innominato* (‘the nameless one’) and he designed the *impresa* for this institution. Furthermore, there is evidence that Cigoli was also connected to the Accademia Fiorentina and the Accademia dei Trasformati, although his role and status in these institutions is uncertain. According to his nephew, occasionally Cigoli

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1183 See for this statute, Waźbiński 1987, II, 438.
1184 Baldinucci 1681-1728, V, 29. However, Waźbiński (1987, I, 181 and 288-289) seems to favor the former option, as he connects Mayerne’s dissections in Santa Maria Nuova to the academy’s statutes.
1186 On Cigoli’s (possible) membership of the literary academies mentioned, see Matteoli 1973, 225-226 and Matteoli 1980, 316. According to Quiviger (1995, 108), in the sixteenth century, visual artists could only become full participating members of literary
acknowledged and lamented that because of his literary studies, his understanding of some of the aspects of his art, especially that of relief, was not as good as it could have been. Cardi writes that Cigoli confessed this to his students in order to show them the importance and difficulty of mastering *disegno*.\footnote{Cardi 1913, 18-19.}

The discussions of the artistic treatises have shown that *disegno* could have different meanings in Italy in the sixteenth and seventeenth centuries. What Cigoli meant by *disegno* becomes clear from various sources. Shortly after arriving in Rome to serve the pope in 1604, he joined the Accademia di San Luca. Cardi writes that in the same year Cigoli also delivered a lecture on *disegno* in the academy’s church in Campo Vaccino, i.e. the church of Santi Luca e Martina. According to Cardi, in this lecture Cigoli discussed the ‘necessity of *disegno*, (...) demonstrating how any argument and activity is improved with the help of it, and that all, who want to operate with perfection are in need of it.’\footnote{Ibidem, 33: ‘[E]l in quel mentre fece nella Chiesa di S. Luca in Campo Vaccino una lezione, contenente la necessità del disegno, nella quale, mostrando quanto ogni discorso et operazione congiunta con quello meglio conseguisse il suo fine, concluse che tutti gli uomini volendo con perfezione operare avevano di esso necessità.’}

Unfortunately, this general description is all that is known about the content of Cigoli’s lecture. However, it should be noted that Cardi’s description almost literally reiterates Zuccari’s formulation of *disegno* in his lectures for the same academy. This suggests that the conception of *disegno*, which had been expressed by Zuccari in the early 1590s, still was the dominant and accepted one in the Accademia di San Luca, and that Cigoli paid homage to the institution and its first president by reiterating and defending it in 1604.\footnote{It should also be noted that in the same year, Romano Alberti’s book about the early years of the Accademia di San Luca, including Zuccari’s theory of *disegno*, was published in Pavia. Matteoli (1973, 227 and 1980, 315-316), however, argues that in his lecture Cigoli was probably oriented more to the practical side of *disegno* than Zuccari in his discussions in *Origini* and *L’Idea*. This means that, like most other scholars, Matteoli understands Zuccari’s notion of *disegno* as predominantly theoretical, instead of as both theoretical and practical, as it is interpreted in this dissertation. However, as explained in the following paragraphs, it is probable that Cigoli’s understanding of *disegno* diverged from Zuccari’s in another sense.}

However, two other sources suggest that Cigoli’s primary conception of *disegno* was different from that of Zuccari. As mentioned, whereas in his advice for the curriculum for Accademia del Disegno in the 1570s Zuccari stressed the importance of a sound mathematical training for artists, during his presidency of the Accademia di San Luca in

academies after showing their skills as letterati and, thus, not on the basis of their pictures and sculptures alone.
1593-1594 his understanding of disegno was anti-mathematical. \(^{1190}\) Cigoli, on the other hand, was very much interested in the mathematical foundations of the visual arts and especially of disegno.

During the last decade of his life, when living in Rome, Cigoli worked on a treatise about perspective, which he left incomplete at his death. Its title, *Prospettiva pratica* (‘Practical perspective’) shows Cigoli adopted a practical approach. \(^{1191}\) In the treatise, the author discusses various practical rules for constructing realistic perspective drawings. These rules were derived from established sources, such as Vignola’s *Due regole* – in the edition that was published with commentary by Ignazio Danti in 1583 – and the more recent *Perspectivae libri sex* (1600) by Guidobaldo del Monte. \(^{1192}\) Like Allori’s *Ragionamenti*, Cigoli’s manuscript contained autograph drawings, as well as woodcut engravings by his brother, Sebastiano. These images are another indication that the treatise was meant as a manual for art students. However, the most innovative part of the treatise is Cigoli’s use of ‘perspectographs’ or ‘perspective machines’, i.e. devices that could aid the artist to convincingly draw objects. What is more, in the *Prospettiva pratica* Cigoli introduces his own perspectograph, versions of which circulated and were used artistic circles. \(^{1193}\)

A second source that attests to Cigoli’s mathematical understanding of disegno is a letter to his friend Galileo from August 11, 1611. Between 1610-1612, Cigoli was painting the cupola of the Pauline chapel in Santa Maria Maggiore in Rome 1612. Commissioned by Pope Paul V, the general theme of the fresco was *Mary’s Immaculate Conception with Apostles and Saints*. \(^{1194}\) In the central axis of the cupola, directly confronting the viewer entering the chapel, Cigoli included an iconographical innovation in his depiction of *Mary as Queen of Heaven* (fig. 56). The moon beneath her feet is not smooth and spotless (immaculate) as it was traditionally portrayed, but full of bumps and

\(^{1190}\) This becomes clear from the criticism that is directed at the painter Giovanni Balducci after giving a lecture in the Accademia di San Luca on how nobility of the art of painting derives from the nobility of its ‘mother’, mathematics. The main point of criticism is that Balducci’s ideas are incompatible with Zuccari’s definition of disegno, which had previously been accepted in the academy. In *L’Idea*, Zuccari (1607/1961, II, 29-31) is even more explicitly anti-mathematical than in his lectures for the art academy.

\(^{1191}\) Giovanni Battista Cardi, planned to publish his uncle’s treatise in 1629. To this end, Cardi wrote a dedication to Grand Duke Ferdinand II of Tuscany, as well as prefaces to the various parts of the manuscript. However, for some reason Cardi’s plan failed and the treatise remained unpublished until 1992. See Kemp 1991, 133-134 and Cigoli 1992.

\(^{1192}\) Kemp 1991, 134.

\(^{1193}\) Ibidem, 136-138.

\(^{1194}\) The inscription near the middle of the cupola reads: MARIAE CHRISTI MATRI SEMPER VIRGINI / PAULUS V P[ONTIFEX] M[AXIMUS] (‘Mary mother of Christ eternal virgin / Pope Paul V’).
dents, which represented the mountains and craters that had been discovered by Galileo and depicted in the *Sidereus Nuncius* (*Starry Messenger*) published in 1610 (fig. 57).

Galileo’s discovery of mountains and craters on the surface of the moon had far-reaching implications for astronomical theory because it refuted the accepted view, as expressed in the Ptolemeic-Aristotelian tradition, that all heavenly bodies were perfect and spotless globes. In this tradition, mountains and craters were considered to be imperfections, belonging to the sublunary world. For this reason Galileo’s observations provoked skepticism from other scientists, who were still committed to the ancient worldview. One of Galileo’s critics was the renowned Jesuit scientist Christopher Clavius (1538-1612). Clavius doubted the reality of the mountains on the moon and attributed the dark blotches seen through Galileo’s telescope to variations in the moon’s density.

In the letter to Galileo, Cigoli attacked and ridiculed Clavius for his skepticism. Cigoli wrote: ‘Now I thought about it and thought about it again, and I cannot find another explanation in his [Clavius’] defense, than that a mathematician, being great as he is, finding himself without design (*disegnio*), is not only just half a mathematician, but also a man without eyes.’

In this passage Cigoli highlights the close ties between

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Cigoli, letter to Galileo, August 11, 1611, in Tognoni 2009, 66: ‘Ora io ci ò pensato et ripensato, né ci trovo altro ripiego in sua difesa, se non che un matematico, sia grande quanto si vole, trovandosi senza disegnio, sia non solo un mezzo matematico, ma ancho uno huomo senza ochi.’ See also Bredekamp 2001, 179-180 and 2009, 319-320 for a
disegno and perception, both in science (mathematics) and everyday life. According to the artist, Clavius failed to see what he should have seen when looking through the telescope, because he lacked disegno. This implies that, according to Cigoli, disegno enabled Galileo to correctly perceive the moon through his telescope.

In recent years, scholars have argued that when Galileo directed his telescope at the moon in 1609, he immediately recognized that the dark blotches he saw through his lens were not caused by imperfections of his instrument or variations in the lunar density – as was suggested by some contemporaries – but by mountains and craters on its surface. Galileo was able to correctly interpret these moon spots not only because of his telescope (which had stronger magnification than previous ones) but also because of his artistic training as a young man and his continued practice in drawing later on. In the play of lights and darks Galileo recognized the problems of perspective that he had encountered when studying with the mathematician Ostilio Ricci in Florence around 1585 in the house of Bernardo Buontalenti. What is more, Galileo’s membership of the Accademia del Disegno in 1613 shows his continued interest in the arts.

The Prospettiva pratica and the letter to Galileo show that Cigoli’s conception of disegno was primarily mathematical, as it was closely connected to perspective and geometry. In this sense, it was the anti-thesis of Zuccari’s conception. However, this distinction is only a superficial one. The correspondence between both points of view is more profound – although Zuccari would probably be reluctant to admit it. Like Zuccari, Cigoli understood disegno as closely related to perception and to knowledge acquisition. This entails that there is no contradiction between Cigoli’s mathematical understanding of disegno and his alleged statement in his lecture for the Accademia di San Luca in 1604 that disegno is the necessary basis for every human discourse and activity.

discussion. Bredekamp, however, translates disegno here as ‘drawing’, highlighting only its practical and physical meaning whereas at that time the term also referred to the more theoretical and mental part of the artistic process, i.e. a design.

1196 See especially Edgerton 1991, 223-253, Bredekamp 2001 and 2009, Roccasecca 2009, 149-150, and McNeely 2009, 252-253, also for further references. Bredekamp is arguably the scholar who has advanced furthest in interpreting the role of images in early modern scientific practices, including in his analyses also Hobbes, Leibniz, and Darwin. It should be noted in this context that his analysis of Galileo’s understanding of disegno (in Bredekamp 2009) was partly based on a copy of Sidereus Nuncius, which later turned out to be a forgery. See Wilding 2012 and 2014, and Van Helden 2014. However, this discovery does not affect the general argument that Galileo was able to correctly interpret the spots on the moon’s surface as craters and mountains because of his training in disegno.
9.10. Conclusion: reasoning and doing

The fundamental question on the background of the artistic treatises discussed in this chapter is whether artists should be content just producing their works or whether they could, and even should, engage in theoretical and literary reflection on their profession. Varchi’s solicitation of the artists’ opinions and inclusion of their letters in the publication of his lezzione on the paragone shows that he adhered to the second position. This conclusion remains valid even when taking into account that he placed the visual arts in an intermediate position in the system of arts and sciences and that he criticized the artists’ arguments for not touching upon the essence of the matter of the paragone.

Borghini’s dismissal of the artists’ contributions to the debate in his notes and his admonition to the academicians to stick to their trade in his lecture on the occasion of the feast of San Luca in 1564 strongly suggests that he adhered to the first position. However, it should be reiterated that he voiced his remarks in the specific context of the fierce disputes that had erupted between painters and sculptors about the primacy of their arts in the wake of Michelangelo’s funeral and, thus, at the time when he, as luogotenente and thus as representative of Cosimo I, was responsible for the peaceful and smooth functioning of the Accademia del Disegno.

The composition and, in some cases, publication of treatises on disegno by academic artists are performative confirmations that they agreed with Varchi’s position, even if in the internal argumentation some of them (e.g. Allori) displayed modesty about their intellectual capabilities or even adhered to Borghini’s views. What is more, Varchi also provided the general Aristotelian epistemological and psychological framework that the artists adopted for their treatises, in which disegno plays a fundamental, though not unequivocal, role.

In his discussion of disegno in his Lives, Vasari shows that he has some theoretical pretensions by connecting the concept to the Aristotelian account of the process of induction. However, his explanation is conceptually confusing and, in the end, it is more practically oriented, which can be seen from his emphasis on disegno as surrounding lines of a figure on paper. This means that Vasari’s passage on disegno occupies an intermediate position between Varchi’s and Borghini’s views on the theoretical aspirations of artists.

Danti’s Primo libro constitutes a more consistent and more convincing attempt to elevate the theoretical level of the academy’s educational practices. However, Danti did not obscure the practical aspects of the profession. He underlined the importance of acquiring a sound practical knowledge of anatomy for the artist. Allori’s rules of disegno are focused mainly on the practical aspect of drawing. As rules of
thumb, Allori’s advice can only lead to a limited and simplified understanding and rendering of the human figure. In order to fully acquire the practical understanding of the professional artists, that is, to be able to represent all types of people, from all ages and levels of beauty, these rules have to be surpassed by long practice. Cellini’s *Principii* contains the most practical approach to the teaching of the art of *disegno*. He simply describes the anatomical sequence the student should follow in order to become a proficient draftsman. The absence of theoretical or philosophical notions in Cellini’s treatise contrasts with his explanations of the meanings of his designs for the seal of the Accademia del Disegno.

The treatises of Cellini, Allori and Danti, have traditionally been grouped together, and justly so. All three deal with the fundamental role of the human anatomy in learning *disegno*. Furthermore, Allori and Danti joined the Accademia Fiorentina on September 26, 1565, which was around the period when they were working on their treatises. This means that these works were possibly written for the purpose of entering the literary academy. Cellini’s treatise dates from the same period, which might suggest that he also handed it in as an admission piece, albeit unsuccessfully. However, because the subject of all three treatises is the teaching of drawing to young students, their function in the Accademia del Disegno should also be considered as the context, in which these texts originated.

In the past, it has been noted that the incorporating statutes of the Florentine art academy say very little about the institution’s pedagogical program, but that they are focused almost exclusively on organizational matters. From this fact the conclusion has been drawn that, contrary to what is stated in the first section of the statutes, the aim of the founders of the academy was not to provide art education, but only to create an institution that would elevate the status of the visual arts and of their practitioners. There are two problems with this argument. First, as has been discussed in the previous chapter, the statutes of the Accademia del Disegno do give various stipulations about the organization of educational practices within the institution. Second, even if granted that the rules concerning the educational program are somewhat meager compared to those about organizational issues, this is probably not a reflection of the intentions of the artists, but a feature of the type of document under discussion. Whereas statutes are a very good means for laying down the organizational structure of an institution, they are ill suited for presenting a detailed pedagogical program or a curriculum. Theoretical and discursive treatises, such as those of Allori, Cellini, and

Danti, are much better in this respect. Therefore, it is probable that these artists wrote their works not only for the purpose of gaining admission to the Accademia Fiorentina, but also as part of the practical training program in the Accademia del Disegno. Cigoli’s *Prospettiva pratica* and Zuccari’s lectures in the Accademia di San Luca were composed for similar reasons.

Allori’s treatment of the different body parts corresponds almost literally with what Federico Zuccari was to state thirty years later in his outline for the practical training program of young artists in the Accademia di San Luca. According to the latter, students of the academy should start by copying individual body parts from examples given by the professors. He even calls this the Alphabet of *disegno*. Furthermore, in Zuccari’s art theory the philosophical and psychological discussions are intimately connected to the practical instruction of *disegno*. As discussed in the previous chapter, the four groups (capate) represented the four stages of *disegno*, in which the students developed not only their physical drawing skills but also their intellectual understanding of the surrounding world through the sequence of *copiare*, *ritrarre*, and *disegnare*. In terms of Zuccari’s conception of *disegno*, the students in first three stages (and groups) learned how to obtain the *disegni esterni* from the objects in the outer world by copying them and turning them into *disegni interni*, through which they understood these objects. In the fourth and highest stage, the students, in turn, practiced exteriorizing the *disegno interno pratico* with the help of their imagination (fantasia). Whereas the skills acquired by the artists in the first three stages correspond to the skills required from the artists who produced the images for the scientific projects of the Accademia dei Lincei, this does not hold for the skills obtained in the final stage. Federico Cesi and his fellow Linceans did not want the artists they employed to make use of their imagination while producing scientific images.

Like Zuccari, Cigoli also understood *disegno* as closely related to perception and to knowledge acquisition. This point of convergence is more fundamental than the fact that, in his *Prospettiva pratica* and his letter to Galileo, focused primarily on the mathematical uses and significances of *disegno*, something that was forcefully rejected by Zuccari in Rome. Cigoli’s mathematical understanding of *disegno* can be related to his artistic education in Florence. As discussed in the previous chapter, in the Accademia del Disegno the mathematical instruction played a more important role and was more developed than in the Roman academy. The epistemological scheme of the relation between *disegno interno* and *disegno esterno*, which Zuccari advanced in the Accademia di San Luca in the 1590s, seems to have been applied in Florence to mathematical knowledge. This is noteworthy, because, as discussed, in
this period Zuccari downplayed the importance of mathematics for the arts of the *disegno*. This means that the professionalization of mathematical teaching in the Accademia del Disegno meant both a change in the institution’s educational practices and a difference with the educational practices of the Roman art academy, where, in accordance with the first president’s views, mathematics seem to have been less important.

When analyzing these treatises and comparing them with each other from a practice-theoretical perspective, it becomes clear that they functioned in two distinct social practices, those of art education and of literary production. The fact a *letterato* Varchi discoursed on the visual arts in the Accademia Fiorentina and identified *disegno* as their foundation constitutes a strong piece of evidence of the growing overlap of these practices. The integration of these practices is clearly visible in Allori’s *Ragionamenti* and Vasari’s *Vite*. The latter wrote the book for a mixed audience of professional artists and *letterati*. Moreover, by documenting the lives and works of the most excellent painters, sculptors, and architects of the past, Vasari promoted these artists to a level that had hitherto been reserved for princes, philosophers, or generals. In his *Ragionamenti*, Allori teaches *disegno* to his *letterati* and gentlemen friends. He suggests that the rules are the same for both amateurs and professionals, but only the latter have the time to transcend them and perfect their practical understandings of *disegno*.

The analysis of the treatises has shown that their authors disagreed about the manner in which these practices were to function and develop within the art academies. The differences were derived, at least in part, from the conflicting goals pursued in these practices. Educating students to become professional artists is obviously not the same as providing a leisure activity for gentlemen and amateurs. Furthermore, the treatises show that it was possible to express dissenting views, not only with respect to the long-established status of the visual arts in society, but also to the opinions of the political rulers (Borghini’s admonition to the artists) and the tradition of the ‘demotion of practice’. This means that the Accademia del Disegno and the Accademia di San Luca were institutions of reasoning and doing.

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1198 Van Veen 1990, 12. It is interesting in this context that Vasari’s friend Borghini admonished him to focus on the works of the artists and not on their lives, precisely because ‘biographies are only for princes and those involved in the affairs of princes, not for people of low rank’. Williams 1997, 31.