

BEYOND THE 'PRIMO LIBRO' OF VINCENZO DANTI'S 'TRATTATO DELLE PERFETTE PROPORZIONI'

by Margaret Daly Davis

While Vincenzo Danti is best known as a sculptor¹, he is also remembered as a *trattatista*, and he practiced as a painter, architect, and engineer, although these are more obscure aspects of his career. Danti descended from a long-established Perugian family of artists, and it was a family who wrote about their art. Vincenzo was the namesake of his grandfather, Pier Vincenzo, a goldsmith and architect, who, "*parte per mio diporto, e parte per istruire i miei figliuoli in così nobile arte*", translated into Italian Giovanni Sacrobosco's *De sfera*, an astronomical treatise important for Quattrocento studies of optics. In the following generation, Teodora Danti, Pier Vincenzo's daughter, wrote a commentary on Euclid's *Elements* and a treatise on painting. Her brother Giulio, our Vincenzo's father, by profession a goldsmith, bronze caster, and architect, wrote treatises on engineering and architectural ornament.² While all but one of these treatises by the Danti are lost, Egnazio Danti, Giulio's son and Vincenzo's brother, and the most prolific writer of all the Dantis saw printed, in addition to his own now obscure works on the astrolabe and anemoscope, editions of Euclid's *Prospettiva* and Vignola's *Due regole della prospettiva*.³ Egnazio also published Proclo Liceo's *Sfera*, Latino Orsini's *Trattato del radio latino*, and his grandfather's translation of Giovanni Sacrobosco's *Sfera*.⁴

Fate was harsher with Vincenzo, whose writings, like those of his ancestors, have largely disappeared. His brother Egnazio never fulfilled Raffaello Borghini's hope that he would one day publish the fourteen remaining books of Vincenzo's *Trattato delle perfette proporzioni* as yet unprinted when Vincenzo died at the age of forty-six in 1576.⁵ Danti's premature death occurred little less than a decade after the first book of his treatise, *Il primo libro del trattato delle perfette proporzioni di tutte le cose che imitare e ritrarre si possano con l'arte del disegno*, appeared in Florence in 1567.⁶

What has made Vincenzo Danti's fragmentary treatise so intriguing, apart from the possibility, often counted as a near certainty, that it mirrors Michelangelo's ideas is the list of topics Danti promises to treat in his fourteen never-published books: anatomy (in eight books); the poses and movements of the human figure; the passions; 'historical' compositions ("*de le composizioni de l'istorie*"), drapery, and other ornaments; landscapes and animals and all the things which pertain to landscapes; architectural proportions based on the human body; and the practice of the arts of design "*in universale*". In Schlosser's words, Danti projects a vast program covering the most important features of the arts of *disegno* — "*eine der wichtigsten Geistesurkunden des Manierismus*"⁷ — a lost treasure that has entranced many later commentators. Leopoldo Cicognara speculated that

it perhaps awaits discovery, lying neglected "in qualche archivio polveroso".⁸ Nevertheless, except for two brief references to Danti's treatise in his brother's commentary to Vignola's *Due regole della prospettiva*, published in 1583, nothing of the other fourteen books has ever been identified.⁹

Danti's discussions of painting and sculpture in the unpublished books of his *Trattato* are not, however, entirely lost. A detailed account of Danti's treatment of these two important topics survives, unnoticed, between the covers of *Le scienze matematiche ridotte in tavole*, a book Egnazio published in Bologna in 1577.¹⁰ *Tavola 44* of Egnazio's book, "*Della Pittura et Della Scultura cavata dalli XV. libri delle arti del disegno di Vincentio Danti Scultore*", prints missing parts of Danti's treatise in a condensed form (Fig. 1).

The contents of this page are not as novel as Vincenzo Danti's topical outline of the unpublished last fourteen books of his treatise promises. Nevertheless Egnazio's *tavola* on the arts of painting and sculpture sheds light on the contents of his brother's entire treatise. By documenting Vincenzo's knowledge of earlier treatises and the rôle they played in formulating his own, it opens new perspectives on his writings, on his methods of composition, and on his sources.

Egnazio Danti's *Scienze matematiche ridotte in tavole* is a concise encyclopedia that treats, in some sixty folio pages, numerous topics relating to mathematics; its 45 tables outline the principle elements of arithmetic, geometry, proportion, perspective, music, astronomy, geography, hydrography, and similar subjects. In the dedication to Jacopo Boncompagni¹¹, Egnazio describes the aim of his book; he intends to disseminate knowledge, gained from many years of mathematical study, in an easy-to-understand form, useful to beginners and pleasing to experts — "*imperoche quei che di già perfettamente l'havranno apprese, potranno in una occhiata ridurle a memoria*".¹² As its title indicates, Egnazio Danti's book is a compilation drawn from various sources. The table on astronomy, for example, reduces to seven pages *La sfera di Proclo Liceo*, a book Danti had published in Florence four years earlier.¹³ The table on civil architecture is derived from Vitruvius and Vignola; that on military architecture from the "*discorsi di M. Antonio Alberti*", a work otherwise unknown.¹⁴ Similarly, the table on painting and sculpture, Table 44, has its source identified: it is the "*XV. libri delle arti del disegno di Vincentio Danti Scultore*".

Table 44 is divided into two columns. The first treats the practical definitions of painting and sculpture, and the second treats theoretical aspects of the *arti del disegno*, introducing the concepts of *essercizio*, *ritrarre* and *immitazione*. Upon examining closely the passages that Egnazio prints, it becomes clear that Vincenzo's discussion is, in turn, also derivative. The two arts of painting and sculpture are divided into categories that are based rather literally (and, in Egnazio's condensation, without acknowledgement) on categories devised by Leon Battista Alberti and Pomponius Gauricus. Nevertheless, although Vincenzo utilized earlier systems of classification, he was not simply juxtaposing extracts from his sources. In fact, as will be seen, he modified and amplified these classifications and categories, adjusting them to current artistic theory and practice.

Danti's table begins with painting, the "*amica della prospettiva*"; like perspective, painting is based on visual rays. The concept of the visual pyramid and the ensuing definitions of the "*raggi*" of the visual cone as "*VLTIMI*", "*MEDII*", and "*CENTRALI*" are derived from the "*razzi estremi, mediani e centrici*" in Alberti's *Della pittura*. The definitions are concise, but they nevertheless include practical exemplifications of Alberti's theory.¹⁵ For instance, when Alberti states that the median rays are full of color, Danti adds that this can be seen when such rays enter a dark room through a small hole in a window, for then all the colors of the median rays will be projected on the opposite wall.¹⁶

56 TAVOLA XXXIII. DELLA PITTURA, ET

Della Scultura cauata dalli xv. libri delle arti del disegno di Vincentio Danti Scultore.

La PITTURA
RA amica
della Pro-
spettiva dal
la quale in
gran parte
guidata, si
sostenta an-
co essa con li
raggi visua-
li consideran-
doli di tre
maniere,
cioè

VLTIMI, raggi del Cono visuale, & son quelli con li quali comprendiamo tutto lo spazio della cosa veduta oue è la basa di esso cono, & la sua punta è nell'occhio. Et perciò quanto la cosa visibile sarà più lontana, tanto sotto minore angolo, & basa sarà veduta, onde dipingerà minore quel, che dall'occhio ha da apparire più lontano. del che interuenie al contrario di quelle superficie, che nelli corpi sferici si vedono.

MEDITI, & sono quelli, che stanno dentro al cono visuale, & son circondati da gl'ultimi raggi, & questi sono talmente pieni di colori, che douque siano tagliati da qualche superficie vi imprinono dentro tutti i loro colori, come chiaro si scorge in quelle imagini, che si vedono entrare per il buco della finestra nella stanza scura, oue nel muro riportono tutti i loro colori, & essendo questi raggi ripieni di colori, & di luce sono graui, & per il lungo intervallo in deboliscono la vista, & fanno apparire la pittura più confusa, & perciò le pitture, che si hanno a vedere di lontano si fanno sempre più chiare, & più abagliate.

CENTRALI, & sono quelli, che feriscono la cosa veduta ad angoli pari, & perciò nessuna cosa può con la medesima distanza essere veduta maggiore, che quando il raggio centrale la percuote, onde dalli Pittori si osserua di far sempre maggiore quello, che è nel mezzo della veduta.

CIRCNSCRITZIONE del luogo oue sono varie superficie delle cose dipinte.

COMPOSITIONE delle parti insieme.

LVICE, & dall'ombra, cioè dal chiaro, & dallo scuro, & perciò li Pittori hanno grande auertèza di nò far mai le cose tanto chiare, che la bianchezza non sia più di esse, ne tanto scure, che il negro non le soprauanti, però il bianco, & il negro appreso di loro, non sono propriamente colori.

La gran difficoltà, che si ritroua nella compositione delle storie, che sia no perfette di tutte le parti: o, & principalmente di prospettiva, ha fatto dubitare i più periti artefici qual sia maggiore magisterio, o il comporre la storia, o le parti d'vno ignudo colosso,

La PITTURA
RA è compo-
sta di tre
parti, cioè
dalla

La SCVLTVRA
RA è sorella
della Pittura,
che quando con
essa si ritrova in
vno istesso sub-
bietto la fa mol-
to più perfetta
si come auco es-
sa dalla Pittu-
ra riceue gran-
dissimo lume.
Ma quale di que-
ste siap a nobile
è sempre stato
in dubbio, & an-
cora la lite è
auanti il giudi-
ce, che al pa-
rer mio ciascu-
na di esse, secon-
do diuersi ris-
spetti, sopra-
uanza la compa-
gnia di gran
lunga. Ma la
scultura si faò
veramente.

TOMICI, che in toscano diremo intagliatrice, & quella si fa quando si scolpisce in legno, o in auorio, & li maestri si chiamano intagliatori. A questi vno appreso gli intagliatori de conij delle monete, & medaglie, & delle corgiole, o altre pietre che con tanto grande arteficio si fanno, & in questi intagli imprendendosi si vede il rilieuo, il che si aspetta alla parte Diaglyphica.

PLASTICE quasi figurina, che scolpisce di terra, o di stucchi.

PARADIGMATICE, cioè formatrice, che getta le figure di gesso dentro alle forme.

COLAPTICE, cioè scultrice, che scolpisce ne marmi, & nelle altre pietre, & questi maestri sono propriamente chiamati Scultori.

GLYPHICE, cioè Metallaria, & questa secondo Plinio è propriamente chiamata lituaria, nel lib. 36. cap. 5. & è veramente.

DIAGLIPHICE, cioè con lo stampare, perché scolpisce nelle Lamine, come si fanno i busti, & simili. La nota.

Questa men-
tre lauora non
vede il suo lau-
oro, & men-
tre che lo mi-
ra non può lau-
orare, & ha-
re le membra se-
bene non mol-
to proprij.

Que-
ste ar-
ti si co-
sequi-
uono
perfer-
tamen-
te con

LO ESSERCITIO continuo dello studio del disegno: si come si vede che tutti li valenti huomini di questa nobilissima professione hanno fatto, auenga che in queste arti del disegno più, che in tutte le altre per conseguire l'habito perfetto, si mettersi la perpetua esercitatione di esse.

il **RITRARRE**, che saria il perfetto mezzo ad effequire l'arte del disegno, se non fosse, che queste cose, che si ritranno prodotte dalla Natura, o dall'arte, sono per molte caggioni il più delle volte imperfette, & di qualità, & di quantità. Tutte le forme della Natura intentionali in se stesse sono utilissime, & proportionatissime, ma non tutte le volte la materia è atta a riceverle perfettamente. Però quello artefice, che opera ritraendo indifferentemente tutte le cose come le sono, non camina per la buona strada, essendo, come si è detto, le cose tutte in qualche parte mancheuoli, & rare volte se ne troua di tutta perfectione, la onde bisogna nel ritrare andare osseruando le parti buone, & cauare da molti imperfetti vn composto perfetto, il che si fa per il mezzo dello imitare la Natura, & altro non è.

La **IMITAZIONE**, che vna operatione fatta in quello stesso essere, & di quella perfectione, che è intesa dalla Natura, & perché essa Natura nel formar l'huomo intende di farlo di tutta perfectione, però l'artefice doue andare considerando le qualità delle parti del corpo humano, che è perfetto, & quello lo farà andando scegliendo da diuersi corpi le parti perfette le quali conoscerà dalla bellezza, & vaghezza loro, & dalla proportionata figura di essi membri. Et perché a quello si ricerca vn solerte ingegno, & vno acuto giudicio prima a sapere conoscere le parti buone, & poi conoscere a farle nelle torre da diuersi corpi, & metterle insieme in vno istesso composto, il che si fa con il lungo vizio, quale fa fare l'habito buono, che poi senza ritrare dal naturale disegna di fantasia ciascuna parte del corpo bene proportionata, hauendo fatto prima gran fondamento nella notomia, & grandissima pratica nel ritrarre le cose buone. Et perche pochi sono dotati di sì acuto ingegno, & solerte giudicio, & pochi son quelli, che per fare questo buono abito si afaticano lungo tempo; però rari son quelli, che giungono alla perfectione delle arti del disegno, le quali non sono apprese se non mediante il grande, & continuo esercizio del ritrare fatto per via della imitazione, & sono queste tre parti di maniera incatenate insieme, che l'vna non può far perfetto l'artefice senza l'altre. Perché, chi ritraette le cose egli come sono, le faria come le stanno, o buone, o triste; ma chi procede per via della imitazione le ritra come deouo essere, & come sono perfette nella intenzione della Natura. La onde si vede che Titiano ha dipinto alle uolte figure di femine bellissime, & alle volte non così belle, secondo, che ha hauti corpi belli da ritrarre, come quello, che procedea solo per la via del ritrarre. Et il Buonarroti l'ha dipinte sempre, & scolpite tutte belle à vn modo, perché procedea per via della imitazione della intenzione della Natura.

The component elements of painting follow next in Danti's table. They are "CIRCVN-SCRITTIONE", "COMPOSITIONE", and "LVCE". *Circunscrittione*, *compositione*, and *luce e ombra* correspond to Alberti's division of painting into three basic parts ("circunscrittione", "compositione", and "rezezione di lumi") in his *Della pittura*.¹⁷ Treating "compositione", Danti introduces the theme of the *paragone*, a topic which figured prominently in most mid sixteenth-century discussions of art. Without mentioning that his example is drawn from Alberti, Danti expresses reservations concerning the opinion (which is Alberti's) that the creation of an "istoria" is a greater accomplishment than that of a colossus, and thus in the age-old discussion of the rival claims of painting and sculpture Danti adopts a neutral position. The experts, he writes, are in doubt: "*La gran difficultà, che si ritrova nella compositione delle storie, che siano perfette di tutte le parti loro, & principalmente di prospettiva, ha fatto dubitare i più periti artefici qual sia maggiore magisterio, ò il comporre la storia, ò le parti d'uno ignudo colosso*".¹⁸

Upon passing to sculpture, Danti immediately revives the topic of the *paragone*. Sculpture is the sister of painting, Danti begins, and when painting is found together with sculpture in one and the same object, it is all the more perfect, just as sculpture receives "*grandissimo lume*" from painting. Thus Danti does not follow his fellow sculptors, Francesco da Sangallo, Tribolo, and Cellini, in praising his own art above that of the painter.¹⁹ Instead Danti repeats an idea his literary friend, Benedetto Varchi, expressed in his *Della maggioranza delle arti* in 1546. To the sculptor's claim that his work was longer lasting, Varchi has the painter respond, "*si può dipignere ancora nei marmi, e così saranno eterne a un modo*".²⁰ Danti's balanced view of the nobility of the arts also accords with that of Varchi. The question remains undecided, Danti writes, "*al parer mio ciascuna di esse, secondo diversi rispetti, sopravanza la compagna di gran lunga*".

Sculpture is then divided into "ANAGLIPHICE", where the image is in relief, and "DIAGLIPHICE", where it is engraved. ANAGLIPHICE is sub-divided into five categories, TOMICE, PLASTICE, PARADIGMATICE, COLAPTICE, and GLYPHICE, which contain two sub-categories, AGOGICE and CHEMICE. DIAGLIPHICE, which Danti limits to sculpture in metal, is divided into three categories, ENCOLAPTICE, TOREUTICE, and ENCAUSTICE (or "*smaltare*"), categories determined principally by the type of object produced. For this classification Danti's source was Pomponius Gauricus' *De sculptura* (Florence 1504)²¹, a work which seems to find its only earlier echo in Francisco de Hollanda's *Dialogos*.²² Danti takes over the system of Greek categories (categories largely invented by Gauricus) in much the same way he uses Alberti's formulations, for he modifies Gauricus' terms in light of modern work-shop practice. When Gauricus defines TOMICE as the carving of wood and ivory, Danti notes that TOMICE in Tuscan is called "*intagliatrice*", and thus adds the carving of dies for coins and medals and the carving of cornelian and other stones to the category.²³ The working of *pietre dure* was fast becoming a sought-after skill in mid sixteenth-century Florence, and, attempting to be comprehensive, Danti adds it to Gauricus' pre-existing scheme.²⁴

Gauricus' treatise was primarily concerned with the art of bronze sculpture and casting. *Sculptura*, in fact, signified working in bronze (its artisans were *sculptores*), and *statuaria* was applied to working in stone and other materials (the métier of *marmorarii* or *sculptores*).²⁵ Danti adopts a different line, citing Pliny's statement ("*lib. 36, cap. 5*") that working in metal "*è propriamente chiamata statuaria*". Moreover, in defining COLAPTICE, Danti affirms that those who work in marble and other stones "*sono propriamente chiamati Scultori*". This revision of Gauricus again appears to reflect Benedetto Varchi, who, in his *Lezzione sopra il sottoscritto sonetto di Michelangelo Buonarroti*, writes: "*I marmi*

sono ordinariamente il subietto degli scultori".²⁶ And it is further related to Michelangelo's opinion, reported by Varchi: "Io intendo scultura quella che si fa per forza di levare: quella che si fa per via di porre è simile alla pittura".²⁷

Thus, for his theoretical consideration of the two arts of painting and sculpture, Danti relies upon classifications, categories, and definitions found in two earlier treatises on these subjects. Nevertheless, even the brief sketch contained in Egnazio's *tavola* reveals Vincenzo subjecting his sources to a process of revision that reflects his own artistic experience and ideas current in the circle of artists and *letterati* in which he moved.

The second part of Danti's table, contained in the right hand column, explains three methods or procedures for attaining perfection in the arts of painting and sculpture. They are "LO ESSERCITIO" (or the continuous practice of *disegno*), "IL RITRARRE", and "LA IMMITAZIONE". The worthy men of our noble profession, Danti writes, have shown that only through constant exercise will *disegno*, or drawing, become second nature to the artist ("un habito perfetto"). Much of Danti's subsequent discussion of *ritrarre* and *immitazione*, the cornerstone of his entire treatise, is drawn from his published first book. There he applied, more discursively, the Aristotelian distinction between history and poetry to the figurative arts, *ritrarre* being the accurate representation of things as they are found in nature and *immitazione*, the representation of the intentions of nature.²⁸ In Egnazio's table *ritrarre* would be the perfect means of practicing the arts of design, were it not for the fact that the things portrayed from nature, or from art, are for many reasons usually imperfect. The intentions of nature are "bellissime & proportionatissime", but matter is not always able to reproduce them perfectly ("non tutte le volte la materia è atta à riceverle perfettamente"). Thus the artist who portrays all things just as they are in nature does not follow the correct path, for the things made by nature are usually in some way defective, and rarely perfect ("essendo ... le cose tutte in qualche parte manchevoli, & rare volte se ne trova di tutta perfezione"). Therefore, Danti counsels, already touching upon the theme of *imitazione*, it is necessary, applying the method of "il ritrarre", to portray only the parts of natural wholes which are perfect. To form a "composto perfetto" the artist must compound the perfect parts extracted from imperfect wholes.

Discussing his last main term, *immitazione*, Danti focuses on the artist's representation of the human body, the central concern of the arts of *disegno*. Since nature does not always succeed in its intention of forming a perfect human body, the artist should proceed, Danti writes, following Cicero's story of Zeuxis and the Croton maidens²⁹, by selecting perfect parts from several models and assembling them. The artist who possesses "solerte ingegno" and "acuto giudizio" will recognize these parts by their "bellezza & vaghezza" and well-proportioned shapes. The combination of a solid foundation in anatomy and skill in drawing (*ritrarre*) will permit the artist to recombine the human body in a perfectly proportioned way — to form a composite of perfect parts (*imitazione*).

But, Danti writes, few are gifted with "acuto ingegno" and "solerte giudizio" and few, indeed, are those who are constant and diligent in their work. Thus, those who attain perfection in the arts of *disegno* are rare, and they succeed only through tireless application (*esercizio*) in portraying, or representing "per via della imitazione". At this point, Danti's exposition extends beyond the positions established in Book I of the *Trattato delle perfette proporzioni*. The three procedures of *esercizio*, *ritrarre*, and *imitazione* are so intimately related that the artist cannot attain perfection in one without the others: "l'una non può far perfetto l'artefice senza l'altre". He who represents things as they are ends up with them just as they are, "ò buone, ò triste", but he who proceeds "per via della imitazione" shows

things the way they should be, “*e come sono perfette nella intenzione della Natura*”. Danti concludes his discussion contrasting Titian to Michelangelo. Titian's painted female figures were sometimes “*bellissime*” and sometimes less so, depending upon the beauty of his model, because he proceeded solely “*per via del ritrarre*”. Michelangelo, instead, painted his figures and carved them all of a single beauty, because he proceeded “*per via della imitazione della intentione della natura*”.³⁰

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While previous discussions of Vincenzo Danti's *Trattato* have necessarily focused on the surviving *Primo libro*, published in 1567, reading Egnazio Danti's Table 44 suggests re-examining Vincenzo's entire treatise, even in its fragmentary state, from a somewhat different perspective. The contents of “*Della pittura et della scultura*”, as presented in Egnazio's *tavola*, suggest with some force that Vincenzo's methods do not differ substantially from the derivative method of literary composition that is a so marked feature of Egnazio's oeuvre, and indeed of the literary production of the time.³¹ Thus considering the potential sources of Danti's lost books may yield a more complete picture of his entire *Trattato*.

Well over one half of the titles of the missing fourteen books of Danti's *Trattato* concern anatomy. Thus it has been said that Danti's completed work would have been “*primarily a treatise on anatomy*”, most likely based on Michelangelo's views.³² While it is true that the importance of anatomy in the artist's education received increased emphasis in treatises written, like Danti's, in the wake of Michelangelo's art, this claim requires drastic revision. Danti's treatise aimed to formulate a general rule for the “*arti del disegno*”, and, in particular, a rule for the proportions of the human figure (the “*proporzione della figura dell'uomo*”). Rejecting mathematical schemes of proportioning, such as those proposed by Dürer, Danti sought in anatomical study a “*vera regola*” for perfect proportions, since, he believed, the perfection of Michelangelo's figures lay in his understanding of the secrets of human anatomy.³³

The question of what were the anatomical lessons Danti developed in eight books of his *Trattato* (Books II-IX) can be partly answered by reference to what he says in the published first book. There Danti sets forth his basic theoretical ideas. In composing the human figure, he writes, there is always “*qualche discordanza*”, which is to be overcome through the study of anatomy, as is demonstrated by Michelangelo's art. Anatomical study trains the artist's judgement so that, with the “*seste del giudizio*” in his eyes, he spontaneously recognizes what is beautiful. Instead of mechanical measurement, it is his trained vision that detects disharmony. Thus, taking Michelangelo's work as his model, Danti intends to expound, in the subsequent books of his *Trattato*, what he believes was Michelangelo's system of anatomical proportions.³⁴

In addition to what Vincenzo writes in his *Primo libro*, it is again Egnazio Danti who sheds light on the anatomical books of his brother's *Trattato delle perfette proporzioni*. In 1583 Egnazio Danti published Vignola's *Due regole della prospettiva* with an extensive commentary of his own. When Vignola explains perspective with reference to the physiology of the eye, he states that the “*centro dell'occhio è il centro dell'humore christallino*”, a simple assertion that elicits an extended and revisionary commentary from his editor.³⁵ Egnazio Danti's remarks are doubly interesting because they derive, he says, from the “*libri dell'Anatomia di Vincentio Danti*”. Moreover, Vincenzo's views differ from Vignola's. The “*humore christallino*”, that is the crystalline lens, is not found in the center of the eye, but, “*il qual centro e fuori del centro della sfera dell'occhio la quinta parte del suo diametro in circa*”.³⁶ Egnazio quotes the analytical description of the eye from Vincenzo's “*libri*”, illustrating the explanations in the text with a diagram of the eye and its parts. At the end,

Egnazio himself returns to the crystalline lens, writing that while Andreas Vesalius, among others, has wrongly placed it in the eye's center, he, instead, positions it correctly, following not only the results of his own dissections but also his brother Vincenzo and the anatomist Valverde.

Juan Valverde de Hamusco's *Historia de la composicion del cuerpo humano* illustrated, as early as 1556, the true position of the crystalline lens³⁷, a discovery made in fact, by his teacher Realdo Colombo, a former student of Vesalius. Relying upon the dissection of animal eyes, earlier anatomists, including Vesalius, had placed the lens in the center of the eye.³⁸ It is precisely the rejection of this traditional point of view that is interesting about Vincenzo's discussion. Egnazio's reference to Valverde indicates that he was Vincenzo's source, and this deduction can be confirmed by a detailed textual comparison of Vincenzo's analysis of the eye, in Egnazio's version, and the chapter on the eye in Valverde's *Anatomia*.³⁹

Among the elements of the eye that Valverde names are the three humors: *acquoso*, *cristallino*, and *vitreo*. Danti gives the humors the same names: *l'acqueo*, *christallino*, and *vitreo*. Valverde identifies the six tunics, or "tele" as (1) *aranaea*, (2) *retina*, (3) *uvea*, (4) *dura*, and (6) *la bianca*, while the fifth *tela*, unnamed, "si fa de' fini de' muscoli". Similarly Danti identifies them (1) *aranaea*, (2) *retina*, (3) *uvea*, (4) *dura*, and (6) *la bianca*; the fifth "è posta alla fine de' muscoli". Valverde describes the cornea as "simile ad un corno di lanterna"; Danti compares it to a "corno della lanterna". The crystalline humor, "la cui figura è quasi del tutto simile ad una lenticchia", according to Valverde, is, in Danti's description, "schiacciato à guisa d'una lenticchia". And there are further textual parallels and other similarities, not the least of which are the illustrations of the eye in both works: in both, the crystalline humor is moved from the center of the eye toward the front.

Vincenzo Danti boasted he had dissected eighty-three cadavers, and he further claimed to have studied the "migliori Annotomisti".⁴⁰ Nevertheless, despite Egnazio's reference to Valverde, the Spanish anatomist's name has not been associated with Danti's anatomical interests. Vincenzo's discussion of the eye proves that he, in one instance, relied on Valverde. In fact his indebtedness is much more far-reaching. It appears that Valverde was one of his principal sources for anatomical theory and that Danti used Valverde's works much as he used those of Alberti and Gauricus. The following table displays the close correspondences between all but one of the topics of Danti's anatomical books and chapters in Valverde's *Anatomia*.

Danti	Valverde
II. <i>De l'ossa, et in generale un breve raccolto di tutta la notomia del corpo umano.</i>	I, 1. <i>Dell'ossa.</i>
IV. <i>De' muscoli della testa.</i>	II, 18. <i>De muscoli che muovono la testa.</i>
V. <i>De' muscoli che muovono la scapola, il braccio e la mano.</i>	II, 15, 17, 29, 30. <i>De muscoli che muovono il braccio; le palette delle spalle, le dita della mano; la mano sopra il bracciale.</i>
VI. <i>De' muscoli che muovono il dorso, il torace, e le abdomine.</i>	II, 20, 22, 24. <i>De' muscoli nel ventre; De' muscoli che muovono il petto; De' muscoli che muovono la schiena.</i>
VII. <i>De' muscoli che muovono la coscia, la gamba et il piede.</i>	II, 36, 37, 38. <i>De muscoli che muovono la gamba; De muscoli che muovono la coscia; De muscoli che muovono il piede.</i> ⁴¹

In addition to such correspondences, the separate illustrations accompanying Valverde's chapters (in which each part of the body is assigned a letter, with corresponding definitions and descriptions appearing on the facing page) were perhaps Danti's model for the separate illustrations which he intended to accompany each of the first seven anatomical books of his *Trattato*.⁴²

The first edition of Juan Valverde's *Historia de la composicion del cuerpo humano*, in seven books, was printed in Rome by Salamanca and Lafrery in 1556.⁴³ An Italian translation followed in 1560 with many engraved illustrations copied from the larger, more impressive woodcuts in Vesalius' *De humanae corporis fabrica* of 1543.⁴⁴ The greater accessibility of Valverde's Italian text, its abundant illustrations, and convenient size doubtless made it immediately popular with scientists and artists, as both Varchi and Vasari attest.⁴⁵ Valverde's 1556 frontispiece closely reflects Michelangelo's "Last Judgement", as does one of the few newly designed engravings introduced by Valverde into his book, an *ecorché* based on Michelangelo's celebrated flayed St. Bartholomew holding his own skin.⁴⁶ Moreover, Valverde advises artists to study anatomy, and to take Michelangelo as a model. Because he combines painting with the study of anatomy, Michelangelo (together with Valverde's countryman Pietro Roviale) belongs among the most excellent and famous painters seen in a long time.⁴⁷ Valverde was among the first writers who identified Michelangelo's knowledge of human anatomy as the source of perfection in his art, a position soon reaffirmed by Vincenzo Danti.

Michelangelo's disciple, Ascanio Condivi, writing in 1553, described Valverde's teacher, the anatomist Realdo Colombo, as "*amicissimo di Michelagnolo*", and he wrote further that Michelangelo himself had hoped to compose a treatise on anatomy, "*un opera che tratti di tutte le maniere dei moti humani, e apparenze, e dell'ossa, con una ingegnosa theorica, per lungo uso da lui ritrovata*".⁴⁸ This project was ultimately abandoned, for Michelangelo came to doubt his scientific and literary capacities.⁴⁹ In any event, Realdo Colombo's anatomical books appeared, posthumously, in Rome in 1559, without illustrations and in Latin. Long ago it was suggested that Condivi's passage stimulated Danti to compose and illustrate a treatise on anatomy for artists⁵⁰, and it has even been suggested, speculatively, that Danti's anatomical books reflected the ideas of Michelangelo, as transmitted through Condivi.⁵¹ While Valverde has not been considered in connection with Vincenzo Danti's treatise, his books, addressed to artists as well as to scientists, should be regarded as a stimulus to Danti and as one of his principal sources for anatomical theory⁵², just as Alberti and Gauricus served for Danti's definition of the visual arts.

Turning to Book VIII, it is a more than noteworthy coincidence that its title, "*L'uso di tutti i membri del corpo umano*", is the same as that of the *De usu partium corporis humani*, by Galen, his best known work, and a principal source for Renaissance anatomical knowledge.⁵³ Moreover, Danti's references to Book VIII in the published first book of his *Trattato* reveal further connections with the ancient text.

For Galen the word "*usus*" does not signify "use" but rather "usefulness", and, similarly, for Danti "*l'uso*" refers to the suitability or fitness of a part of the body for performing its proper function or action.⁵⁴ Danti's intention was to show the number, characteristics, shapes, position and movement of the parts of the body, especially investigating their "usefulness". In addition to the anatomy of the individual parts of the body, the artist needs to know, according to Danti, the purpose of the parts, how they perform their proper purpose, and how, having any other form, they would not perform their proper purpose. In Danti's *Primo libro* there remains a trace of his Book VIII in a statement that summarizes his intention in treating the "*uso*" of all the members of the

human body: "Del quale uso [delle parti] per venire in cognizione, cioè sapere a che fine esse parti son fatte e come servano; che in altra forma non potrebbero servire".⁵⁵ This concept has its origins in the thesis of Galen's homonymous *De usu partium* — to investigate each important part of the body, examining it to determine not simply whether it is useful or whether it is suitable for an intelligent animal, but whether it is in every respect so constituted that it would not have been better had it been made differently.⁵⁶

Chapter VII of Danti's *Primo libro* argues that "grazia" in painting and sculpture is dependent, ultimately, on the beauty of the internal parts of the body. Danti introduces the concept of "parità" and "conformità" or "symmetry" and "harmony"⁵⁷, concepts which he intended to treat at greater length in his book, "L'uso delle parti". Anatomical symmetry and harmony, are, of course, fundamental concepts in Galen, and it was not perhaps without interest for Danti that Galen used sculpture to illustrate these principles. In the last book of *De usu partium* Galen treats symmetry in Nature and Art:

"Or is it right to admire Polyclitus for the symmetry of the parts of his statue called the Canon and yet necessary to deprive Nature not only of praise but of all skill — Nature, who exhibits the symmetry of the parts both on the outside, as sculptors do, and also deep below the surface? Or was it not Polyclitus himself who was her imitator, at least in what he was able to imitate?... And yet aside from all this, the symmetry itself is indicative of marvellous skill; for sculptors, using many tools in the making of their statues, achieve it only with difficulty".⁵⁸

And as regards harmony, Galen writes elsewhere that beauty resides in the proportions of the parts of the body: "of finger to finger, of all the fingers to the palm and wrist, of these to the forearm, of forearm to upper arm and all to all, as is written in Polyclitus' Canon".⁵⁹

For Vincenzo Danti investigating the parts of the body, their placement, shape, and number has two consequences: on a practical level it assures grace in the artistic rendering of the poses and movements of the body, and, on a theoretical level, it leads the artist to the knowledge of "tutte le intentioni della natura innel composto dell'uomo".⁶⁰ Thus Book VIII, "L'uso di tutti i membri del corpo umano", represents a complement to Danti's treatment of internal anatomy: it gives a scientific foundation to his concept of *imitazione*, and it instructs the artist's judgement allowing him to achieve an innate sense of proportion, his "seste del giudizio", that guide his artistic creation. Thus the "seste del giudizio" become as accurate for measuring and proportioning the human body as the "seste materiali" are for measuring the architectural orders.⁶¹

Of Danti's ninth book there remains only the author's bare indication of its theme, "Le cause de le figure di tutte le parti superficiali"⁶², that is the topics comprised by surface anatomy. Thus the application of anatomy to the representation of the human figure — the outward forms and surfaces produced by the movements of bone and muscle — brings the anatomical section of Danti's *Trattato* to its natural conclusion.

Considering in retrospect all of Danti's anatomical books, it is not surprising to discover that Danti turned to earlier writers, and, in particular, to recent and contemporary anatomical treatises in order to formulate his own discussion of this impenetrable science. Indeed, in his "Prefazione di tutta l'opera", Danti writes that, owing to his "poca pratica" in the "studii delle migliori scienze", he might have abandoned his attempts to complete his book had he not, "confidato nell'aiuto di coloro che in alcune cose supriranno amorevolmente al mio difetto", taken heart.⁶³ Like most *trattatisti* of his day, and, more particularly, like architectural theoreticians who could read what "molti antichi e moderni n'hanno scritto lungamente", Danti drew upon both ancient and modern sources to devise his anatomical prescriptions.

Danti's reliance upon Valverde, Galen, and Vesalius, and perhaps Colombo and other anatomical writers, does not however, provide an exhaustive picture of his anatomical knowledge. Danti's experience included numerous first-hand anatomical dissections, and his friends, including his brother Egnazio, also dissected cadavers. And surely he also knew the anatomical "secrets" that circulated among artists. There are, moreover, indications that Danti developed his sources in terms of a commentary relevant to artists. Several passages in his published *Primo libro* suggest Danti selected from, condensed, and clarified his sources in order to give a theoretical basis to artistic practice, without burdening the artist with recondite, inapplicable anatomical information.⁶⁴

* * *

Book IX apparently concluded the anatomical section of Vincenzo Danti's projected treatise. The remaining topics that he lists at the end of the *Primo libro* of the *Trattato delle perfette proporzioni* ("*Delle attitudini o ver movimenti*"; "*De' segni degli affetti*"; "*De le composizioni de l'istorie, e panni et altri abigliamenti*"; "*L'universale de' paesi et animali bruti, e tutte l'altre cose ch'a'paesi si convengono*"; "*Delle proporzioni de l'architettura cavata de la proporzione de la figura de l'uomo*"; "*Della pratica di questa arte in universale*"), do not suggest that Books X-XV treated specifically anatomical subjects. Nevertheless, these books were related to the anatomical section of the treatise, and it may be possible to discern something of their genesis.

Many of the topics of Books X, XI, and XII of Danti's *Trattato*, on "*attitudini o ver movimenti*", on the "*segni degli affetti*", and on the "*composizioni de l'istorie, e panni et altri abigliamenti*", figure prominently in the writings of Alberti, Filarete, Gauricus, and Leonardo, and these fundamental themes persist in later treatises on painting, by Lomazzo and others.⁶⁵ In Book II of Alberti's *Della pittura*, in particular, all of these topics, the fundamental components of an "*istoria*", are concisely treated under the rubric of "*composizione*". Alberti discusses first the composition of surfaces, then of members of the body (requiring anatomical study), then of bodies together to form "*istorie*". Alberti writes further of the passions, or the "*movimento d'animo*" (also called the "*segni degli affetti*" by Danti), of the actions of the body, or the "*movimenti del corpo*", of the body at rest, or static poses, and finally of the movement of non-animate objects, devoting special attention to draperies. Danti was familiar with Alberti's chapters, for he drew upon Alberti's concepts of "*composizione*" and "*istoria*", as the table published by Egnazio in his *Scienze matematiche* testifies. Moreover, in his choice and sequence of topics (anatomy, movements and poses, the passions, draperies and ornaments), Danti follows a pattern established in Alberti's *Della pittura*.⁶⁶

In his missing thirteenth book, "*L'universale de' paesi et animali bruti et di tutte l'altre cose ch'a'paesi si convengono*", Vincenzo Danti continues treating the accessory elements of "*istorie*", and it has been suggested that this book is extensively summarized in Chapters 12, 13, and 14 of the published "*Primo libro*", chapters which treat the perfect proportions of "*corpi inanimati*", chiefly stones, "*corpi vegetivi*", trees and plants, and "*animali bruti o vero sensitivi*".⁶⁷ These three chapters may shed light on the missing thirteenth book and a closer consideration of their sources can further elucidate the meaning of Danti's sometimes elusive artistic terminology.

The philosophical thesis of Danti's *Primo libro*, and the cornerstone of his entire artistic theory, lies in the proposition that "*tutte le cose che sono state fatte hanno avuto bisogno dei debiti mezzi*" and that they are "*con il mezzo dell'ordine create*". As Paola Barocchi demonstrates these derive directly from Varchi's Aristotelian treatise, *Dell'amore*.⁶⁸

"Le cose della Natura", Varchi writes, "sono ordinatissime tutte. E per ciò disse il Filosofo, che la Natura non salta, cioè è non trapassa da uno estremo a un altro, se non per lo debito, o per gli debiti mezzi".⁶⁹ Varchi continues, dividing his ordered universe into ten "enti". Danti uses six of these to organize the matter of Chapters 12, 13, and 14 of the *Primo libro*: "i misti imperfetti", "i misti perfetti", "le piante", "gli animali bruti, o vero irrazionali", "gli animali razionali, cioè è gli uomini" and "i corpi celesti".⁷⁰

Danti's "misti imperfetti", generated from vapors, are *nuvole, piogge, gragnuola, neve, brine*, and also *baleni, comete, and ruggiade*.⁷¹ Varchi similarly notes among his "imperfetti", *piogge, rugiade, gragnuola, nugole, neve, brina, baleni, and comete*.⁷² Danti's "misti perfetti" are solids which partake of color: "sono sotto la cosa, o dura o tenera, o bianca o negra o d'altro colore".⁷³ His prime example is stones, whose "qualità" are hardness and color, as well as *chiarezza, lustrezza and bianchezza*.⁷⁴ Similarly, Varchi's "misti perfetti" are those "che hanno una loro propria forma sostanziale", and he singles out "pietre preziose", which partake of the qualities of hardness, clearness, translucidity or transparency, and lustre.⁷⁵

Varchi's characteristics ultimately derive from those of Theophrastus: smoothness, solidity, lustre, transparency, color, and hardness.⁷⁶ While Varchi treats his fifth "ente" of the universe, "le piante", very briefly, Danti's treatment of "le piante" is much more extensive, and it is clear that he consulted Theophrastus. Danti's classification, "alberi" and "erbe", simplifies Theophrastus' classes, tree, shrub, under-shrub and herb.⁷⁷ And the characteristics, or "qualità", of plants is a further concept based on Theophrastus. For Danti, "qualità" is related to how a plant fulfills its function within its surroundings. For instance, one quality of leaves is shape, and their shapes depend from the quantity of sunlight they optimally allow to reach the tree roots to foster growth and to protect the roots. Another "qualità" of leaves is color: the extent of their greenness depends on how they react to the four humors, wetness, dryness, heat and cold.⁷⁸ Danti's definition of the "qualità" of plants corresponds to the idea of "qualità" in Theophrastus — the characteristics of a plant in relation to its environment.⁷⁹

Just as plants are subjected to an Aristotelian-Varchian scheme of classification, Danti's "animali bruti o vero sensitivi" are divided into the same Aristotelian categories that Varchi used, "aerei", "acquatici", and "terrestri".⁸⁰ Again much of Danti's detailed information comes, as Barocchi demonstrates, directly from Aristotle.⁸¹ It is clear that for Book XIII Danti projected the anatomy of at least one animal for each of the three categories' (air, water, land), dedicating particular attention to the horse, the animal whose correct anatomy was of special interest to sculptors and whose proportions were a standard topic in artistic manuals.⁸² While Danti was perhaps familiar with the abundantly illustrated books on plants and animals that were appearing at the time, and Varchi certainly was,⁸³ Danti's intention to illustrate the anatomy of animals went a step beyond such books and at the same time, it further underlines the anatomical bias of his entire treatise.

Thus in Chapters 12, 13, and 14 of the "Primo libro", Danti runs his artistic theory through the gamut of Aristotelian metaphysical categories enumerated by his friend Benedetto Varchi (e.g., "imperfetti misti", "perfetti misti", "piante" and "animali sensitivi"). Stones and meteorological phenomena such as clouds, snow, rain, dew, etc., may simply be portrayed ("ritrarre") for their proportions appear to us to be perfect in nature. Higher up the ladder of "composti", plants and trees are formed of more parts, and hence are more likely to appear imperfect, and they must be "imitated". Animals, according to their significance, may be portrayed or imitated.⁸⁴ Man is the most complex of animals, and the principal divisions of the human body consist of many parts, each differing in "quantità" and "qualità". The distinction between "quantità" and "qualità"

is central to Danti's treatise for it is proportions of the "qualità" of the human body, rather than of the "quantità" with which he claims to be primarily concerned:

"Più ci serviremo di essa proporzione [i.e. il "modo di comporre le cose in guisa che l'una con l'altra convenga] nelle parti della qualità che in quelle della quantità, nella pittura e nella scultura; perché nelle figure delle cose tengo per fermo avere a essere meglio inteso che nella quantità delle cose".⁸⁵

While Danti defines "qualità" in the human body far less explicitly than he defined it for stones and plants, his meaning, although somewhat opaque, can perhaps be grasped through the relationship between the two terms, "quantità" and "qualità" that he sets forth in the passage just quoted. "Qualità" equals the "figure delle cose" (i.e., the shape or form of things), and "quantità" equals the "quantità delle cose" (i.e., their size).

For Danti, *proporzione* is a method of composing which forms a commensurate and fitting relationship (in terms of function) of part to part and of the parts to the whole. In this conception, *qualità* is given precedence over *quantità*, for the *qualità* needs to be better understood in rendering the "figure delle cose" (the shapes and forms of things) than in rendering the *quantità* (or size) of things. Thus the *qualità* become functionally equivalent to the form and shape of the parts. Danti's definition of "qualità" conforms, moreover, to that of Varchi, proposed in his *Della bellezza e della grazia*, a topic of central interest in Danti's first book.⁸⁶

To explain his theory of beauty, Varchi comments on an epigram of Catullus, which begins, "*Quinzia a molti par bella, a me par bianca, Grande, dritta, ben fatta...*". The source of his commentary, Varchi admits, is Pico della Mirandola's exposition of Catullus' poem, which Varchi proceeds to paraphrase. About Cinzia, Pico himself writes, "*Concede el Poeta in Quintia essere & la qualita del colore per li bianchezza & della figura per essere dritta, & della quantita che ne formosi si richiede che è la grandezza...*".⁸⁷ The material disposition of the body, for Pico, consists in the "*debita quantita delle sue parti, e nella conveniente qualita. La quantita e, & nella grandezza de membri se ella è secondo la proportione del tutto conveniente & nel sito loro & distantia luno dell'altro. La qualita è nella figura e nel colore*".⁸⁸ For Pico, and for Varchi, "quantità" refers to the size of the parts of the body and their distance from one another, and "qualità" to the shape of the parts and their color. It seems inevitable that this was also Danti's understanding, and it supports the importance he attaches to anatomical study by artists.⁸⁹

The Varchian and Aristotelian (and Theophrastan) influences in Book XIII (revealed in Chapters 12-14 of the *Primo libro*) suggest some of the literary foundations of Danti's *Trattato*, and they illustrate how he applied his artistic theory of *ritrarre* and *imitare* to current literary concepts.

In contrast, Book XIV was more narrowly allied with Danti's own discipline, and, curiously, it seems rather unorganically related to the subject matter and dominant approach of his *Trattato*. In the preface to his *Trattato*, Vincenzo Danti notes that many general treatises on architecture exist, and he disavows any intention to treat this subject, "*se non quanto alle proporzioni appartiene*".⁹⁰ Danti's disclaimer accords with his subsequent description of the topic of Book XIV: "*Delle proporzioni de l'architettura cavata da la proporzione de la figura de l'uomo*", a description that sharply delimits the scope of his discussion of architecture.⁹¹ By turning again to Egnazio Danti, we discover what Vincenzo had in mind for his fourteenth book. Egnazio, in his commentary to Vignola's *Due regole*, writes: "*Si potrà dalle misure delle parti del corpo umano cavare le misure de gl'ornamenti dell'architettura, sì come fanno i periti, & come da Vincentio Danti è scritto ne' suoi libri dell'arte*

del Disegno".⁹² The "ornamenti dell'architettura" are quite simply the five architectural orders, a fact that becomes obvious in *Tavola 42* of Egnazio's *Scienze matematiche ridotte in tavole*. Table 42, containing "Le misure delle principali parti de gl'Ornamenti in ciascun ordine dell'Architettura tratte da gl'ornamenti antichi dal Vignola", gives a synoptic treatment of the Tuscan, Doric, Ionic, Corinthian, and Composite orders, an outline based on Vignola's *Regola delle cinque ordine*.⁹³ It seems inescapable that Vincenzo's book was simply a discussion of the architectural orders and their proportions, rather than a more general treatment of architecture.

Thus it appears that Vincenzo's discussion of the proportions of the orders was a continuation of an older Quattrocento tradition. While most contemporary architectural writers, including Egnazio Danti, use a modular system of proportions for the architectural orders⁹⁴, the concept of proportions derived from the "misure delle parti del corpo umano", or from the "proporzione de la figura dell'uomo", points to an anthropomorphically derived system of proportions. While the correspondences between human proportions and the orders, posited by Vitruvius, was a long-lived feature of architectural theory⁹⁵, it belonged primarily to an earlier phase of Vitruvian studies that established exact parallels between the proportions of the parts of the human body and the column and its parts. Among its exponents were Filarete⁹⁶, Luca Pacioli⁹⁷, and, in particular, Francesco di Giorgio, who illustrated columns, architraves, friezes, and capitals with the human figure inscribed in them.⁹⁸ Francesco di Giorgio, for instance, writes of an architrave, "della faccia o gola e petto del corpo umano tratte".⁹⁹

Although Francesco di Giorgio's proportions were not subscribed to by forward-looking architects of the sixteenth century, they retained, nonetheless, a certain currency.¹⁰⁰ It is perhaps significant that Egnazio Danti collected his drawings and lavished praise upon him: "Francesco di Giorgio Sanese, Scultore, Architetto & Pittore ma nell'Architettura, e Prospettiva fu eccellentissimo, come mostra il mirabile palazzo fatto al Duca Federigo in Urbino & molte altre opere sue, & i suoi stupendi disegni, de' quali me ne sono stati donati da M. Oreste Vanocci da Siena".¹⁰¹ There exists a further connection between Francesco di Giorgio and the Danti family. Egnazio Danti writes that his father Giulio "fu amico singolare"¹⁰² of Baldassarre Peruzzi, Francesco di Giorgio's pupil, and Giulio also wrote a treatise on the "ornamenti dell'architettura"¹⁰³, a manuscript once preserved in Egnazio's library. While Vincenzo Danti's anthropomorphic proportions of the orders are perhaps generically associated with the anatomical character of his treatise, they appear to belong, more precisely, to the tradition of Francesco di Giorgio's ideas. Thus it seems unlikely that the ideas contained in Book XIV of Danti's *Trattato* placed him among the avant-garde of architectural writers.

Following the outline of the *Trattato delle perfette proporzioni*, "spartito in quindecim libri", which Danti gives at the end of his printed first book, the last book of the *Trattato* was devoted to "Della pratica di quest'arte [del disegno] in universale". Following Book XIV, on architecture, this book necessarily contained a consideration of the other arts of design — painting and sculpture¹⁰⁴, a discussion which can only be that preserved in condensed form in *Tavola 44* of Egnazio Danti's *Scienze matematiche*, the "Della Pittura, e Della Scultura cavata dalli XV. libri delle arti del disegno di Vincentio Danti Scultore", which, as we saw, was based on Alberti and Gauricus. Painting and sculpture are not topics treated in Danti's *Primo libro*, nor is the discussion "in universale" of their "pratica" suitable to any of the themes Danti projects for the other successive books. Moreover, Danti's discussion of "essercitio", "ritrarre", and "imitazione", which concludes *Tavola 44* does not simply repeat what is said in Book I, where, in fact, the concept of "essercitio" (or *pratica*) is not mentioned at all. And the treatment of *imitazione* in terms of a contrast

between Titian and Michelangelo (to the latter's advantage) is also new. Moreover, the discussion of *esercizio*, *ritrarre*, and *imitazione*, the procedures for attaining perfection in the arts of design, is a coherent re-statement of Danti's initial theoretical positions.

* * *

The point of departure of the preceding consideration of Vincenzo Danti's *Trattato delle perfette proporzioni di tutte le cose che imitare e ritrarre si possano con l'arte del disegno*, in fifteen books, was the reappearance of a fragmentary reflection of Book XV on painting and sculpture. Egnazio Danti's synopsis of this book, together with Vincenzo's references to the other lost books, contained in the published *Primo libro*, have permitted a closer analysis of the sources of Danti's original fifteen-book *Trattato*. These, in turn, help define Vincenzo Danti's intellectual formation, and they indicate the literary ambient in which his treatise was conceived and clarify the artistic theory of imitation that was at its basis.

Nothing is known specifically of Vincenzo Danti's formal education, but the logical, systematic approach of his treatise betrays a level of intellectual preparation uncommon for an artist of his time, a deduction borne out by the documented theoretical interests traditional in his family. Danti's subsequent path apparently led him to scientific interests and 'academic' friendships. And he could always avail himself of his brother Egnazio's wide-ranging knowledge and propensity for divulgation. Perhaps it is not simply a coincidence that Vincenzo's eclectic approach, and even his method of composition, resembles that of Egnazio.

In Vincenzo's *Primo libro* he presents, as a theoretical introduction to his *Trattato*, a philosophical system based on Benedetto Varchi's concept of *ordine* in the universe. Danti divided his universe into categories already formulated by Varchi, selecting those that pertained to the objects or phenomena in nature that a painter or sculptor would be called upon to represent. To Varchi's system he applied his own artistic theory of *ritrarre* and *imitazione*. Anatomical study becomes the new "*regola*" for correct proportions and prepares the way for *imitazione*. To formulate the following fourteen books Danti turned to other treatises and manuals: for anatomy to Juan Valverde and Galen, and probably to Vesalius; for painting and composition, and for his theory of "*istoria*", to Alberti; for sculpture to Gauricus; for plants and animals to Aristotle, Theophrastus, and Varchi; for architecture to a Quattrocento tradition related to Francesco di Giorgio. It is probably misleading to stress the singularity of Danti's treatise, when so much of it was clearly routine, and since it relied so heavily upon earlier models, following the imitative procedures characteristic of the *trattatistica* of the day.

The preceding treatment of Danti's treatise has emphasized the sources of his ideas and arguments. While the structure and methodology of the lost books are impossible to consider in detail, Egnazio Danti's *Tavola 44* (Fig. 1) suggests strongly that, in these respects, the published *Primo libro* is representative. Its most striking feature perhaps lies in the exceedingly detailed, systematic, and ratiocinate character of its exposition. Topics are defined, and divided into categories and subcategories. One classificatory scheme is considered exhaustively and insistently in light of another. In its abstractness, the *Trattato* is far removed from artistic practice.

By extracting selected terms from this context, rather spectacular claims have been advanced for Danti's treatise in a recently published book, most notably that the treatise provides a major source for Michelangelo's thoughts on art, indeed that "its core ideas are Michelangelo's".¹⁰⁵ While Danti's treatise promises to reveal a "*vera regola et ordine particolare*" which he has discerned in Michelangelo's works, Danti claims no direct, or indirect access to Michelangelo's ideas, as opposed to his works, despite the authority

such a claim would have lent his treatise. Much of his work derives instead, quite demonstrably, from more conventional sources. While Vincenzo Danti may, through his own efforts, have achieved very genuine insights into Michelangelo's art and thought, it would seem, nevertheless, that his treatise continues to belong to the contemporary apotheosis of Michelangelo, and is not a direct reflection of his ideas.

Although Borghini reported, in 1584, that the completion of Danti's *Trattato* was awaiting publication, there has been considerable uncertainty as to whether the remaining fourteen books were actually finished.¹⁰⁶ The many specific references to them in the *Primo libro*, together with Egnazio's partial publication of the last book in his *Scienze matematiche*, suggest that these books were written, or at least that material had been accumulated for them. Nevertheless, it is difficult to know if the framework professed in the *Primo libro* was actually filled in according to the author's promises.

Tavola 44 does contain, however, a theoretical conclusion to Danti's treatise. It is of a piece with the *Primo libro*, and it reaffirms the centrality of Danti's distinction between *imitare* and *ritrarre*, and it introduces a new concept, "essercitio", or practice, the level on which theoretical exposition becomes reality. With the introduction of the concept of "Essercitio" a new triad is formed: *lo Essercitio, il Ritrarre, la Immitazione*, and the concepts of *ritrarre* and of, in particular, *imitazione* are given a new, more practical orientation. Like good habits, they can be achieved only through exercise and long experience. And, so are they intertwined, that perfection in the arts cannot be attained "with one and not the others".

The concept of the practiced hand developed through the "studio ed esercizio di molti anni" is one that runs through Vasari's *Vite*¹⁰⁷, and Lomazzo develops the same set of ideas in his chapter, "Della virtù della pratica."¹⁰⁸ Indeed, the concept of 'Esercizio' forms a natural and timeless part of the artist's thinking about the everyday practice of his art. In 1795, after a long absence from his studio, Canova labels a preliminary sketch for his Hercules and Lichas, "Primo disegno dopo il mio ritorno da Venezia", and then adds, "e si vede che sono stato per tre mesi e più fuori d'esercizio".¹⁰⁹

The concepts of *esercizio* and the practiced hand are, in fact, adumbrated in Danti's *Primo libro*, which opens with the affirmation that all rules and precepts are discovered through practice and experience¹¹⁰ and which closes with the promise to treat the "pratica di questa arte in universale" in the *quindicesimo libro*.¹¹¹ The idea of long, continuous study and *esercizio* is also occasionally invoked in the *Primo libro*, without receiving particular emphasis¹¹², but Danti mainly follows his chosen path of arid, rather generic argumentation. Toward the conclusion of the *Primo libro*, in chapter XV, when Danti treats the difficulties of achieving "la perfetta proporzione" in works of art, he draws a distinction between "materia" (e.g., marble) and "artificio", which belongs to the artist and is, in part, intellectual ("l'intelletto") and, in part, manual ("le mani"). First he outlines the case in which the sculptor's material is defective, and then he writes: "Per lo contrario ancora talvolta sarà la materia atta a ricevere la perfezione del composto della figura, ma non sarà l'artifice atto a comporre perfettamente nell'intelletto e fare l'idea della figura, e questo per alcun accidente della sua mente potrà avvenire, o vero le sue mani, ancor che la mente componesse il concetto perfettamente, non saranno atte a metterlo in opera in quel marmo".¹¹³

Thus the lost books that intervene between the first and the fifteenth lead to and prepare practice, by adding to art the study of science. Danti proposes to offer what the artist needs to know to "partirsi da una semplice e naturale pratica, et accostarsi all'artificiale teorica", through the "artificio della scienza"¹¹⁴, which, trusting Danti's list of projected topics, concentrated heavily upon the science of anatomy.

NOTES

- ¹ The substance of this article was presented at the conference "Umanesimo problemi aperti" held by the Istituto per la storia dell'arte lombarda at Villa Monastero in Varenna on 9 September 1980 (cfr. *Arte lombarda*, 1981, no. 60, p. 7-8). Danti's principal biographers are *Vasari* (*Vasari-Milanesi*, vol. VII, pp. 630-633), *R. Borghini* (n. 5) and *Pascoli* (n. 2). The standard edition of his treatise in *P. Barocchi*, *Trattati* (n. 6). Recent publications on *Vincenzo Danti's* sculpture include *Pope-Hennessy*, *Sculpture*, III 2, pp. 377-380 (with further bibliography); *H. Keutner*, *Andrea Sansovino e Vincenzo Danti: il gruppo del Battesimo di Cristo sopra la Porta del Paradiso*, in: *Scritti di storia dell'arte in onore di Ugo Procacci*, Florence 1977, pp. 370-380; *F. Santi*, *Un'opera perduta di Vincenzo Danti*, in: *Boll. d'arte*, S. V, 57, 1972, pp. 112-114. *D. Summers*, *The Sculpture of Vincenzo Danti* (Ph.D. Diss.), Yale University, 1969, re-issue New York-London, 1979, contains a catalogue of works. Also *Giorgio Vasari*, *Principi, letterati e artisti nelle carte di Giorgio Vasari* [Exhibition catalogue, Arezzo, 26 September - 29 November 1981], Florence 1981, pp. 151-152, 301-302.
- ² *L. Pascoli*, *Vite de pittori, scultori ed architetti moderni*, vol. I, Rome 1730, pp. 287-298; *idem*, *Vite de' pittori, scultori ed architetti perugini*, Rome 1732, pp. 137-143; *G. Tivaboschi*, *Storia della letteratura italiana*, vol. XI, Milan 1824, pp. 724-727; *G. B. Vermiglioli*, *Bibliografia degli scrittori perugini*, vol. I, Perugia 1829, pp. 366-377.
- ³ *La prospettiva di Euclide*, Florence 1573; *Le due regole della prospettiva pratica di M. Jacopo Barozzi da Vignola*, Rome 1583.
- ⁴ *La sfera di Proclo Liceo tradotta da Ignazio Danti con le annotazioni, e con L'uso della Sfera del medesimo*, Florence 1573; *La sfera di Messer Giovanni Sacrobosco tradotta da Pier Vincenzo Danti, ed accresciuta, e commentata da Frate Ignazio*, Florence 1571 (cited in *Vermiglioli*, n. 2, vol. I, p. 369); *Latino Orsini*, *Trattato del Radio latino*, ed. E. Danti, Rome 1586 (Preface 1583). For *Latino Orsini* di Lamentana, see *C. Promis*, *Biografie di ingegneri militari italiani*, Turin 1874, pp. 562 ff.).
- ⁵ *R. Borghini*, *Il Riposo*, Florence 1584, p. 522. Egnazio Danti's library is lost. *Pascoli* 1730 (n. 2), p. 289, and *idem* 1732 (n. 2), p. 77, indicates that Egnazio inherited his father's library. For Egnazio's book collecting, see *G. Cecchini*, *La Biblioteca Augusta del Comune di Perugia*, Roma 1978, pp. 350 f. While Egnazio died 19 October 1586, at the age of 49, as late as February 1587 his library was intact, and *Cesare Gonzaga* was urged to buy it (*V. Marchese*, *Memorie dei più insigni pittori, scultori e architetti domenicani*, Bologna 1879, Vol. II, p. 376, n. 3). According to his contemporary biographer, the Dominican *Serafino Razzi*, Danti's books passed to the Camera Apostolica, and were then to go to his monastery in Perugia (*Cronica della Provincia romana dell'Ordine dei frati predicatori*, Florence, Bibl. Laurenziana, 873 [San Marco], fol. 56v). Danti's "scritture" are also mentioned by *Ripa* (*Iconographia*, Rome 1603, p. 130; cfr. also pp. 8, 60, 61, 133). *E. Pillsbury* attributes to Egnazio Danti the programme for the tribune of S. Spirito in Sassia in Rome (*Jacopo Zucchi* in *S. Spirito in Sassia*, in: *Burl. Mag.*, 116, 1974, pp. 434-443). I am grateful to *Carolyn Valone* for this reference. A recent exhibition of restoration at the Vatican, "Restauro in Vaticano", 8 March - 8 May 1981, attributes to Danti the programme for the paintings in the Torre del Vento: "Programma iconografica fu stabilito dal cosmografo pontificio Ignazio Danti che ci ha lasciato il testo di quello della sala della Meridiana". Cfr. *M. Vaes*, in *Bulletin de l'Institut historique belge de Rome*, 8, 1928, pp. 314-316, *L. v. Pastor*, *Storia dei Papi*, Rome, vol. IX, 1955, p. 916.
- ⁶ *Il primo libro del Trattato delle perfette proporzioni di tutte le cose che imitare e ritrarre si possano con l'arte del disegno*, Florence 1567. Republished with commentary in: *Trattati d'arte del Cinquecento*, ed. *P. Barocchi*, Bari 1960, vol. I, pp. 207-269, 324-328. See also *J. v. Schlosser*, *Aus der Bildnerwerkstatt der Renaissance*, in: *Jb. Wien*, 31, 1913-1914, pp. 83-86; *Ch. de Tolnay*, *Die Handzeichnungen Michelangelos im Codex Vaticanus*, in: *Rep. für Kwiss.*, 48, 1927, pp. 181-182; *E. Panofsky*, *Idea*, 2nd ed., Berlin 1960, pp. 41-46; *Schlosser-Kurz*³, pp. 386-388; *Italian Art 1500-1600*; *Sources and Documents*, eds. *R. Klein* and *H. Zerner*, Englewood Cliffs/N.J. 1966, pp. 100-105; *S. Rossi*, *Il 'Trattato delle perfette proporzioni' di Vincenzo Danti e l'incidenza della 'Poetica' sulle teorie artistiche del secondo Cinquecento*, in: *Storia dell'arte*, 1972, no. 14, pp. 127-147, and now in *idem*, *Dalle botteghe alle accademie*, Milan 1980, pp. 123-145; *D. Summers*, *Michelangelo on Architecture*, in: *Art. Bull.*, 54, 1972, pp. 146-157; see now: *idem*, *Michelangelo and the Language of Art*, Princeton/N.J. 1981.
- ⁷ *Schlosser*, p. 343.
- ⁸ *L. Cicognara*, *Storia della scultura*, 2nd ed., vol. V, Venice 1825, p. 237.
- ⁹ *Vignola* (n. 3), pp. 3, 94.
- ¹⁰ *Le scienze matematiche ridotte in tavole dal Rev. P. Maestro Egnazio Danti publico professore di esse nello Studio di Bologna*, Bologna, Compagnia della Stampa, 1577.
- ¹¹ For *Boncompagni* (1548-1612), see *Diz. Biogr.*, vol. XI, Rome 1969, ad vocem. The sketchbook "Gozzadini 171" of the Biblioteca Comunale d'Archiginnasio, Bologna, recently attributed to Egnazio Danti, contains an illustration of *Boncompagni's* villa in Cicogna (S. Lazzaro di Savena) inscribed "Dello Illustrissimo et Eccellentissimo Signore Iacopo Buoncompagni Marchese di Vignola". See *Ville, castelli e chiese bolognesi da un libro di disegni del Cinquecento*, ed. *M. Fanti*, Bologna 1967, no. 229; *G. Roversi*, *Il patrimonio fondiario dei Tanari*, in: *Strenna bolognese*, 24,

1974, p. 260. I am grateful to Professor Thomas Settle, Brooklyn Polytech, for bringing these publications to my attention. The attribution of "Gozzadini 171" is supported by a letter of Egnazio to Borghini, 15.2.1578, "andero sopra tutti i luoghi, et con lo strumento in mano, siccome feci a Perugia, perche fo disegno solo nel contado di Bologna starvi 60. giornate ed annotare, et designare ogni minima cosa" (V. Borghini, Carteggio inedito, Florence 1912, p. 123).

¹² E. Danti, (n. 10), n.p., dedication.

¹³ Ibid., p. 23.

¹⁴ *Tavola XXXXII: "Dell'architettura civile qual deve essere l'architetto vitruviano; Tavola XXXXIII: Della architettura militare chiamata volgarmente fortificazione tratta delli discorsi di M. Antonio Alberti"*.

An Antonio Alberti architect and engineer from Urbino, active in the second half of the sixteenth century, published "*mehrere theoretische Schriften*" (Thieme-Becker), none of which are traceable. Another Antonio degli Alberti is mentioned by Gherardo Spini (I tre primi libri sopra l'istituzioni de' Greci et Latini architettori intorno agl'ornamenti che convengono a tutte le fabbriche che l'architettura compone, ed. C. Acidini, in: *Il disegno interrotto: trattati medicei d'architettura*, Florence 1980, vol. I, pp. 51, 188, n. 43). Antonio Alberti's discourse on military architecture corresponds very closely to Egnazio Danti's "Sopra le fortezze e lor situazioni" in the Biblioteca Riccardiana, published by G. Baccini (Un'opera inedita del P. Ignazio Danti da Perugia, in: *Archivio storico per le Marche e l'Umbria*, 4, 1888, pp. 82-112).

¹⁵ Compare Danti with Alberti, *De pictura*, ed. C. Grayson, Bari 1960, pp. 14-22. Egnazio Danti also followed Alberti. See Vignola (n. 3), p. 2:

"Et perciò Leonbattista Alberti dice, che la Pittura, cioè la Prospettiva, non è altro che il taglio della piramide visuale...". Given her mathematical interests, Teodora Danti's lost treatise on painting may have been a treatise on perspective. Her father wrote: "essendo ch'ella [i.e. Teodora] oltre la sfera, di già intende e l'Astrolabio e l'Almanacho non mediocrementemente" (*La sfera di Messer Giovanni Sacrobosco* (n. 4), premessa; *Tiraboschi* (n. 2), vol. XI, p. 725).

¹⁶ To Alberti's definition of the central rays, Danti adds: "e perciò nessuna cosa può con la medesima distanza essere veduta maggiore, che quando il raggio centrale la percuote, onde dalli Pittori si osserva di fare sempre maggiore quello che è nel mezzo della veduta". L. Mallè notes the Albertian character of Vignola's treatise and of Egnazio Danti's commentary (*L. B. Alberti, Della pittura*, ed. Mallè, Florence 1950, p. 128; cfr. n. 15 above).

¹⁷ *Alberti* (n. 15), pp. 52-62.

¹⁸ Ibid, p. 60: "Grandissima opera del pittore non uno colosso, ma istoria. Maggiore loda d'ingegno rende l'istoria che qual sia colosso".

¹⁹ For a concise summary of views on the *paragone*, see: L. Grassi and M. Pepe, *Dizionario della critica d'arte*, Turin 1978, s.v. "Paragone", and S. Rossi, 1980 (n. 6), pp. 87-122. The letters of the artists to Varchi on the *paragone* in *Barocchi* (n. 6), vol. I, pp. 59-82.

²⁰ B. Varchi, *Della maggioranza delle arti*, Florence 1549, in *Barocchi* (n. 6), vol. I, pp. 1-82, esp. 41, 43-44: "Dico dunque ... che sostanzialmente la scultura e la pittura siano una arte sola, e consequentemente tanto nobile l'una quanto l'altra" (p. 41). Somewhat earlier is the letter of Vittorio Soranzo, the Pope's *cameriere*, to Pietro Bembo of 8 June 1530: "Dovete sapere che Sebastianello [del Piombo] ha trovato un segreto di pingere in marmo a olio bellissimo il quale farà la pittura poco meno che eterna" (*M. Hirst*, *Sebastiano del Piombo*, Oxford 1981, p. 124).

²¹ P. Gauricus, *De Sculptura* (1504), eds. A. Chastel, R. Klein, Geneva-Paris 1962, p. 71:

"Statuaria igitur omnis in quinque distincta species est, Quom ligno Eboreue tractabitur, ab abscidendo *τομική* dicetur, Quom Argilla quoniam figulorum est *πλαστική* nominabitur, Quom gypso quod eo typos imitatur, *παραδειγματική*, nos Exemplariam appellare poterimus, Quom lapidibus ubi Scalpello utitur. a Percussione *κολαπτική* siue Sculpturam, Quom uero Metallis *γλυφικήν* hoc est Sculpturam, Cuius quidem ratio duplex, Nam aut cera fabricantur, et a deducendo *ἀγρωγικήν* aut informantur et a fundendo *χημικήν* enuncupabimus".

These terms, Plastique, Proplastique, Tomice, Paradigmatiche, and Colaptice are more extensively defined (pp. 241-242) in Chapter VI, "De caeteris speciebus sculpturae". "Chetnice", on Danti's table, is surely the typesetters misreading of "Chemice" (= "Chemike"). See also p. 234, where Diaglyphice, Encolaptice, Toreutice, and Encausto or "Smalton" are defined: "Diaglyphice quando insculptur ad impressuram, Encolaptice quando laminae cudendo efformantur, quae maxime ad aurifices pertinent. Item et Toreutice Quom vasa fibulas, candelabra et eiusmodi ancedimus...". and concerning Encaustice, "... dehinc eam intelligamus que ipso tractatur Encausto quod Smalton vocant, usitatissimam, quom videlicet argentum, aes, vitrumque pingimus". For an English version, see John Evelyn, *Sculptura or, The History and Art of Chalcography and Engraving in Copper*, London 1755, (pref. 1662) Chapter I, esp. p. 15.

²² *Francisco de Hollanda*, *Le opere*, ed. A. Pellizzari, Naples 1914, p. 38. Cfr. *Gauricus*, (n. 21), pp. 234-235, n. 52. Gauricus was also mentioned by Paolo Pini (*Barocchi*, n. 6), vol. I, pp. 96, 136), and with his brother, for their writings on *Physiognomia* and *Architectura*, included in *Paolo Giovio's Elogia virorum literis illustrium*, Basel 1577, pp. 140-141.

²³ "A questi [intagliatori] vanno appresso gli intagliatori de conij delle monete, & medaglie, & delle corgnole, o altre pietre che con tanto grande artefitio si fanno".

²⁴ See also Varchi (*Barocchi*, n. 20), p. 45, who includes "intagliatori non tanto di legname ... quanto

- di gioie e pietre fini ...” among the practitioners of the “arti del disegno”. Danti includes a discourse on stones and their properties in Book I, Chapter XII, to illustrate the concept of perfect proportions in inanimate objects. See also *Gaye*, Carteggio, vol. III, pp. 251-256.
- ²⁵ *Gauricus* (n. 21) pp. 71, 22.
- ²⁶ *Varchi*, *Due lezioni*, Florence 1549, p. 21: “... perché i marmi sono ordinariamente il subbietto degli Scultori, onde i Latini gli chiamavano propriamente Marmorarii, & quelli, che facevano le figure di bronzo, Statuarii”.
- ²⁷ *Varchi* (n. 20), p. 82 (cfr. Vasari's similar opinion: *Vasari-Milanesi*, I, p. 148).
- ²⁸ *Rossi* (n. 6).
- ²⁹ *Panofsky* (n. 6), index: “Zeuxis als Beispiel für das Elektionsverfahren”.
- ³⁰ This sentiment echoes Michelangelo whom Vasari quotes as saying before Titian's Danae: “che era un peccato che a Vinezia non s'imparasse da principio a disegnare bene, e che non avessono que' pittori miglior modo nello studio Se quest'uomo fusse punto aiutato dall'arte e dal disegno, come è dalla natura, e massimamente nel contrafare il vivo, non si potrebbe far più ne meglio...” (*Vasari-Milanesi*, VII, p. 447, also p. 431).
See further, *E. Battisti*, Il concetto d'imitazione nel Cinquecento, in: *Commentari*, 7, 1956, pp. 86-104, 249-262; *D. Rosand*, The Crisis of the Venetian Renaissance Tradition, in: *L'arte*, 1970, no. 11-12, pp. 5-53, esp. pp. 7-9.
- ³¹ *R. Clements*, Michelangelo and the doctrine of Imitation, in: *Italica*, 23, 1946, no. 2, p. 97, with bibliography.
- ³² *Summers* 1972 (n. 6), p. 148.
- ³³ *Danti* 1960 (n. 6), p. 212.
- ³⁴ *Ibid.*: “Il quale studio non sarà, spero, senza mio e forse di molti altri grandissimo frutto, poi che fin qui ha in me tanto operato, che mi ha fatto evidentemente conoscere a poco a poco, se io non sono ingannato, una vera regola et ordine particolare che da lui [Michelangelo] è stato osservato, o vero che si può e dee osservare intorno alla perfetta composizione delle parti de' membri, che al loro tutto della figura umana si convengono”, and p. 240: “Onde per queste difficoltà, che sono quasi impossibilità, esso Michelagnolo si voltò forse a questo ordine, il quale per lo mezzo dell'anatomia bene esaminata io propongo; perciocché si legge che esso Michelagnolo dodici anni continui s'affaticò intorno all'anatomia, e per lo mezo di essa specolando e discorrendo, come penso io, gli poté cadere nell'animo questo modo d'operare ch'io dico; e con questo mezzo credo eseguisse le belle proporzioni nelle sue figure”.
- ³⁵ *Vignola* (n. 3), pp. 1-3.
- ³⁶ *Ibid.*, p. 3.
- ³⁷ *Juan Valverde de Hamusco*, *Historia de la composicion del cuerpo humano*, Roma 1556 (ed. Venice 1608, p. 495).
- ³⁸ See The Illustrations from the Works of Andreas Vesalius of Brussels, eds. *J. B. de C. M. Saunders* and *C. D. O'Malley*, Cleveland-New York 1950, p. 200. For recent discussions of the crystalline lens and vision see: *D. C. Lindberg*, Theories of Vision from al-Kindi to Kepler, Chicago 1976, pp. 11-17, 169-170, 173-175; *J. Ackerman*, Leonardo's Eye, in: *Warburg Journal*, 41, 1978, pp. 108-146, esp. 115.
- ³⁹ Compare *Vignola* (n. 3), p. 3, and *Valverde*, *Anatomia del corpo humano*, Rome 1560, pp. 112, 113, fig. 118. Eyes were popular objects of study both for anatomists and artists. Valverde writes (p. 142): “Perche cavandosi a' ladroni in Vinegia p'il primo furto un'occhio, intraviene che si tornano a prendere indi ad un anno o due, & si mandano a Padova per farne Anatomia”. *Cellini* complained that these studies were not worth the trouble (I trattati dell'oreficeria e della scultura, ed. *C. Milanesi*, Florence 1857, p. 235).
- ⁴⁰ *Danti* 1960 (n. 6), p. 209; *Vignola* (n. 3), p. 3.
- ⁴¹ *Danti* 1960 (n. 6), p. 268; *Valverde* (n. 39): “Tavola delli capitoli della presente opera”. Valverde's Books III and IV deal with internal anatomy, the subject of Danti's third book (“*Notomia de l'intiore*”).
- ⁴² *Danti* (p. 268) wrote: “Et in ciascuno di questi libri sono con disegno riportate, nel principio d'ogni capitolo, le figure loro”. *Valverde* (n. 39), “Ai lettori”, n.p., writes, “Ho posto tutte le figure, che appartengono ad ogni libro, al suo fine”.
- ⁴³ *H. Cushing*, A Bio-Bibliography of Andreas Vesalius, 2nd ed., Hamden, Conn. 1962, pp. 142-153, lists the editions of *Valverde's Anatomia*.
- ⁴⁴ *J. L. Choulant*, A History and Bibliography of Anatomic Illustrations, New York-London 1962, pp. 32, 205-208. For the anatomical illustrations in *Vesalius'* books: *D. Rosand* and *M. Muraro*, eds., Titian and the Venetian Woodcut, A Loan Exhibition, 1976-1977, Meriden/Conn. 1976, pp. 211-235.
- ⁴⁵ Vasari writes (*Vasari-Milanesi*, V, p. 435, Vita di Marcantonio Bolognese): “... furono condotte con bella maniera d'intagli; come furono anco gli undici pezzi di carte grandi di notomia, che furono fatte da Andrea Vessalio, e disegnate da Giovanni di Calcarea fiamingo, pittore eccellentissimo; le quali furono poi ritratte in minor foglio, ed intagliata in rame dal Valverde, che scrisse della notomia dopo il Vessalio”, and *Varchi* (n. 20), p. 39, writes about painting: “Tra'sene ancora grandissima utilità nelle scienze, come si vede nel libro della Notomia del Vessalio...”.

- ⁴⁶ R. Herrlinger, *Geschichte der medizinischen Abbildungen*, vol. I: Von der Antike bis um 1600, Munich 1967, pp. 122-127. Many of Valverde's illustrations portray sculptural fragments.
- ⁴⁷ Valverde (n. 39), f. 65v-66v: "Michelagnolo Buonarruoti Fiorentino, & Pietro Rubiale Spagnuolo; i quali per essersi dati alla Anatomia insieme con la Pittura son venuti ad esser i piu eccellenti & famosi Pittori, che gran tempo si siano veduti".
- ⁴⁸ G. Vasari, *A. Condivi*, *Le vite di Michelangelo Buonarroti*, ed. C. Frey, Berlin 1887, pp. 192, 194.
- ⁴⁹ *Ibid.*, p. 192: "... e l'harebbe fatta, se non si fusse diffidato delle forze sue e di non bastare à trattar con dignità et ornato una tal cosa, come farebbe uno nelle scientie e nel dire essercitato". Attempting to describe the skeleton, Cellini is often unable to supply the scientific names of the bones and leaves a gap in his text (*Cellini*, n. 39, p. 237-239).
- ⁵⁰ Schlosser 1913-1914 (n. 6), p. 84; A. Blunt, *Artistic Theory in Italy, 1450-1600*, Oxford 1956, p. 101.
- ⁵¹ Summers (1972 [n. 6], pp. 149-150) hypothesizes a close relationship between Condivi and Danti and sees Condivi as the transmitter of Michelangelo's ideas on architecture, as well as on anatomy: Danti "may well have been the 'learned person' to whom [Condivi] confided his notes". However, Condivi was present, according to his own testimony, for only one dissection by Michelangelo. Furthermore, Condivi was neither a scientist nor an anatomist, and he knew of Michelangelo's theories only what he heard. There is no evidence that he kept notes, as Summers implies. That Condivi and Danti became members of the Accademia Fiorentina on the same day, 26 September 1565, is not evidence that they ever met (p. 149). Condivi was rarely, if ever, in Florence, and he did not need to be present to be inscribed on the Accademia rolls. Condivi's presence in Ripatransone is documented in 1565, on 23 July, 5 August, 8 August, 5 September, and 24 October (C. Grigioni, *Ascanio Condivi, la vita e le opere*, Ascoli Piceno 1908, pp. 23-25; G. Settimo, *Ascanio Condivi*, Ascoli Piceno 1975). It is equally plausible that the anatomical ideas in Alessandro Allori's surviving treatise in the Biblioteca Nazionale (n. 52 below) represent the ideas of Michelangelo, transmitted through Condivi, since Allori became a member of the Accademia Fiorentina the same day as Condivi and Danti (Florence, Bibl. Marucelliana, Cod. III, 54, c. 15 r.). Summers further attempts to link Danti to Michelangelo through Benedetto Varchi by hypothesizing a lost dialogue on art by Michelangelo known to Danti (*Summers* 1981 [n. 6], p. 22). The dialogue mentioned in the letter of Annibal Caro, cited by Summers, has been shown to be one of the dialogues in Varchi's *Ercolano* (see Ch. Hope, in: *Art History*, 5, 1982, no. 3, p. 250).
- ⁵² Alessandro Allori, in his treatise "*Dialogo sopra l'arte di disegnare le figure*", B.N.C.F., Palatino, E.C. 16,4, dated circa 1565 (R. Ciardi, in: *Storia dell'arte*, 1971, no. 12, p. 281, n. 48) recommends the anatomists Valverde and Vesalius to his readers. Realdo Colombo's *De re anatomica libri XV*, Rome 1559, which did not have the same impact as Valverde's illustrated treatise was almost certainly known to Danti, too. Colombo's Book V, chapters 19, 20, and 21, treat "De musculis dorsi, De musculis thoracem moventibus, De musculis abdominis". His discussion of the eye does not correspond to Danti's or Valverde's.
- ⁵³ Editions and translations of Galen's works from 1473 to 1600 are treated in: R. J. Durling, *A Chronological Census of Renaissance Editions and Translations of Galen* (*Warburg Journal*, 24, 1961, pp. 230-305); editions appeared in 1528, 1533, 1537, 1538, 1543, 1549, and 1550. See also *Vasari-Milanesi*, IV, p. 35, on Leonardo: "Fu de' primi (come odo dire) che cominciò a illustrare con la dottrina di Galeno, le cose di medicina, e a dar vera luce alla notomia"; and *Ghiberti* (-Schlosser, I, p. 7): "Non bisogna esser medico come Ypocrate et Avicenna et Galieno, ma bene bisogna aver vedute l'opere loro". Varchi frequently refers to Galen (n. 20, pp. 13, 17, 21, 25, 27, 32-33, 44) and Galen's "*Oratione ... nella quale si essortano i giovani alla cognitione delle buone arti*" was translated by Lodovico Dolci (Venice 1548).
- ⁵⁴ C. Singer, *A Short History of Anatomy from the Greeks to Harvey*, New York 1957, p. 50; *Galen, On the Usefulness of the Parts of the Body*, transl. with an introd. and commentary by M. T. May, Ithaca/N.Y. 1968, vol. I, p. 72. Danti's Book VIII, like Galen's treatise, was not intended for beginners, and hence it followed Danti's introduction to the entire subject matter of anatomy.
- ⁵⁵ *Danti* 1960 (n. 6), p. 232.
- ⁵⁶ *Galen* (n. 54), vol. I, p. 72.
- ⁵⁷ *Danti* 1960 (n. 6), p. 230.
- ⁵⁸ *Galen* (n. 54), vol. II, pp. 726-727.
- ⁵⁹ *Galen, On the Doctrines of Hippocrates and Plato*, ed. Ph. de Lacy, Berlin 1978, p. 309. Cfr. *Danti* 1960 (n. 6), p. 225: "Perciò, sì come una bella mano ricerca la bellezza del suo braccio in proporzione con la sua bellezza, e tutto il braccio insieme vuol essere in proporzione col torace che lo sostiene; così parimente tutte l'altre membra del corpo è necessario che abbiano l'un con l'altro proporzione, infino che si giunga all'intera proporzione del tutto di loro insieme".
- ⁶⁰ *Danti* 1960 (n. 6), p. 233.
- ⁶¹ *Danti* 1960 (n. 6), p. 233. Cfr. *Vasari-Milanesi*, VII, p. 270; *Alberti* (n. 15), p. 16.
- ⁶² *Danti* 1960 (n. 6), pp. 232-233, 255. In the mid-sixteenth century, the most important and popular treatment of surface anatomy was *Vesalius' Epitome*, a condensation of his encyclopedic *De humanae corporis fabrica* (*De C. M. Saunders / O'Malley* [n. 38], pp. 203-227; *H. Cushing* [n. 43], pp. 109-113, *Rosand-Muvaro* [n. 44], pp. 234-235). Composed for a non-specialist public the reader is instructed to begin with the nude figures of a man and woman, printed on facing pages, and to study the surface forms of their bodies, while learning their Greek and Latin names. Then turning back, through

another set of illustrations, the reader progresses toward a bared skeleton; turning forward, through a further set of plates, he gradually exposes the nervous system, the cardiovascular system, and the viscera. A final illustration contains the images of numerous internal organs, which are to be cut out and pasted, in superimposed flaps, onto two-dimensional models of the body to form male and female anatomical mannequins. These parts are the determinants of surface forms. Vesalius' patterns for anatomical mannequins to be cut out and pasted together transformed learning the causes of surface anatomy into an exercise well-suited to the artistic imagination. It has not been noticed that they underlie the anatomical "invenzioni" of Pietro Francavilla (described in *Baldinucci-Ranalli*, III, p. 65), a sculptor who came to Florence shortly before Vincenzo Danti departed in 1573. Vesalius' works were translated at least as early as 1559 with artists in mind. See *A. Vesalius, Beschreibung und antzeigung Mannes und Weibes innerlicher glieder in XII cupffere figuren... nitt allein tzo nutz den Artzen ... aber auch einen jeden der die Kunst lieb hat*, n.p., n.ed., 1559 (Bibl. Vaticana, Palatina III, 141).

⁶³ Danti 1960 (n. 6), p. 213-214.

⁶⁴ For example, *ibid.*, pp. 214, 232, 261, 268.

⁶⁵ See *Alberti*, loc. cit. (n. 15); *Filarete, Trattato di architettura*, eds. A. M. Finoli and L. Grassi, Milan 1972, vol. II, pp. 676-677; J. P. Richter, *The Literary Works of Leonardo da Vinci*, 2nd ed., Oxford 1939, vol. I, pp. 269-270; *Gauricus* (n. 21), pp. 92-113 (*De symmetria*), pp. 129-163 (*De physiognomia*); *G. P. Lomazzo, Scritti sulle arti*, ed. R. P. Ciardi, Florence 1973-1974, I, p. 308, II, pp. 160-162, 394-396

⁶⁶ *Alberti* (n. 15): *istoria* — pp. 60-62, 68; *anatomia* — p. 62; *movimenti del corpo* — pp. 64-66, 72-74, 78; *composizione di corpi* — pp. 66-70; *movimenti d'animo* — pp. 68-72, 74-76; *movimento degli inanimati, panni, capelli, crini, rami, fronde e veste* — pp. 78-80.

⁶⁷ Danti 1960 (n. 6), pp. 241-261.

⁶⁸ *Ibid.*, pp. 215, 499 notes 1, 3.

⁶⁹ B. Varchi, *Dell'amore*, 1564, in: *Opere*, Trieste 1859, vol. II, p. 328.

⁷⁰ *Ibid.*, pp. 323; 325-330. Cfr. also Varchi's *Sopra il primo canto del Paradiso di Dante* of 1545, in his *Opere* (n. 69), vol. II, p. 344, for an earlier formulation of these categories.

⁷¹ Danti 1960 (n. 6), pp. 244, 246.

⁷² Varchi (n. 69), vol. II, p. 325.

⁷³ Danti 1960 (n. 6), p. 243.

⁷⁴ *Ibid.*, p. 245.

⁷⁵ Varchi (n. 69), vol. II, p. 327.

⁷⁶ *Theophrastus, De lapidibus*, ed. with introd., translation and commentary by D. E. Eichholz, Oxford 1965, pp. 57, 59.

⁷⁷ *Theophrastus, Enquiry into Plants*, London-Cambridge/Mass. 1961, vol. I, p. 23: "the first and most important classes, those which comprise all or nearly all plants, are tree, shrub, under-shrub, herb".

⁷⁸ Danti 1960 (n. 6), pp. 247-248.

⁷⁹ *Theophrastus* (n. 77), p. 37 and p. 3 note 2.

⁸⁰ Danti 1960 (n. 6), p. 256; Varchi (n. 69), vol. II, p. 328.

⁸¹ *Ibid.*, p. 257, and notes.

⁸² *Ibid.*, p. 257.

⁸³ One of the most impressive illustrated treatises on plants at the time Danti wrote was *Leonhard Fuchs' De historia stirpium* (Ed. pr. Basel 1542, pp. 896), which included woodcut portraits of the three "Pictoris operis". Fuchs also wrote on stones, and Varchi knew Fuchs' book on plants and used it in the paragone as an example of how painting served the sciences (n. 45, p. 39): "Tra'sene ancor grandissima utilità nelle scienze, come si vede ... nel libro dell'Erbe del Fucio". In 1560 Konrad Gessner's *Icones animalium quadrupedum*, his *Icones avium omnium* and his *Icones animalium aquatilium in mari & dulcibus aquis*, were published in their second edition. Ignazio owned "tre pezzi di libri de Animalibus Conradi Gensneri" (ASF, Guardaroba 40, f. 74v [1564]).

⁸⁴ Danti 1960 (n. 6), p. 260.

⁸⁵ *Ibid.*, p. 234.

⁸⁶ Varchi, *Opere* (n. 69), vol. II, pp. 733-735; *Barocchi*, ed. (n. 6), vol. I, pp. 85-91 and notes.

⁸⁷ *Pico della Mirandola, Commento dello Illustrissimo signor conte Ioanni Pico Mandolano sopra una canzone de amore, composta da Girolamo Benivieni*, in: *Opera omnia*, Turin 1971, vol. I, p. 754.

⁸⁸ *Idem*.

⁸⁹ While Summers acknowledges a general dependency of Danti on Varchi, he identifies Ficino as the source of Danti's *quantità-qualità* distinction. Ficino considers *qualità* the active force, which, having its origin in the soul, determines the several actions of the body (cfr. *M. Ficino, Sopra lo amore over' Convito di Platone*, Florence 1544, p. 104; *W. Horbert, Metaphysik des Marsilius Ficinus*, Inaug. Diss. Univ. Bonn, Koblenz 1930, esp. pp. 9, 13; *P. O. Kristeller, Il pensiero filosofico di Marsilio Ficino*, Florence 1953, esp. p. 33). The Varchi-Pico definition of *qualità* in terms of the form and shape of the parts of the body is readily applicable to the problems of artistic representation. Far less applicable, in practice, is Ficino's conception of *qualità*, especially as it is rendered, somewhat intangibly, in Summers' conception of "qualitative proportions": the "correspondence between the appearance of a thing and its 'form' or 'soul' or 'animating qualities'" (*D. Summers, David's Scowl*, in: *Collaboration in Italian Renaissance Art*, eds. W. S. Sheard, J. T. Paoletti, New Haven-London 1978, p. 116; *idem* 1981, n. 6, pp. 329-330).

- ⁹⁰ Danti 1960 (n. 6), p. 213.
- ⁹¹ Ibid., p. 269.
- ⁹² Vignola (n. 3), p. 94.
- ⁹³ E. Danti (n. 10), tavola 42, p. 54.
- ⁹⁴ For example, Vignola, *Regola delle cinque ordini*, n. p. [1562], passim; E. Danti (n. 10), p. 54.
- ⁹⁵ See P. H. Scholfield, *The Theory of Proportion in Architecture*, Cambridge 1958, p. 42.
- ⁹⁶ *Filarete*, Trattato di architettura, eds. A. M. Finoli, L. Grassi, Milano 1972, vol. I, pp. 18 ff, 212-221; see also N. Speich, *Die Proportionslehre des menschlichen Körpers*, Andelfingen 1957, pp. 155-157; P. Tigler, *Die Architekturtheorie des Filarete*, Berlin 1963, pp. 46-56.
- ⁹⁷ L. Pacioli, *Divina proportione*, Venice 1509, fols. 25r-28v.
- ⁹⁸ *Francesco di Giorgio Martini*, Trattati di architettura, ingegneria e arte militare, ed. C. Maltese, Milan 1967, vol. I, pp. 62, 90, plates 24, 25, 37; vol. II, pp. 375-378, plates 216-218, 220-221; R. Papini, *Francesco di Giorgio architetto*, Florence 1946, vol. II, fig. 284, from Ashburnham 361.
- ⁹⁹ *Francesco di Giorgio* (n. 98), vol. I, p. 90. Also G. Scaglia, *The Opera De architettura of Francesco di Giorgio Martini for Alfonso, Duke of Calabria*, in: *Napoli nobilissima*, 15, 1976, p. 151: "Ma lo sporto della sommità [del capitello] debbe havere grandezza de uno occhio humano"; "Et tonidi delle volute non siano più grosse che la grandezza dell'occhio"; *Trattato di architettura civile e militare di Francesco di Giorgio Martini*, ed. G. Saluzzo, Turin 1841, vol. I, p. 213: "Alcuna volta imaginando e investigando se la proporzione della cornice si potesse ridurre a quella della testa dell'uomo, e commensurando più varie specie di cornici, ho visto di molte essere impossibile, benché grande similitudine si trovi: manifestante però molte altre, le quali non solo sono simili, ma della medesima proporzione come appare per la figura. Perocché l'epistilio è in luogo del petto, il fregio in luogo della gola, l'astragolo invece del mento, il denticulo dei denti, l'ovolo ovvero echino è il naso, la corona ovvero gocciolatoio in cambio della fronte e cigli e ultimamente la sima in cambio della sommità e arco del capo".
- ¹⁰⁰ See H. Burns, *Progetti di Francesco di Giorgio per i conventi di San Bernardino e Santa Chiara di Urbino*, in: *Studi Bramanteschi*, Atti del Congresso internazionale, Rome 1974, p. 295, and n. 11, and further J. Meder, *Die Handzeichnung*, Vienna 1919, pp. 226-227; M. Azzi Visentini, *Riflessioni su un inedito trattato di architettura, il codice Zichy della Biblioteca comunale di Budapest*, in: *Arte veneta*, 29, 1975, pp. 139-145; L. Puppi, *Scrittori vicentini d'architettura del secolo XVI*, Vicenza 1973, p. 71, n. 233 and fig. 10. See also the drawings in Siena, Biblioteca comunale, S.IV.1, fol. 55r, and S.IV.6, fol. 21r; H. v. Geymüller, *Cento disegni di architettura di Fra Giovanni Giocondo*, Florence 1882, p. 23, as well as Uffizi 2050A, 1690A, 1694A; G. Scaglia (n. 99), pp. 139, 141. *Pietro Cataneo's treatise De architectura*, Venice 1567, p. 110, is another late reflection of Francesco di Giorgio's anthropomorphic ideas: "Così come l'ornato accresce bellezza e gravità a qual sia voglia ben proporzionato corpo humano. Similmente l'ornato delle fabbriche essendo ben proporzionato, augmenta vaghezza & maestà a qualunque ben composto edificio". For *Cataneo*, see Burns, above; L. Olivato, *Profilo di Giorgio Vasari il Giovane*, in: *Rivista dell'Istituto nazionale d'archeologia e storia dell'arte*, N.S., 17, 1970, pp. 199, 227 n. 93, fig. 21, and E. Berti, *Un manoscritto di Pietro Cataneo agli Uffizi e un codice di Francesco di Giorgio Martini*, in: *Belvedere*, 7, 1925, pp. 100-103.
- ¹⁰¹ See Vignola (n. 3), p. 72. Egnazio's drawing collection was noted by C. C. Malvasia, *Felsina pittrice*, Bologna 1678, parte II, p. 245: "il quale [Fra Ignatio Danti] le hà accomodate in un libro di disegni, ch'egli fà di mano di tutti i valentuomini dell'arte". Egnazio's drawings, though unidentified as such, seem to have passed to the *canonici regolari* of S. Salvatore in Bologna. See M. Fanti, *Spigolature d'archivio*, in: *Il carrobbio*, 4, 1978, pp. 193-194. In this 1611 inventory are "due teste fatte per mane (sic) del Passarotto una d'un Cristo e l'altra de la Madonna disegnato a penna", which correspond to Passerotti's "due teste una di Christo e l'altra della V.M. in foglio Imperiale" belonging to Egnazio Danti and described by Malvasia (p. 245). These two "teste" have recently been identified by P. Cooney at the 24th International Congress of Art History, Bologna, September, 1979.
- ¹⁰² Vignola (n. 3), p. 82.
- ¹⁰³ *Pascoli* 1732 (n. 2), p. 81: "Scrisse un trattato dell'alluvione, ed un altro degli ornamenti dell'architettura". Giulio left to Egnazio (*Pascoli* 1730, p. 289): "il prezioso legato de' suoi manuscritti, che come cosa rara conservò egli sempre nella sua libreria".
- ¹⁰⁴ The phrase "quest'arte" refers to the *arte del disegno*, and not to "architettura" (cfr. *Summers* 1972 n. 6, p. 150, n. 21; *idem* 1981 n. 6, p. 292): see Book I where the terms "arte", "arte del disegno", and "arti del disegno" are nearly interchangeable (pp. 210, 211, 212, 213, 215, 219, 220, 221, 222, 223, 230, 235, 236, 237, 242, 258, 261, 262, 265, 266, 267, 268, and esp. 236: "Quest'arte, dico, del disegno e quella che, come genere, comprende sotto di sé le tre nobilissime arti architettura, scultura e pittura, delle quali ciascuna, per sé stessa, è come specie di quella, conciossia che per lo mezzo del disegno ciascuna di esse consegue il suo fine").
- ¹⁰⁵ *Summers* 1981 (n. 6), pp. 20, 25-26, 27, 275, 297, 374; see also pp. 14, 23 ff., 211 217, 287, and 276, 287, 289.
- ¹⁰⁶ *Cicognara* ([n. 8], vol. I, p. 55, no. 317) considered the treatise probably finished. *Schlosser-Kurz*³ (p. 386), *Barocchi* ([n. 6], p. 495) and *Rossi* ([n. 6], in summary) consider it unfinished. *Summers* (1972 [n. 6], pp. 146, 148-149) is not definite but tends towards seeing it finished. *Summers* (1981 [n. 6], p. 25) considers the treatise finished and on p. 155 implies that it was finished. On p. 420,

however, he writes that one of the books has disappeared, "if indeed it was ever written". The clues in the *Primo libro* that the work was completed are on pp. 209, 210, 212, 213, 230, 232-233, 242, 243, 255, 257, 258, 260, 261, 266, 267, 268. There are substantial grounds to be confident that there existed a fairly complete draft of the entire treatise.

¹⁰⁷ *Vasari-Milanesi*, I, p. 169, and passim.

¹⁰⁸ *Lomazzo* (n. 65), vol. II, p. 242; cfr. *Varchi* (n. 20), pp. 24, 26.

¹⁰⁹ *E. Bassi*, I disegni di Antonio Canova, Museo civico di Bassano, Venice 1959, D-1-107-676.

¹¹⁰ *Danti* 1960 n. 6, p. 209.

¹¹¹ *Ibid.*, p. 269.

¹¹² *Ibid.*, pp. 211, 232, 233, 255-256.

¹¹³ *Ibid.*, p. 263 and n. 1.

¹¹⁴ *Ibid.*, pp. 267, 268.

RIASSUNTO

Nel 1567 Vincenzo Danti pubblicò il *Primo libro* del progettato *Trattato delle perfette proporzioni di tutte le cose che imitare e ritrarre si possano con l'arte del disegno*, diviso in quindici libri. Gli altri quattordici libri non furono mai stampati e sono considerati dispersi. La riscoperta di una sinopsi del quindicesimo libro, sulla pittura e scultura, nell'opera poco conosciuta di Egnazio Danti, *Le scienze matematiche ridotte a tavole* (Bologna 1577), fornisce l'occasione di riesaminare il *Trattato delle perfette proporzioni*. La tavola 44, "Della pittura et Della scultura cavata dalli XV. libri delle arti del disegno di Vincentio Danti Scultore", è divisa in due colonne: la prima, di carattere pratico, tratta della pittura e della scultura; la seconda, di natura teoretica, espone i tre principali metodi artistici, "lo esercizio", "il ritrarre" e "la immitazione".

Il discorso di Vincenzo Danti sulla pittura mostra di essere derivato dal *Della pittura* di L. B. Alberti, e allo stesso modo, il testo sulla scultura ripete le categorie formulate da Pomponius Gauricus nel suo *De sculptura*. Tenendo conto del carattere compendiarico dell'ultimo libro del *Trattato*, le numerose indicazioni fornite dal Danti nel *Primo libro* stampato, riguardanti i contenuti dei libri perduti (II-XIV), sono qui riesaminate. Sembra che i libri II-VII, trattanti l'anatomia, fossero basati sull'*Anatomia del corpo umano* (Roma 1560) di Juan Valverde, e che il Libro VIII derivasse dal *De usu partium corporis humani* di Galeno. Gli argomenti dei libri X, XI e XII, su "attitudini e movimenti", "i segni degli affetti" e "le composizioni de l'istorie, e panni et altri abigliamenti", hanno un posto preminente nel *Della pittura* dell'Alberti. Il libro XIII, "L'universale de' paesi et animali bruti et di tutte l'altre cose ch'a' paesi si convengono", è riassunto nei capitoli XII-XIV del *Primo libro*, su pietre, piante e animali, e questi capitoli, a loro volta, sono strettamente legati al trattato aristotelico di Benedetto Varchi, *Dell'amore*. Infatti, la tesi filosofica che costituisce il fondamento del *Primo libro*, che "tutte le cose che sono state fatte hanno avuto bisogno dei debiti mezzi", e che esse sono "con il mezzo dell'ordine create", deriva direttamente dal Varchi. Inoltre, per organizzare i capitoli XII-XIV del *Primo libro*, il Danti si servì di sei delle dieci classificazioni varchiane dell'universo. E come il Varchi, il Danti si rivolge anche ad Aristotele e a Teofrasto. In più, il trattato del Varchi, *Della bellezza e della grazia*, chiarisce i concetti artistici del Danti di "quantità" e "qualità". Benché il Danti promettesse di rivelare nel suo trattato "una vera regola et ordine particolare", derivata dal lungo studio delle opere michelangelolesche, non si è mai vantato di godere di un accesso privilegiato alle idee di Michelangelo. Il fatto dimostrabile che egli si basa su altre fonti conferma questo parere.