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Renaissance Proportion Theory and Cosmology: Giovanni Paolo Gallucci's Della Simmetria and Dürerian Neoplatonism

James Hutson
Lindenwood University, jhutson@lindenwood.edu

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James I. Hutson Jr.

Introduction

In 1591 Giovan Paolo Gallucci (1538-1621) published his *Della simmetria dei corpi humani* (Fig. 1), an Italian translation of the *Four Books on Human Proportion,* or *Proportionslehre* (1528), by Albrecht Dürer (1471-1528).[1] Though passed over in modern scholarship, and not as well-known as other publications from the last two decades of the Cinquecento, the encyclopedic treatment on human proportion theory in the new edition was widely read by artists and writers on art. A. Blunt demonstrated that Nicholas Poussin (1594-1665) made extensive use of Chapter LVII in the *Libro quinto* of Gallucci's publication in his *Osservazioni sopra la pittura* printed by Giovan Pietro Bellori (1613-1696) in his Life of the artist.[2] More recently, it has been cited that there was also an extensive reutilization of the chapter, noted in a section on physiognomy in Vincenzo Carducho's (ca.1578-1638) *Diálogos de la pintura* (1633).[3] While Dürer's proportion studies had been translated into French (1557) and Latin (1532), the Italian version (reprinted in 1594) greatly expanded the artistic discourse and availability of information on human anatomy in Italy and remained the version most often cited in later treatises.[4]

Though the influence of Gallucci's *Della simmetria* is demonstrable, its place in the canon of art theory is ambivalent. On the one hand, the question of literary "originality" and authenticity has tarnished the text. When Poussin began conducting research for his proposed *Trattato,* he gathered together typographically independent paragraphs representing universally valid truths or maxims.[5] But the near verbatim quotations of the sources lead Blunt to call into question the interpretation of these aphorisms as "original" ideas of the artist, and as such were then classified as mere "notes".[6] In a similar fashion, Blunt traced Poussin's source material first to the Neoplatonic writings of Giovan Paolo Lomazzo (1538-1600) and then to Gallucci, but determined that these, as well, ultimately derived from Marsilio Ficino's *Sopra lo amore o ver' Convito di Platone,* thus casting them in the same derivative light.[7] While Poussin's ideas have been vindicated from their classification as mere "notes" by Anthony Colantuono, the same cannot be said of the influential and pertinent treatment under review here.[8] On the other hand, Massimiliano Rossi recently proposed that the translation and additions by Gallucci were estranged from the intentions and motivations of the original author, Dürer. Instead Rossi believes that the treatise was «inspired by the haste of contemporary taxonomy» of the late cinquecento demonstrated in other encyclopedic treatments such as Lomazzo's *Trattato dell'arte della pittura, scoltura et architettura* of 1584.[9] In essence, the relationship of the ideas presented to the original author, as well as the sources utilized by Gallucci, have placed the publication in a tenuous position as neither reflecting the intentions of Dürer nor the interests of contemporary art theory surrounding its pub-

lication, and calls into question the originality and applicability of the astronomer's art theoretical construct.

Though passed over in scholarship as a mere translation, the *Della simmetria* is important for an understanding of the nature and reception of proportion studies in the late cinquecento. The text also, as will be argued, actively participated in the discourse on art with other publications that were being promulgated with increasing frequency in the last two decades of the century; especially that of Lomazzo's *Idea del Tempio della Pittura* (1590). Moreover, as Rossi's account distances the ideas of Gallucci from the original author, attempts have been made, in turn, to further separate Dürer from Neoplatonic philosophy.[10] This article seeks to demonstrate that the estrangement of Dürer from Neoplatonism (and as such Gallucci) overlooks the delayed dissemination of Ficinian metaphysics in the sixteenth century, and that the systematization of human proportions paralleled interests in other disciplines like astrology and cosmology; analogous to, yet diversifying, the interests of Lomazzo.

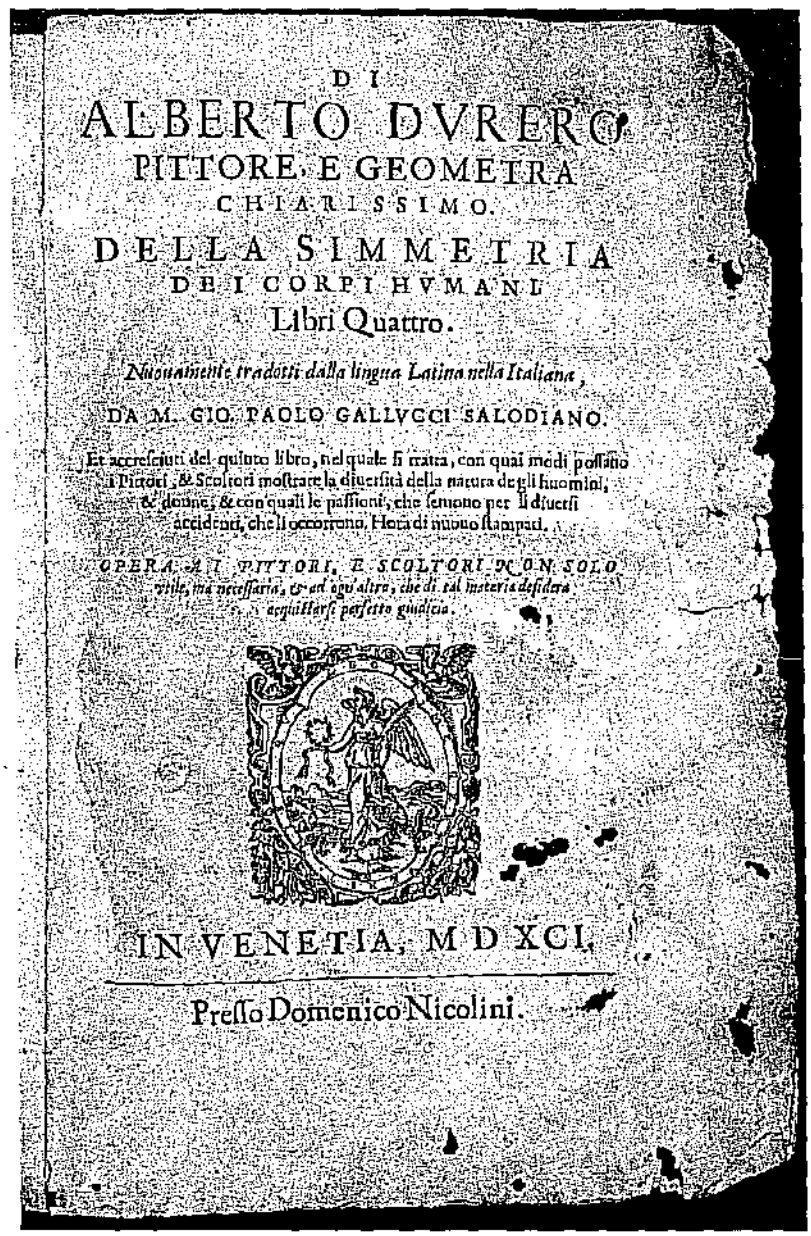

DI
ALBERTO DVRERO
PITTORE, E GEOMETRA
CHIARISSIMO.
DELLA SIMMETRIA
DEI CORPI HVMANI
Libri Quattro.
Nuouamente tradotti dalla lingua Latina nella Italiana,
DA M. GIO. PAOLO GALLVCCI SALODIANO.
Et accresciuti del quinto libro, nel quale si tratta, con quai modi possano i Pittori, & Scultori mostrare la diuersità della natura de gli huomini, & donne, & con quali le passioni, che semono per li diuersi accidenti, che li occorrono. Hora di nuouo stampati.
OPERA A I PITTORI, E SCOLTORI NON SOLO
vtile, ma necessaria, & ad ogni altro, che di tal materia desidera acquistarsi perfetto giudicio.
IN VENETIA, M D XCI.
Presso Domenico Nicolini.

FIG. 1 Giovanni Paolo Gallucci, *Title page*, 1594. Woodcut from *Della simmetria dei corpi humani, libri quattro*, Venice 1594. Washington, Library of Congress

Furthermore, the varied reception of proportion studies later in the century parallels the views of beauty that were so vigorously wrestled with in the theory of the day, especially between Neoplatonism and Neo-Scholasticism. In both traditions, but especially the Neoplatonic, the notion of mapping the universe, reflected in the microcosm of man, collapsed the six decades that separated the original publication of Dürer from its translation into Italian by Gallucci. The attempts made to categorize and map the human body were understood by art-theorists, astrologers and cosmologists as an attempt to reveal the macrocosm of the universe, and thus reveal its "divinely" ordered beauty in the microcosm of man. Such information concerning the structure of the universe was seen as necessary for artists to understand in order to reveal the beauty buried in imperfect material existence. In newly formed educational institutions, such as the Accademia del Disegno and Accademia di San Luca, later in the century,

treatises such as Gallucci's were considered necessary for the training of young artists. However, even as arts education increasingly demanded supplemental textual materials to assist with an artist's training in mathematics, anatomy and natural philosophy, the critical reception of such texts, especially on human proportions, was varied.[11]

Aside from his foray into art theory, Giovan Paolo Gallucci is perhaps best known for his publications on astronomy and astronomical instrumentation. Born in Salò near Brescia in Lombardy, he studied there and in Padua, and on 20 May 1564, along with eighteen others, founded the Accademia degli Unanimi.[12] Later he settled in Venice after his studies, the center of intellectual life at the time, and resided there for his remaining years. During the last two decades of his life, Gallucci's literary output was extensive. It was in this period that he published his most well-known works: in 1588 Gallucci published his most celebrated work, the *Theatrum mundi, et temporis*, an encyclopedic treatment covering the motions of the planets and celestial cartography; and in 1597 he published his *Della fabrica*, a treatise discussing the use of astronomical instrumentation.[13] Given his academic inclinations and profession, Gallucci extended his knowledge and interest in astronomy to his *Della simmetria* in 1591, demonstrated by an interest in classification and categorization.[14] In the work, Rossi announces that Gallucci attempted to forge a methodology uniting proportion theory, physiognomy, and concepts of virtue and iconographic rectitude in an anti-Mannerist program designed to «guarantee long-lasting fame» to artists who adhered to it.[15] Dedicated to Maximilian III, Archduke of Austria (1558-1618), the *Della simmetria* consists of the original four books published in 1528 by Dürer along with an additional Preface for the new edition, a short biography of the artist, and the *Libro quinto*, the final book in which the translator's own theoretical ideas are articulated. Though the text in the original books and the illustrations are based closely on the original publication, the new additions have lead to the interpretation that it deviated from the purpose and intent of the original. In fact, Rossi was correct in his deduction that Gallucci's text deviates somewhat from Dürer's ideas, but that deviation is historical, not necessarily theoretical.

Proportion Theory and the *Proportionslehre*

When Dürer published his treatment in 1528, the perceived benefit of such a study was self-evident and widely accepted in the art community.[16] In point of fact, Dürer's studies represent the culmination of an interest that began with the demand for systematization of human proportions with Leon Battista Alberti (1404-1472).[17] Such studies were based on the premise that beauty was dependant on a harmony of parts in all of the *Arti del Disegno* of painting, sculpture and architecture. The belief is expressed unanimously in writings on art in the fifteenth and sixteenth centuries. Lorenzo Ghiberti (1378-1455) related in his *Commentarii* (ca.1450) that «only proportionality creates beauty».[18] The assertion was more clearly enumerated by Alberti, who stated:

> thus we may say that beauty is a certain agreement and harmony of parts within that to which they belong with regard to a definite number, proportionality, and order, such as concinnity demands.[19]

These three interrelated aspects of harmonious congruity described by Alberti (number, proportion and order) were further discussed in his *De Pictura* of 1435, as he laid out the specific order in which an artist should proceed:

> First one must observe that the single members fit together well, and they will fit together well if in relation to the size and measure, character, color, and other similar things they harmonize and form one unified beauty.[20]

The harmonious arrangement of the parts of a particular work of art, or «the consonance and mutual integration of the parts», were central to the nature of beauty itself, and as such was defined by harmony and proper proportion.[21]

The belief that beauty was related to harmonious arrangement repeated by Renaissance thinkers was derived from ancient treatments of music and architecture, particularly by the Pythagoreans, in which such arrangements could be quantified in their value resulting from certain mathematical relationships.[22] These early formulations by Greek thinkers declared that beauty be expressed by the proportions of the parts, the arrangement of those parts, and the size, equality, and number of the parts and their interrelationships.[23] However, the detailed exposition for this valuation comes to us from the first-century BCE Roman architect Vitruvius in Book III of his *De Architectura*, where he maintained that beauty in a building is achieved when all of its parts have the appropriate proportions.[24] The same was true in sculpture, painting, and in nature, which is illustrated in that it «has created the human body in such a way that the skull from the chin to the upper brow and hairline makes up one tenth of the entire length of the body».[25] As Vitruvius continued, he presented the proportions for a well-formed human figure as follows.[26]

> Then again, in the human body the central point is naturally the navel. For if a man be placed flat on his back, with his hands and feet extended, and a pair of compasses centered at his navel, the fingers and toes of his two hands and feet will touch the circumference of a circle described therefrom. And just as the human body yields a circular outline, so too a square figure may be found from it. For if we measure the distance from the soles of the feet to the top of the head, and then apply that measure to the outstretched arms, the breadth will be found to be the same as the height, as in the case of plane surfaces which are perfectly square.[27]

In this view, it is possible to present the proper canon of proportions of human bodies in numerical terms, thus resulting in mathematical harmony. Vitruvius gave measurements for the ideal proportioned human figure as: the length of the head being equal to one-eighth of the total length of the body; the length of the face being equal to one-tenth of the total length of the body. Throughout the Renaissance several artists and theorists had attempted to extrapolate from Roman authors the ideal proportions for the human figure. Around the same time, Koerner noted, «the project of the idealized human figure as exemplum of beauty turned to the constructed nude as the privileged domain of the beautiful.»[28] The systematization of proportion was first developed by Alberti and elevated to an empirical science and doctrine by Leonardo da Vinci (1452-1519).[29] Each sought to refine their canon and produce a more objective and agreeable form of beauty. From a multitude of figures they «selected those which, in their own judgment and in the opinion of competent advisers, were deemed the most beautiful».[30] The discoveries made by Leonardo in his proportion illustrations were published by a fellow mathematician, Luca Pacioli (1446/7-1517) in 1509.[31] The three books that would be published under the title *De Divina Proportione*, often related to the 'golden ratio,' utilized much of Euclid's work including the theorem $a : b = b : (a + b)$. The application of such a ratio to a human model was demonstrated by Pacioli in woodcuts, which was later adopted by Dürer and Gallucci (Fig. 2). The ideas of Pacioli were equally influential for Leonardo in his choices as it was for contemporary mathema-ticians, Carlo Maccagni noted.[32] The mathematical harmony inherent in Euclidean geometry certainly influenced the artist who would categorize all human types through proportion studies.

While the first steps towards a doctrine of proportion had been taken in Italy, the relationship of beauty to a canon of proportions and mathematics was most fully expressed in pedagogical publications in Germany by Albrecht Dürer, who began his studies on human proportion as early as the first decade of the sixteenth century.[33] Taking nearly three decades, Dürer completed two treatises that would be the dominant basis for art theory in Renaissance Germany, as well as being used by artists in Italy: in 1525 *Underweysung der Messung* was published as a guide to geometric perspective and in 1528 *Vier Bücher von Menschlicher Proportion*, or *Proportionslehre*,

appeared a few months after his death.[34] Taken together, the studies illustrated the Renaissance belief that mathematics formed the firm basis and grounding for the arts. This is confirmed in the 1532 introduction to the Latin edition of the *Proportionslehre* by the translator Joachim Camerarius (1500-1574):

> Letters it is true, he had not cultivated, but the great sciences of Physics and Mathematics, which are perpetuated by letters, he had almost entirely mastered. He not only understood principles and knew how to apply them in practice, but he was able to set them forth in words.[35]

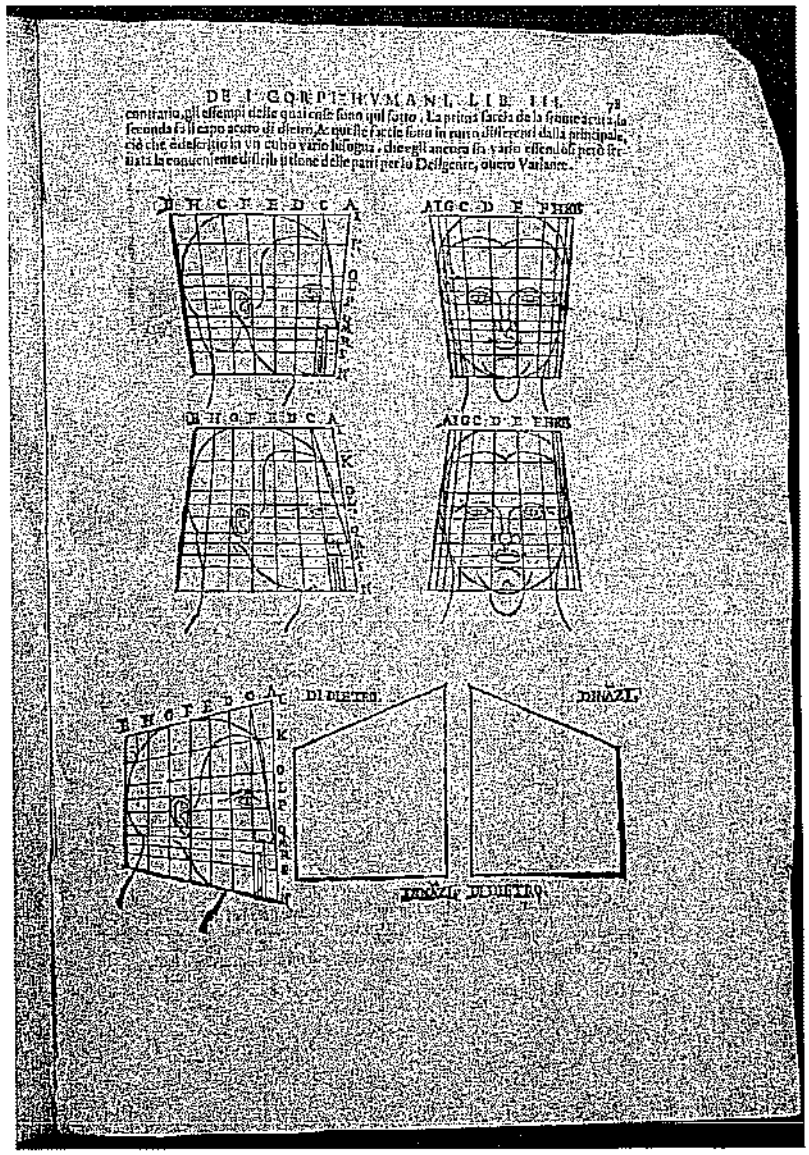


FIG. 2 G. P. Gallucci (after A. Dürer), *Proportions of a Face*, 1591. Woodcut after *Della simmetria dei corpi humani*, Venice 1594, Book 3, p. 78r. Washington, Library of Congress

Nevertheless, he did not develop these mathematical skills in isolation. As E. Giusti has noted, it was not a coincidence that Leonardo was working with Pacioli in Venice at the same time Dürer made the trip south of the Alps.[36] Lomazzo's 1584 *Trattato* attests to Dürer's knowledge of theoretical currents in Venice in the Cinquecento; especially that of Vincenzo Foppa (ca.1430-ca.1515) and his drawings.[37] In fact, it was through his contact with Italian art theory that Dürer sought to establish

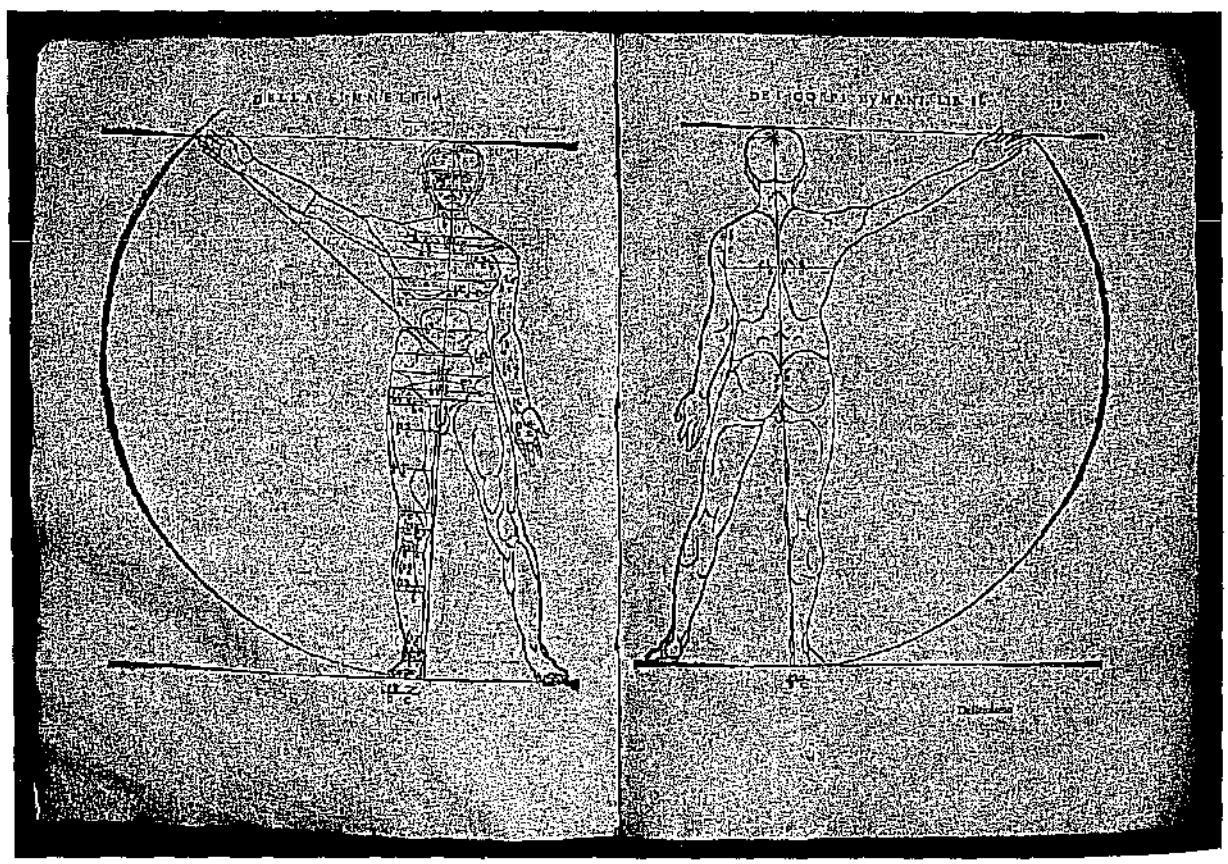
> the mathematical relations between the various members of a living creature, in particular of human beings, in so far as these are thought of as subjects of artistic representation.[38]

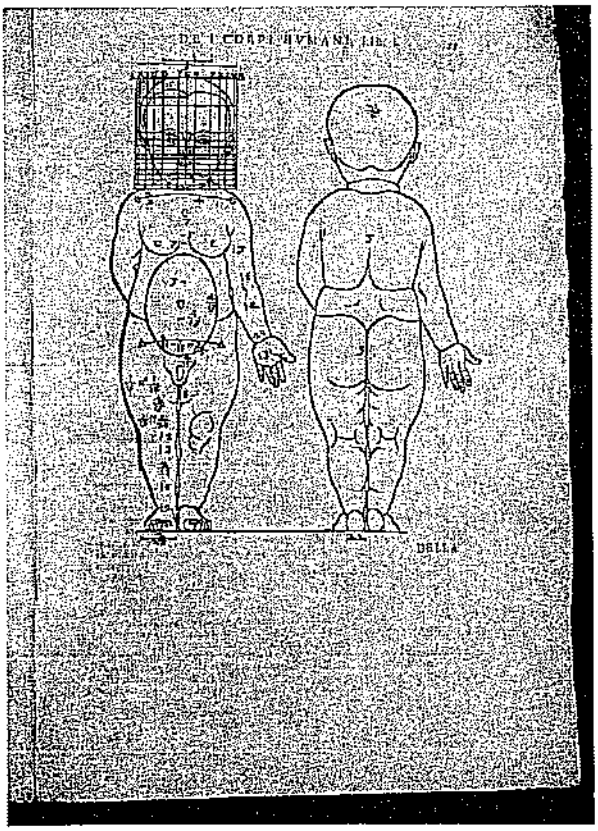
The doctrine of proportions developed by Dürer attempted to ascertain (through mathematical and geometrical constructs) what the "correct" canon of proportions actually were; and, moreover, how the harmonious relationships of these canonical figures could create beauty in art. The previous answers to such a line of questioning, espoused in the works of Leonardo and Alberti, agreed that the subjective and individual judgment of a single artist does not suffice to legitimize correct proportions as "good". In order to qualify the value of proper proportions, theorists demanded referencing the basic laws of mathematics or music (which are objective), while individual judgment would be tempered by study of antique sculptures and the venerable ancient authorities.[39] The consequent system developed could then be

defended as objectively reputable, as is illustrated in the case of Dürer who obviously believed, early in his career, in a universally binding set of human proportions and the separate, objective existence of beauty. As he writes:

> And yet, I wish here to understand beauty for myself: that which the majority of people of all times consider beautiful, that we should diligently fashion.[40]

The proportion studies that were produced around 1500 by the artist indicated this primary interest in creating a single, ideal type from a mathematical construction to be used directly in art.
However, this ideal, universal system for valuing art was not to go unchallenged; and concomitantly, as Giulia Bartrum has noted recently, Dürer's ideas on proportion were to move through many changes over the course of his career.[41] After his second trip to Italy in 1505- where he stayed in Venice for nearly two years - he gradually came to realize that no single canon of beauty could be achieved. Later in the 'Aesthetic Excursus' - an essay on beauty published as a conclusion to the third book of his proportion studies- the artist began questioning the universal nature of beauty and investigating individual types. As Koerner also observed, at the same time Dürer shifted from idealizing actual models to «fabricating more abstract, generalized human 'types'».[42] In pursuing the principles behind this realization, Dürer began assembling alternate sets of proportions that accorded the different shapes and sizes of human figures, for which he took measurements from several hundred individuals (FIG. 3).[43] He accumulated no fewer than twenty-six sets of proportions, plus an example of the infant's body and the detailed measurements of the head, the foot and the hand (FIGS. 4-6).[44] Not satisfied with even this, he indicated ways and means of further varying these many types so as to capture even the abnormal and grotesque by strictly geometrical methods.[45]
The encyclopedic rendition of all conceivable variations of humanity demonstrates Dürer's intent to categorize and circumscribe, while the





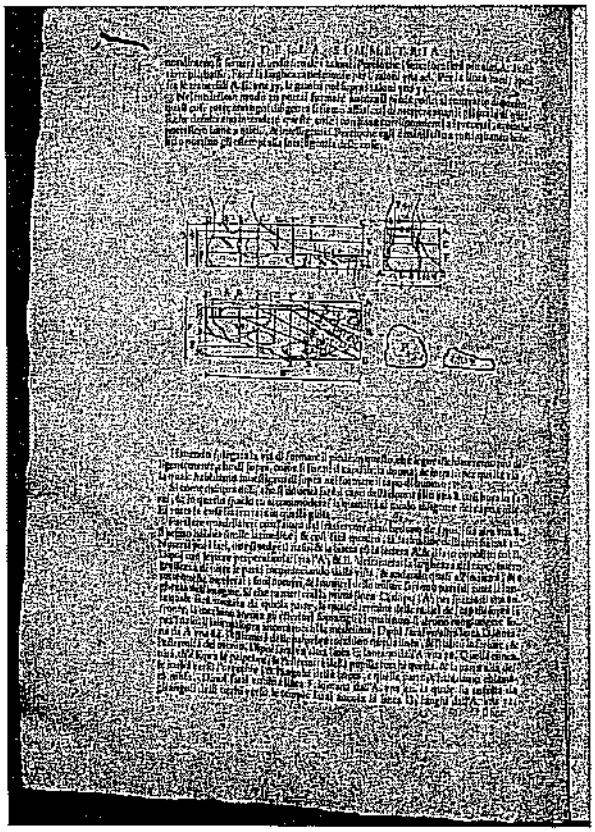


FIG. 4 G. P. Gallucci (after A. Dürer), *Proportions of a Child*, 1591. Woodcut from *Della simmetria dei corpi humani*, Venice 1594, Book 1, p. 27r. Washington, Library of Congress
FIG. 5 G. P. Gallucci (after A. Dürer), *Proportions of a Foot*, 1591. Woodcut from *Della simmetria dei corpi humani*, Venice 1594, Book 1, p. 26v. Washington, Library of Congress
FIG. 6 G. P. Gallucci (after A. Dürer), *Proportions of a Man*, 1591. Woodcut from *Della simmetria dei corpi humani*, Venice 1594, Book 3, p. 90v. Washington, Library of Congress

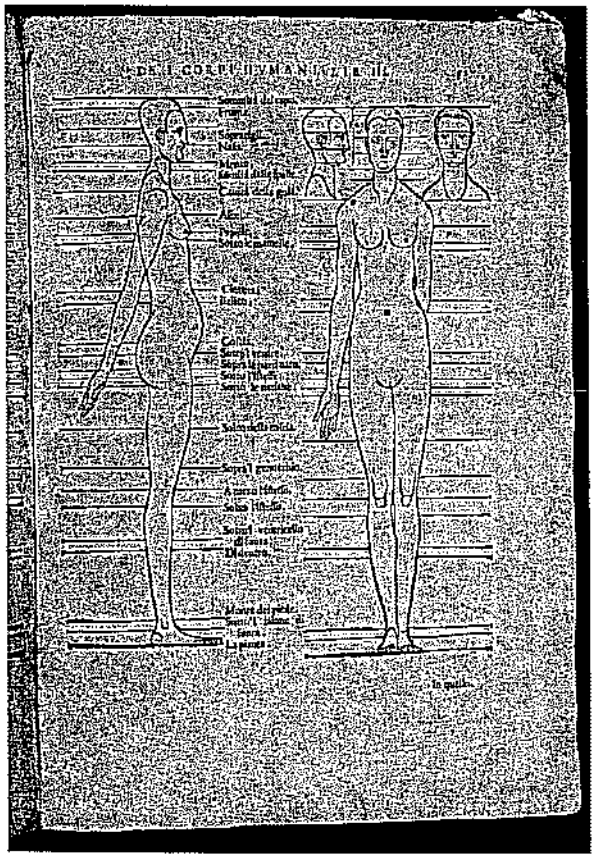


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FIG. 3 G. P. Gallucci (after A. Dürer), *Proportions of a Man*, 1591. Woodcut from *Della simmetria dei corpi humani*, Venice 1594, Book 2, p. 59vr. Washington, Library of Congress

scattered nature of beauty noted by Dürer on multiple occasions, was the result of a divergence from the true exemplum in Christ and Adam. By 1504 and the creation of *The Fall of Man* (FIG. 7) engraving, Dürer set this notion down in writing:

> Just as they [the pagans] apportioned the most beautiful form of man to their idol Apollo, so too we want to use the same proportions for Christ the Lord, who is the most beautiful of all men in the whole world.[46]

Like Christ, Adam was physically perfect before the Fall. The theological dimensions of such a belief in extrapolating from man to the universe cannot be passed over. Throughout the Christian tradition, it should be remembered, Christ was referred to as the "universal man".[47] His exemplarity was founded in many examples. Morally, he was sinless in life and his acceptance of the Passion was the model for Christian behavior. Through his perfect sacrifice he took upon himself the sins of mankind. Or as Koerner writes

> And theologically, as the true *imago Dei*, beside whom other humans are but *ad imaginem Dei*, he represents man's perfect spiritual and physical state; hence his typological aspect as New Adam.[48]

As is read in the "Aesthetic Excursus", «The Creator once made people as they ought to be».[49] The notion was preceded by an earlier draft of the essay where Dürer notes that whereas human beauty was once embodied in a single man, Adam, it is now imperfectly «distributed among the multitudes of all people».[50] This multiplicity and diversity is explored in the "types" that are recorded in the *Proportionslehre* (FIGS. 3, 6).
The particularizing approach taken by the artist reflected larger theoretical concerns about beauty in general as he found that no two persons are ever the same. The heterogeneity that resulted was in response to the subject-object dilemma that presented itself in capturing a universal beauty with the defining assistance of mathematics and geometry; or as Koerner wrote:

> No single person's body can be representative of a type, and therefore there is no living embodiment of the beautiful, for all particular cases are divergences from an ideal. And no one will ever know beauty absolutely, for each person has only a limited, relative access to the ideal.[51]

Or as the artist himself writes:

> There lives on earth no one beautiful person who could not be more beautiful. There also lives on earth no one who can say or show how the most beautiful form of a person should look.[52]

As Patrick Doorly has pointed out, Pirckheimer and Dürer would have been familiar with two of Plato's dialogues, *Republic* and *Gorgias*.[53] Within these works under the subtitle "on the beautiful" (*Phaedrus de pulchro* and *Hyppias maior de pulchro*) the artist found the inspiration for his own essay on the subject in the 'Excursus'. As the artist wrote,

> There lives also no man upon earth who could give a final judgment upon what the most beautiful shape of a man should be; only God knows that [...] What the beautiful is I know not, though it adheres to many things. When we wish to bring it into our own work we find it very hard.[54]

Doorly has noted that each sentence is taken up from *Greater Hippias*, which he used to conclude that Dürer's reference to Plato and in his notes was dependant on the ancient Greek philosopher and not Florentine Neoplatonism.[55] The Platonic interpretation was further illustrated by the artist when he continues in the 'Excursus' to say that: «For the deception is in our cognition, and darkness lies so stubbornly within that our feeble gropings also fail».[56] The belief that individual judgment was insufficient to access universal beauty was not unique to the northern artist. Even theorists who criticized such orderings, like Alberti and Leonardo, attempted to abstract some kind of norm from material culled from the judgment of public opinion, or by the opinion of "experts" and to contrast this norm with judgments based merely on individual taste.[57] In like manner

the objective and universal was sought in proportion theory, while at the same time difficulty in accessing universals, in any form, was admitted.

Incorporeal Proportions: Dürer, Ficino and Neoplatonism

The use of Platonic frameworks, and the references made to Plato by Dürer later in his theories on proportion, illustrates the diffusion of Florentine Neoplatonism throughout intellectual circles in Europe. Indeed the idea exhibited by Dürer that more was needed to produce beauty in works of art than merely observable harmonious relationships owes its origins to the movement. Along with artists who sought to distill a formula to represent well-proportioned human figures were philosophers such as Marsilio Ficino (1433-1499) who stressed the same concern. Ficino had translated Plato's dialogues into Latin in 1482, which arguably had the most lasting effect on Neoplatonic thought in the following century; as well, his writings were widely read by artists and copied for their own treatises. One of the most pertinent passages for artists and proportion can be found in Speech V Chapter III entitled *Beauty is something incorporeal* in his *Sopra lo amore o ver' Convito di Platone*, where Ficino notes the necessity in holistic proportion for the infusion of beauty into a figure:

> There are some who think that beauty consists in a certain arrangement of all the parts, or [...] in symmetry and proportion, together with a certain agreeableness of colors. The opinion of these people, however, we do not accept, because since such an arrangement of parts exists only in composite things, no simple things would be beautiful [...]
>
> In addition to this is the fact that that "proportion" includes all of the parts of a composite body, and does not exist in individual parts, but in all of them. And so, the individual parts in themselves will not be beautiful. But the "proportion" of the whole construction arises out of all the parts. Whence something very absurd follows[58]

Interestingly, in his essay on beauty Dürer also writes that artists ought to be meticulous in their depiction of every and all parts of the human body, down to the most seemingly peripheral:

> Then one should further take care that one puts to-

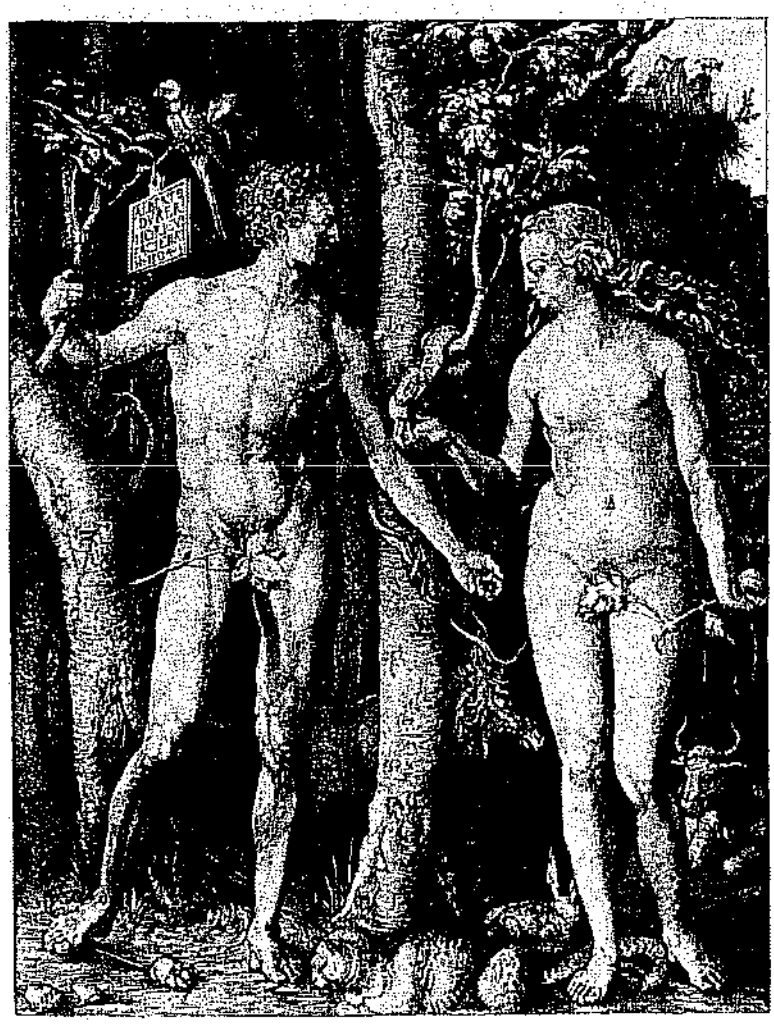

FIG. 7 A. Dürer, *The Fall of Man*, 1504. Engraving, 9 7/8 x 7 5/8 inch. Philadelphia Museum of Art

gether diligently, and down to the last detail, the breast, belly, the back and behind, the legs, feet, arms, and hands with all that they contain. And these things should also be fashioned within the work in the clearest and most meticulous manner, and the tiniest wrinkle and speck should not be omitted insofar as this is possible.[59]

The admonishment falls in line with the demands of Ficino.

The emphasis on considering all the parts taken together as a single, unified representation of beauty, might not at first reveal the differing approach of Ficino to ideal human proportion; but it does highlight a criticism that would gain acceptance in the following century. The need for a unifying "idea" to relate all of the proportioned parts to one another is central to this early conception that would be developed by Dürer, and more fully by Gallucci. Furthermore, the resultant "absurdity" that Ficino cites, springs not only from a disunity of parts, but from focusing solely upon the harmony of proportions, color and qualities. These "corporeal attractions" are to be ignored as superfluous, for it is ridiculous to believe «that things which are not beautiful of their own nature give birth to beauty»; as early art theorists such as Alberti understood the nature of beauty, as well.[60] Referring back to the third-century CE philosopher Plotinus, and the revival of Plato in antiquity, this definition of beauty is vapid because it seizes only the external characteristics of appearance, rather than the inner essence and true meaning of beauty.[61]

The belief is elaborated upon by Ficino in the infamous Speech V Chapter VI *How many things are required that a thing be beautiful and that beauty is a spiritual gift.* The section would resonate as a particular truism when treating the incorporeal nature of beauty and was excerpted by numerous theorists, including Gallucci, Lomazzo and Poussin. In continuing his discussion of the importance of proportion, Ficino notes that *bellezza* is «a certain grace shining in itself through the influence of its own Idea».[62] The entrance of this "Idea" into matter is contingent upon the specific steps in preparation for it. As he writes:

> But the preparation of the living body consists of these three things: order, mode and form. The order is the distance of the parts, the mode is the quantity, and the form is lines and color [...] Although these three particulars are in the matter, they nonetheless may not be any part of the body. The order of the limbs is not a limb by itself, because the order is in all of the limbs and in no one limb are all of the limbs present. In addition, the order is nothing more than a proper spacing of the parts, and the spacing is either nothing, a void or a linear characteristic. But who will say that the lines are the body? They lack the length and the depth necessary to the body. Moreover, the mode is not quantity, but the limit of quantity. The limits are the surfaces, lines and points which, not having depth, cannot be called bodies. We also do not put shapeliness into the matter but into the joyful harmony of the lights, shadows and lines. For this reason Beauty is so distant from corporeal matter that matter does not communicate with it unless the matter is prepared according to the three incorporeal conditions that we have mentioned.[63]

Thus the necessary preparation of the «three incorporeal conditions», which are «order, mode and form», determines acceptance of beauty into matter, or its rejection. Whereas Alberti merely listed an indeterminate number of characteristics necessary for proper harmony and beauty (i.e. «size and measure, character, color, and other similar things»), Ficino enumerates three specific steps to be taken, including the distance and arrangement of the various parts to be shown; second the number, or quantity of those parts; and third the "form" that will embody the Idea in «lines and color».[64] At one time Ficino defined beauty in close accord with Plotinus as a «clearer similarity of the bodies with the Ideas» or as a «victory of divine reason over matter».[65]

Even though it has recently been disputed, the evidence of Dürer's own sources reveals his knowledge of and borrowings from the recent publications of Ficino.[66] Although the dissemination of Ficinian philosophy is often seen to be delayed, the author's main philosophical works were in circulation well before they were published in 1482, and his commentary on the *Symposium* was even available in an Italian translation two years later, further expanding influence in

lici vita (1489) has been most often cited as the source for Dürer's art. This is especially evident in *Melencholia I* (FIG. 8) where the presentation is closely based on Ficino's description of the Saturnian man: «But a person who is stimulated into scrutinizing curiously the depths of secret things, should know himself to be not only Mercurial but Saturnine».[68] The *De triplici vita,* in particular, became more accessible in Germany when in around 1510 Ficino's writings were circulated among German humanists, inspiring Cornelius Agrippa, for instance, to reiterate many of Ficino's ideas.[69] But direct access was afforded Dürer through Willibald Pirckheimer (1470-1530), a friend and collaborator, who owned copies of Plato's *Complete Works* translated by Ficino published in 1484 and the first printed Greek edition of the works by Aldus Manutius in 1513.[70] Though it has been noted that Dürer would have already been familiar with Ficino through his time in Venice, while there he also purchased a copy of the first Latin translation of Euclid's surviving Greek texts, including the *Elements of Geometry* and the *Optics*.[71] The perspective studies undertook there necessitated that the German artist read Pacioli's *De Divina Proportione* (also published in Venice), which argued that perspective, like music, should be considered a mathematical discipline.[72] Taken together, the texts by Ficino, Euclid and Pacioli gave Dürer the source material necessary to connect the Platonic interest in a universally and quantitatively verifiable beauty with the means to find such beauty by way of geometry and mathematics. Thus proportion studies themselves in the hands of Dürer became inextricably linked with Neoplatonism. The underlying assumption that beauty can be mathematically distilled fell in line much more naturally with the belief that there exists an underlying pattern or universal imperative in nature, which if discovered by an artist would reveal the intended universal forms. As such, it is appropriate that Plato in the *Timaeus* sets forth that the ideal of beauty, one form of truth itself, is governed by reason evident in its system of measurement and proportion.[73]

Art Theory Later in the Century

The development of a canon of proportions based on arithmetic ratios was the consequence of the belief in the relationship between beauty and harmony sought in arts education since the early fifteenth century. Yet as the system had been established and disseminated through treatises like Dürer's, another current of thought sought to undermine the premise that beauty could be attained purely through harmony, symmetry and mathematics. Ironically, the uncertainties expressed by the artist in his work would be developed by others to dismiss the need for such treatises. In the mid-sixteenth century, this can be illustrated in the figure of the sculptor-theorist Vincenzo Danti (1530-1576). Only the first book of Danti's essentially Albertian treatise on *Disegno* was ever published (1567), but we know that eight of the remaining thirteen books were devoted to the subject of anatomy. Danti's telling title of his treatment *Primo libro del Trattato*

FIG. 8 A. Dürer, *Melencholia I*, 1514. Engraving, 9 ½ x 7 ⅜ inch. Washington, National Gallery of Art

delle perfette proporzioni indicates that he was centrally concerned, like Dürer, with the perfect proportions of the human form, which is to say, with mathematical relationships of the parts of the body one to another. Nevertheless, he writes explicitly of a *misura intelletuale*, or "intellectual measure".[74] The perceived interrelationships of forms in Danti's conception were not to be measured with instruments. On the contrary, they could be discerned by the eye of a trained intellect, the greatest instrument of all.

The understanding and circulation of such an ability was well known after the apotheosis of Michelangelo Buonarroti (1475-1564). In his biography of the "divine" artist of 1553, Ascanio Condivi (1525-1574) noted that Michelangelo intended to write a treatise on proportion himself, drawing upon the years of anatomical study and the dissection of corpses, «with a brilliant theory which he arrived at through long experience». Extending the critique of Dürer's rigid, mathematical conception of human proportions, Condivi reassures that:

> I know very well that, when he reads Albrecht Dürer, he finds his work very weak, seeing in his mind how much more beautiful and useful in the study of this subject his own conception would have been. And, to tell the truth, Albrecht discusses only the measurements and varieties of human bodies, for which no fixed rule can be given, and he forms his figures straight upright like poles; as to what was more important, the movements and gestures of human beings, he says not a word.[75]

The understanding that «no fixed rule can be given» for proper proportions is consistent with Danti's concept of the *misura intelletuale*, a belief that Michelangelo's biographers considered the universal artist to possess.
The capacity for "intellectual measure" informed the interpretation of another ability, the *giudizio dell'occhio*, which also did away with "material compasses" in favor of the "judgment of the eye".[76] In a letter to the Milanese architect Martino Bassi (1542-1591), written six years after Michelangelo's death, in 1570, Giorgio Vasari (1511-1574) defended the non-traditional proportions of the artist by noting that:

> Whence the great Michelangelo said that it was necessary to have the compasses in the eyes and not in the hand, that is, to have judgment; and for this reason he sometimes made his figures of 12 or 13 heads, according as they made groups sitting or standing and according to attitude; and so with columns and members and other components, he always went after *grazia* rather than *misura*.[77]

The weight given by Vasari to the pleasure of the eye over numerical measurement is echoed by Michelangelo at the end of the letter as he preferred the quality of *grazia*, or "grace," that pleased the eye over *misura*, or "measure." In a similar fashion, Vasari noted in the 1568 *Vite* that Michelangelo

> sought nothing else than that, in putting everything together, there should be a certain harmony of grace in the whole, that nature does not make, saying that it is necessary to have the compasses in the eyes and not in the hand, because the hand works and the eye judges.[78]

Proceeding from the disparaging judgment of Dürer's theory of proportions by Michelangelo, recorded by Condivi and Vasari, many theorists later in the century vigorously and consciously criticized the earlier attempts to place artistic representation on a scientific, especially mathematical basis.[79] Leonardo had taken pains to determine the motions of the body according to the laws of strength and weight, even to fix numerically the changes of measurement induced by these movements.[80] He also contributed anatomical studies to Pacioli's proportion treatise, while Dürer sought to master "foreshortening" through geometrical construction. All these theoreticians agreed that the proportions of the human body at rest could be ascertained and fixed within an agreed upon mathematical canon of human proportion, and that this was necessary for beauty.[81] The belief was replaced by repeated warnings against overvaluing the theory of proportions that had been diligently established for posterity. Even though the artist was

admonished to be familiar with established canons, he was instructed to disregard them, especially if attempting to reproduce the effects of movement in the human body, as Condivi noted.[82] Such was the recommendation of Raffaello Borghini (1537-1588) in his *Il Riposo* of 1584, for he noted that:

> As for measurements [...], it is necessary to know them; but one must bear in mind that it is not always advisable to observe them. For often we make that bend, rise, or turn, in which attitudes the arms are now stretched out and now contracted; so that, in order to give the figures gracefulness, it is necessary to extend the measurements in some part and to shorten them in some other part. This cannot be taught; but the artist must judiciously learn it from nature.[83]

To achieve the desired effect of "gracefulness" in figures to be produced for a given composition, the artist was required to alter the canon, which was important to internalize, for just this reason. If a particular pose or gesture was desired, accepted precepts would offer a conceptual starting point for the artist, which would then be tempered by "nature", and improved upon by *Invenzione*.
The ambivalent position taken by Borghini here is symptomatic of the fact that proportion theory is a philosophical contradiction. It should be pointed out that many thinkers who championed the use of quantifiable human proportions were Platonically inclined in the sixteenth century. But the notion that beauty can be mathematically quantified can be seen to derive from Aristotle in many accounts.[84] The dichotomy helps elucidate the adoption of such a hostile position by Platonists, as well as Peripatetic writers as it was in response to what the universally valid systems of mathematics, and subsequently nature, could perceivably offer the artist. Earlier mathematics represented for Neoplatonic thinkers, such as Ficino and Dürer, a way in which to more directly relate to the world of immutable Forms, the world of Ideas. Alberti, early in the fifteenth century, related that mathematics, the basis for the revival of art in his own time, was concerned not with visible form, but the incorporeal: «Mathematicians measure with their minds alone the forms of things separated from matter».[85] Therefore, the underlying Platonic assumption present in such proportion studies was vigorously resisted by Neo-Scholastic art theorists such as Federico Zuccaro (ca.1542-1609), co-founder and first Principe of the Accademia di San Luca. The hatred for mathematics present in his *L'Idea de' pittori, scultori et architetti* of 1607 attests to this; for as he set forth «the art of painting does not derive its principles from the mathematical sciences» as «painting is not their daughter, but the daughter of Nature and Disegno».[86] In response to those "mathematical rules" established by Dürer, Zuccaro notes that «such rules neither serve nor suit our actions [as artists]».[87] In fact, he states that the German artist produced the studies «as a joke, a pastime, and to give diversion to those minds that are inclined to contemplation rather than to action».[88] Such pursuits should be «left to those sciences and speculative professions of geometry, astronomy, arithmetic, and the like» as they require "proofs".[89]
Much as Borghini had stressed, the artist need only be familiar with

> the basic principles and instructions acquired from his predecessors, or also from nature itself, becomes a skillful man through mere natural judgment with proper care and observation of the beautiful [...] without any aid from or need for mathematics.[90]

Relating the quality cited by Condivi, Zuccaro calls instead for the quality discussed as *giudizio dell'occhio*; as

> you make yourself so familiar with these rules and measures in working, that you have the compass and the square in your eyes, and judgment and practice in your hands.[91]

Zuccaro then returns to the Aristotelian tradition cited in Aquinas that the artist's goal should be that of mimesis, a truth to nature: «But we, professors of Disegno, have no need of other rules than those which Nature herself gives for imitating her».[92]
Thus, ironically, the same period that so vigorously defended artistic freedom against the oppression of *teorica matematica* also attempted to systematically organize art, with ancient and

modern theories, in such a way that even the most talented had to learn and even the most untalented could learn.[93] Therefore, even though Zuccaro denied that an artist must observe the laws of proportion, he nonetheless admitted that they must be known. The same can be said of Danti, who wrote in his proportion study that an artist should reject the mathematical schematization of the form and movement of the body, nevertheless admitted that the anatomical method was unconditionally valid, since somehow a "scientific" approach to art had to be found. He stated expressly that his *vera regola,* or "true rule", would be useful to those «born to art», as well as to those not born to it, thus supporting the notion that art could be learned.[94] Although a single proportion and canon was not championed as the norm of beauty, which had been customary earlier in the century, even Lomazzo, who espoused the idea of the *figura serpentinata*, nevertheless, also recounted Dürer's detailed proportions in both of his treatises.[95] In fact, Alberti, in the same section where mathematics are related to the incorporeal, affirmed that:

> No one would deny that the painter has nothing to do with the things that are not visible. The painter is concerned solely with representing what can be seen.[96]

The base contradiction reveals the dual role of the artist, understood at the outset of the Renaissance, as he was expected to understand the underlying patterns inherent in nature, and represent the visible world simultaneously. The duality extended to proportion theory in both philosophical camps; but it cannot be overlooked that the doctrine of expressive movement espoused by the theorist attempted to rationalize that which could not be, and this could not be attained without a Platonic notion of universally valid forms expressed in systems such as Dürer's.

Reformatory Dissent: Proportion Theory and Arts Education

Notwithstanding, the condemnation of proportion studies by both philosophical polemics did not slow their proliferation and perceived benefit for arts education. By the end of the Cinquecento, the theory of proportions and anatomy had been well-developed, mentioned in passing in dozens of treatments, and had several solely dedicated to the issue.[97] In each of these, the pedagogical application of such treatises was paramount. The widely available canons of proportions were necessary for young artists to initially internalize in order to derive poses, actions and emotions of figures in *istorie,* or history paintings. After these had been mastered, the mature artist could then modify each set of ratios to befit a given character or narrative. By its very nature then the original purpose of Dürer's publication was, arguably, pedagogical and referential.[98] Koerner affirmed this use by noting that before he died the artist was obsessed with compiling the typological sets for posterity and the benefit of young painters.[99] The same function was retained by Gallucci, but was circulated within a very different artistic environment for it was agreed upon that there had been a decline in the arts around mid-century.

As Sohm has recently concluded, artists that lived in the wake of the High Renaissance were discussed as living in the «the age of senescence and decrepitude».[100] The notion of art as a biological organism was an aphorism applied by Vasari to illustrate the continual march towards perfection in his *Vite*: «The arts, like men themselves, are born, grow up, become old and die».[101] Nevertheless, such a "decline" in the arts did not prevent one of the greatest periods of publication on art of the early modern period.[102] One explanation for the spike in literary interest, ironically, was the belief in art academies, such as the Accademia di San Luca in Rome (founded in 1593 by Federico Zuccaro), that art had sunk into *pratica* and needed reform through a thorough reintroduction and reinforcement of theory.[103] Though the reasons varied, most of the publications emerging at the end of the century were designed to rectify this imbalance in the production of art and overvaluing "practice". In like fashion we find that in his Preface Gallucci

does not spare criticism for contemporary painters who proceed without precepts and rely solely on practice without theory «like so many volcanoes».[104] The astronomer laments that "modern painters" have deviated from the canon established by Dürer, producing figures of nine or ten head-lengths. These artists ignore the proportions «in every kind of body» that the artist had «toiled over in his studies».[105] In this way, Gallucci can be seen to have the same instructive goals as Armenini, Lomazzo, and later Zuccaro, as the translation of the quintessential treatment on human proportions for artists offered a perfect supplementary text to an artist's education in an academic or workshop setting.

In point of fact, it was in the first academy established for the arts, the Florentine Accademia del Disegno, that the need for such texts already existed when Gallucci entered the discourse on proportion studies in 1591. Founded as an instrument of liberal education, the Florentine Academy codified existing principles of theory and practice in a formal program for artists of all ages.[106] *Disegno*, the theoretical principle uniting the three *Arti del Disegno*, was embraced as the guiding principle of the new institution. In the Introduction to the second edition of *Vite*, Giorgio Vasari, one of the founders of the organization, defined *disegno* as the realization of the *idea*, which is born in the intellect.[107] Through endless study and practice, and the application of measured judgment, the hand could be trained to reproduce the inventions of the intellect. This notion of *disegno* called for the union of theory and practice; the mind had to be exercised as well as the hand in order to lead to perfection in art. The curriculum of the Academy was a progressive sequence of study, beginning with foundation sciences and exercises, and then advancing to related disciplines and activities. In the sixteenth century, mathematics was recognized as the foundation of knowledge, as a means for rationalizing the external world. Study thus began with mathematics to provide the artist with the conceptual key for comprehending the world around him. Since Florentine art was primarily concerned with the human figure, anatomy followed mathematics and was complemented by drawing the figure from life. Natural philosophy came next, along with the study of inanimate forms like drapery; all of which intended to aid the artist in the composition of *historia*, or history painting. Barzman noted that knowledge of one subject conditioned comprehension of the next, and together they constituted a coherent theory of art. The codification of this curriculum was drawn directly from Renaissance traditions and earlier theorists, such as that of Alberti, while towards the end of the century unpublished manuscripts of Leonardo's art theory began to circulate in Florence.[108]

In a letter of 1591 to his brother in Genoa, the painter Giovanni Battista Paggi (1554-1627) summarized the curriculum of the Academy and began by affirming the Albertian dictum that theory begins with first principles which, for the arts of *disegno*, meant the mathematical sciences.[109] He asserted that contemporary artistic theory was grounded partly in arithmetic and partly in geometry.[110] From these sciences the artist would gain a knowledge of perspective and symmetry. The rigorous drafting of three-dimensional forms, like regular and irregular polyhedra according to the rules of geometry, provided fundamental exercises necessary for developing a facility of the hand. In addition to this, the study of mathematics was thought to develop measured judgment in both action and intellect.[111] Dürer, like Alberti and especially Leonardo, understood the importance of a firm grounding in mathematics for artists, which informed his publication in 1525 of *Die Unterweisung der Messung mit Zirkel und Richtscheid*, the guide to geometrical and perspective constructions. The treatise was to be read in tandem with the *Proportionslehre*, as it offered a mathematical foundation for the study of human proportion to benefit the education of the young artist.[112]
The sequence was adopted by the Accademia as the next part of the curriculum there was anatomy and life drawing, particularly for the painter and sculptor. In order to discern the mathematical relationships of the parts of the body,

one studied mathematics first and then anatomy in great detail, followed by life drawing. This would enable the artist to recognize and then produce ideal human forms whose beauty was the result of harmonious proportions. After anatomy, the artist turned to the study of the human figure from life. According to Alberti, although the beauty of the body's planes and surfaces could be grasped from ancient sculpture, it was best mastered from nature directly.[113] Alberti had enjoined artists to study human anatomy in a systematic fashion, concentrating on those parts of the body responsible for mobilization. The study of bone structure, musculature, and the flesh stripped of skin would follow each other sequentially. Of course these internal anatomical components had to be mastered in addition to those external features studied in life drawing classes. They had to be understood in their individual appearances and functions, and in their proportional relationships to one another, in order for the artist to comprehend fully the mechanics of mobility. Annual dissections were carried out at the Academy from its inception in 1563, but the interest in anatomical dissection accelerated in the wake of Michelangelo.[114] There was a pervasive notion that the perfection of the "divine" Michelangelo's art, which celebrated and ennobled human form, lay in his profound knowledge of anatomy, and Academy members sought to perfect their own art by way of a solid grounding in this science.[115] The goal of such a rigorous series of studies was to effectively relate the emotional state of figures to be represented in works of art. Based initially on Alberti's recommendations, and then reinforced by the prescripts of Leonardo, the artist was trained to have their works communicate mutely, with their inner thoughts and passions, or *affetti dell'animo*, made visibly manifest.[116] The exhortation, Rossi has noted, remained a central theme in the publications surrounding Gallucci's. In fact, the proposed theory of physiognomy in *Della simmetria* is a primary leitmotif and is used as a literary precept surrendered to the expression of the «passions that [men and women] perceive».[117] The same interest had already been expressed by Lomazzo in his *Trattato* in such chapters as *Delle passioni dell'animo e loro origine e differenza* and *Dell'amicizia et inimicizia*.[118]

However, in order to divine the internal passions, or *affetti*, of figures, the stages of anatomical study were organized to build one on the next. Knowledge of the internal structure of human bodies and their mechanics preceded the study of live models. Only after the mathematical components of the parts had been analyzed could the artist move to assembling multiplicity into a unified whole. And only then could he begin producing numerous drawings from a live nude model. There were many supplementary materials at the disposal of students at the Academy to assist in the process of creating proportional human figures. Along with sculptures and plaster casts, supplementary texts on anatomy would be used to further investigations began with geometrical construction, dissections and life drawing. Barzman notes that these texts would have included Danti's *Primo libro del Trattato delle perfette proporzioni*, which was incomplete but available by 1567, as well as the now lost *Il Microcosmo* by Pietro Francavilla, which discussed physiognomy, various humors and temperaments along with human anatomy.[119] Of extant examples Juan Valverde's *Historia de la composicion del cuerpo humano* was widely circulated and translated into Italian in 1560, while the encyclopedic treatment *De humani corporis fabrica libri septem* by Andreas Vesalius of 1543 was the most influential for the arts and medicine. Appended to this list must be Gallucci's *Della simmetria*, as its influence is demonstrable among artists in the following century. The illustrations that accompanied these texts would have provided excellent models for copying by young artists, as Alessandro Allori (1535-1607) claims in his own treatise.[120]

Be that as it may, the deceptively practical nature of such publications as manuals on proportions for practicing artists to reference overlooks the theoretical knowledge that an artist was also expected to master. These studies were not only a practical resource, but a testament to the theoretical framework on which they were built. In the Florentine

Academy, for instance, the goal of such anatomical exercises, where an exorbitant number of studies would be produced, was to develop the intellective faculty to properly judge nature with *giudizio universale,* or a "universal judgment". Derived from Aristotle's *Nicomachean Ethics* and made applicable to art production by Vasari - through an introduction by Benedetto Varchi (1502/3-1565) - the ability afforded by *disegno* allowed the artist to suggest with line unenmattered form.[121] The artist was expected through a multitude of sense experiences to move from particular to universal, from «perception to intellection».[122] Traditionally the process required young artists to abstract from nature the lines in charcoal or ink that translated the particulars of each form to the universal, which is not immediately revealed through sight alone. But often these students would also draw after highly-prized works of the great masters. The process was somewhat of a "shortcut", as discussed by Barzman, in that the knowledge of «forms or essences» had already been attained by earlier artists. The process of developing one's own faculty of *giudizio universale* is laid out in the curriculum of the Accademia itself, moving from the multitude of "natural" models to the ideal, abstracted or "purified" examples of Raphael and Michelangelo.[123]

The sequence of study in the Accademia was consciously designed to develop within artists the quality to move beyond the subjective particulars of sense perception in order to imbue their works with an objective beauty. Although not fully incorporated into art theory mid-century, the demand necessitated the adoption of certain Platonic precepts. Thus even though the philosophical mechanics supporting arts education mid-century derived its authority from Aristotle (evidenced by Vasari and Varchi), the deviations from the philosopher's own beliefs foretell an alternative approbation that was fully evident only in Gallucci's own time. It is important to realize that in Vasari's definition of *disegno* the sense of sight is able to perceive the underlying qualities of objects perceived and then express them through line. While for Aristotle, the senses do not perceive natural objects themselves, but only the qualities that make them unique. Moreover, the quality associated with the sense of sight for Aristotle was not line, but color.[124] The demand by Vasari that artists transcribe a multitude of examples from nature is unquestionably based in the Peripatetic tradition. But the intellective faculty described by Vasari and the demand that the artist penetrate into the realm of universals using the abstract quality of line is Platonic. These seemingly incompatible philosophical systems coexisted in art theory in the later sixteenth century and have lead to confusion over the ideas presented by such authors as Gallucci. In the example in question, the author explains that:

> Although, in the principle of this book has been said in what thing beauty consists in human bodies with the authority of Aristotle and of the poets [...] nevertheless, [it] has been determined by speaking of the beauty of human bodies according to the doctrine of Plato expounded by Marsilio Ficino in the Convivio by the same.

Although Aristotle had been the chief authority for both the arts and poetry early in the sixteenth century, as Gallucci claims: «Now painters listen to Ficino».[125]

Unenmattered Beauty: Neoplatonism and the *Della Simmetria*

The announcement by the author that artists in his own day favor the writings of Ficino over Aristotle derives from a section in his newly added Chapter LVII of the *Libro quinto* entitled *In qual cosa consiste la bellezza, & proportione de i corpi secondo Marsilio Ficino, & i pittori.* In this section the philosophical underpinnings can be found for Gallucci's publication in the supposition that careful preparations, including proper proportions, are crucial in order to cajole beauty into matter and form. Expanding on Ficino's doctrine in the *Convivio,* Gallucci writes:

> What thing consists of the beauty of the body? A certain liveliness of action, and a certain grace, that

shines in the same beautiful thing for the influence of its own idea. This splendor does not descend into matter if the material is not properly prepared [...] now this preparation of the body that lives consists in three things: order, mode, and species; the significant order being the intervals of the parts, the quantity the mode, the species of lines, and colors.[126]

Over a century after Ficino's translation of Plato had become available, the metaphysical nature of beauty had fully permeated art theory. In an extensive excerption of the *Convivio*, Gallucci reiterated that incorporeal definition of beauty that would be pleasing to Carducci and Poussin. The specified number and order of preparatory steps, as well as the definition of beauty as «a certain grace, that shines in the same beautiful thing for the influence of its own idea», relate to Ficinian metaphysics. For in Speech V Chapter VI in his *Convivio*, *How many things are required that a thing be beautiful and that beauty is a spiritual gift*, Ficino expounded: «Finally, what is beauty of the body? Act, vitality, and a certain grace shining in itself through the influence of its own Idea».[127] Gallucci flagrantly cites his source in his writing and continues to treat each preparatory thing:

The species then assures a sweet agreement of lights, shadows and lines, which is not in the material. Of all these things that are manifest, that beauty in all distance of the material of the body, is never communicated the same to the body, if it is not to be disposed with these incorporeal preparations, which I have recounted.[128]

The notion that matter must be aptly and carefully prepared to ensure that the misshapen or awkward does not encroach on a work of art would have seemed logical for those familiar with arts education in the cinquecento. Vasari, who was sympathetic to an Aristotelian view of art production, would have been resistant to the Platonic orientation of Gallucci's argument, but the incorporeal nature of beauty would have not been completely alien. As Vasari noted, an artist would develop lines that were to be abstracted from particulars and not merely unfiltered reality as perceived by the artist. Though delayed, the adoption of the metaphysical definition of beauty purported by Ficino became widespread in Gallucci's time. Accordingly, Rossi and Blunt have correctly related the section found in Gallucci to the publication of the *Idea del Tempio della Pittura* of 1590 by Lomazzo. The *Idea*, written after the artist went blind, was intended as a theoretical companion piece to his 1584 *Trattato*, an influential manual for artists that was translated into English and French and was widely used until the nineteenth century.[129] In the *Idea*, the Milanese theorist set out a highly complex and interrelated system for understanding metaphysics through the metaphorical construct of a temple. It is in Chapter XXVI, *Del modo di conoscere, & constituire le proportioni secondo la bellezza* that the idea that proper proportion directly influences beauty is discussed. The insistence is on the incorporeal nature of beauty aimed at through these preparations by which we are to infer that beauty exists in the preparations and not the posterior forms themselves. In an almost verbatim summarization of Ficino's quotation above, Lomazzo reiterates that:

Finally, the beauty of the body is nothing more than a certain demeanor, vivacity and grace, which radiate within it from the infusion of its Idea; and the latter does not descend into matter unless it is most properly prepared. This preparation of the living body is accomplished in three particulars, which are order, mode and form. The order signifies the differences of the parts, the mode the quantity, and the form the lines and colors [...] Although these three particulars reside in the matter, they nevertheless cannot be any part of the body [as Ficino states in speaking of Plato's Symposium], saying that the order of the limbs is not any one limb, since the order is in all the limbs, and no limb is present in all the limbs together [...] Thus beauty is so removed from corporeal matter that it does not take shape out of this matter unless prepared according to these three incorporeal conditions.[130]

The Neoplatonic origins of such a system whereby «the beauty of the body» directly corresponds to its approximation of its intended "Idea" are not surprising. Beauty was of central importance to Platonic thinkers in the Renais-

sance following Ficino, and its dissemination had an equally metaphysical, if not mystical, origin. For as Lomazzo continues in his chapter on proportion, beauty is the light reflected from God's face which then passes through a series of three mirrors, until it only imperfectly reflects the "divine" in its last stage of existence in matter. In describing this diffusion, he relates that beauty

> by means of the divine ray is first infused into Angels, in whom the shapes of any sphere may be seen; reflected in the Angels these are called exemplars and Ideas. Then it passes on to the spirits, in whom these shapes are called reasons and notions, and finally into matter, where they are called images and forms.[131]

In like fashion, Gallucci insists on a close correspondence between the human soul and its corresponding affections, elaborating on this metaphysical distinction. The human soul, as such, compelled in its corporeal prison, communicates with external reality through the expression of the intellect in art.[132] In the dedication in the Preface to Maximilian III, Archduke of Austria, Gallucci relates that:

> Painting, like the divine work for the eyes that represents the divine light in us, which for nature are immortal, like windows unto our soul, during which remains enclosed in this prison, penetrates into the more secret parts that make it and complains and rejoices, and decides, and fears according to the diversity of the things, which through good painters come to be represented with colors and lines.[133]

Painting offers humans the ability to express the passions of the soul; however, in order to ensure that beauty could be properly disposed in paintings, the artist, as the philosopher, had to penetrate into material existence and find the faint divine light reflected there. Such an act is difficult for the artist, Lomazzo informs us, because he forgets his divine origination,

> Hence it [the human soul] does not behold this beauty which radiates within it, until the body has matured and reason has awakened, with which it observes the beauty that shines in the sight of the whole world and there abides.[134]

The artist then must regard nature as highly suspect, since it is only with the intellect that true beauty may be ascertained. Dürer exhibited the same understanding in the 'Excursus' as he writes that "art" lies embedded in nature and therefore must be extracted from it.[135] Thus, it is necessary to sketch from life, but the approach to nature was necessary only to reveal the "divine" light buried within.

The relationship of proportions to the incorporeal nature of beauty is complex, and as such some currents of Renaissance Neoplatonism denied the contribution of proportions to beauty. The view that proportions contributed to the beauty of objects implies that those objects have parts; however the argument that stars are beautiful but have no parts, so that beauty cannot possibly have anything to do with relations between parts, goes back to Plotinus.[136] This argument applies to all kinds of immaterial objects: if beauty depended on proportional relationships between material parts, then neither God nor angels, being immaterial, could be called beautiful. Ficino already held this view, which was later reiterated by Lomazzo.[137] Agostino Nifo (ca.1473-1538/45), for instance, warned that if beauty were a relationship between parts, then simple objects, such as simple colors, light, single voices and sciences, could not be called beautiful.[138] Particularly unambiguous in this sense was Benedetto Varchi. Along with Daniele Barbaro (1514-1570), he was among the founders of the Academy of the *Infiammati*, and his *Libro della beltà e grazia* was dedicated to the first Principe of the Academy, Leone Orsini.[139] In the treatise (probably written in 1543), Varchi states that there are two kinds of beauty. The one that is described by Aristotle can be defined as a relationship between parts. As this variety of beauty is corporeal, it can be enjoyed by the senses, and is thus attractive to common people. Hence those who take pleasure in it are described as like brute animals. The Platonic idea of spiritual beauty, however, is born from virtues and known to good and speculative individuals.[140]

The dichotomy inherent in proportion studies was more clearly articulated by Daniele Barbaro himself in his 1556 Commentary on Vitruvius.[141] Interestingly Barbaro adopts a predominantly Aristotelian position, but at the same time admits the existence of independently existing eternal Forms as formal causes. Like Lomazzo and Gallucci after him, Barbaro states that proportion is a property of Form and does not belong to matter. Proportion thus pertains to these independently existing Forms that are reflected in the material world through formal causes. Also like Ficino, Barbaro insists that it is not sufficient merely to order sizes one after another; they must also have *convenienza* among themselves, and thus stand in a relationship of proportion. In as much as can be elaborated on, proportion is thus born from relations between parts, while beautiful inventions are good insofar as they are well-proportioned.[142] Furthermore, the relationship between proportion and the other Vitruvian term, *eurythmia*, is particularly informative. *Eurythmia* encompasses the fine adjustments necessary in addition to general proportional rules. While eternal Forms are reflected in proportions and through formal causes, *eurythmia* encompasses the adjustments made by the architect in order to express these in matter. Therefore, Barbaro concludes that *eurythmia* is «the temperament of proportions applied to matter».[143] The conceptions of proportion and *eurythmia* are then quite separate, belonging to two different realms: proportion is the reflection of eternal Forms in the underlying matter through formal causes; *eurythmia* provides the additional corrections necessary for the proper perception of proportions in buildings.[144]

The application of the term to the other arts was later described by Lomazzo, who adopted the term *euritmia* in his *Idea* as the "foundation" of his 'temple of painting', «as on a very firm base, and from which all beauty derives».[145] As with Barbaro, Lomazzo elaborates that even though it is dependent on number, *euritmia* is not the same as proportion. It is a general principle of proportionality among the parts; it «enters and penetrates» all of the parts in art, and «must reduce them all to a single [thing] which all parts regard».[146] Such an evaluation of the difference between proportion and *euritmia* explains the demands to learn mathematics (the basis of proportionality) and the sets of proportions developed by Dürer on one hand, and their dismissal on the other. Proportion, being only one part of constructing the beautiful, needed judgment and oversight. Because of this the necessary changes had to be made to ensure that beauty and grace were not stifled by mathematics, and that this *disegno overo euritmia* could «shine in all bodies».[147]

As understood by Barbaro, and later modified by Lomazzo, proportions are the reflection of unenmattered form that lie buried within matter. The purification of nature (or the adjustments made through *euritmia*) was connected by Ficino, Lomazzo and Gallucci to the close correspondence between a subject and its incorporeal "Idea," or independently existing, eternal Form. In the Preface for the edition, which seeks to demonstrate the similarities between painting and poetry, Gallucci noted that it was in fact the Idea that informed Dürer's studies and that it was to that end that an artist was to utilize those studies.[148] Dürer, Gallucci tells us, had set forth to capture the beauty of proportions through his judgment by way of the natural sciences and mathematics. As he states of this endeavor:

> For not only has he established the precepts of well-proportioned bodies, but also gave rules, and conferred the precepts, and recovered proportions in bodies that were all disproportionate. For he knew very well that indebted painters [...] display in painting every kind of person, and form every idea of natural inclinations, because they all have diverse bodies, which are proportionally transferred to nature, they wished to form still diverse precepts that would desire the manner of changing all bodies and their parts, like those that are wished for in the individual when representing the most desired in such manner. Although, in deviating somewhat in some body from that true proportion that one finds in perfect bodies [...] it would lose the human form, and would make a thing in all monstrous and ridiculous.[149]

In his *Vita di Alberto Durero*, a short biography be-

fore his Preface, Gallucci claims that Dürer sought to reestablish a universal canon of proportion that had been lost after antiquity.[150] The claim is reinforced here in that when artists deviate from the "true proportion" and precepts that have been laid down, the beauty of the human form is lost to monstrosity. Underlying the operation of nature is a guiding and unifying force, an Idea, which brings together all of the disparate elements in the sense-perceptible world. Dürer understood this and sought to develop a method to «form every idea of natural inclinations» in his typological study.

The philosophical underpinnings for Dürer's original publication are discussed here by Gallucci in a thoroughly Platonic panegyric. It has been stated that Plato had usurped Aristotle for art theorists later in the century by way of Ficino's works. Such intellectual and literary environments lead Rossi to connect Gallucci's publication to those of Lomazzo around the same time. But this does not preclude a Neoplatonic framework for the theories of Dürer, earlier in the century. In fact, the German artist had already adopted many of the conceptions popularized in Gallucci's time, not the least of which being the notion central to Platonic metaphysics: the eternal Form, or Idea. As Panofsky noted, even though Dürer repeatedly made reference to individual "genius", and the suprasubjective interpretation of beauty, he attempted through half of his career to develop a basis or system to unerringly produce beauty in perfectly proportioned human figures.[151] By way of representing countless figures, the artist was able to develop his own *Augenmass*, or «intuitive sense of proportion», which allowed him to pull from a great reservoir of images and figures in his mind.[152] The notion would later be taken up by Vasari and Michelangelo in their understanding of *Giudizio Universale*. The ability was related by Dürer, however, much earlier to the Idea formed in the artist's mind. As Panofsky has noted, the German artist used the term himself as early as 1512 in explaining that:

> For a good painter is inwardly full of figures, and were it possible that he live forever, he would have from his inward ideas, whereof Plato writes, always something new to pour out in his works.[153]

The notion that painters are «inwardly full of figures» would be taken up again in another form by Lomazzo in his *Idea del Tempio della Pittura* later in the century, where he insists that the artist, through continuous study of history, provides for himself an «abundance and copiousness» of inventions.[154] Dürer had foretold the possibility of making a codification of proportions from diverse temperaments, which was in turn bequeathed to Lomazzo. Therefore in Dürer's conception of the "Idea", the early fifteenth-century view that the concept signifies the final result of external experience is abandoned for one that is more closely aligned with Neoplatonism that would later be adopted in Italy. Instead of conceding to a relationship between the artist's conceptualization and the resultant art work, it designates a completely inner notion, such as the soul's "inner image" spoken of by the German theologian Johannes Eckhart (ca.1260-ca.1328).[155] Moreover, as formulated by early theorists such as Alberti, Ideas would normally guarantee an objective validity and beauty in works of art; but with Dürer, their proper function is to ensure originality and inexhaustibility in that they enable the artist to pour forth «always something new» from his mind. The understanding of the diversity of Forms, as it were, demanded their equally diverse expression in the "types" recorded by Dürer.

The approach to Nature (*natura*) was thus of central importance to artists and writers on art. The inborn, or hard won, conception of the material world and its order was discussed by both philosophical camps in Gallucci's time. From the Neoplatonic, and especially Ficinian, man was believed to have imprinted on his soul the idea of all creation. In Speech V Chapter IV of the *Convivio*, Ficino writes that God infuses into «Angels and the Souls» that

> ray of His, in which there is a fecund power of creating all things. This imprints the arrangement and order of the whole world much more exactly in these, because they are nearer to Him, than in the matter of the World. For this reason this whole picture of the

world which we see shines more clearly in the Angels and the Souls. For in them there is a picture of each sphere, the sun, moon, the other stars, the elements, stones, plants, and each of the animals.[156]

The epistemological model would be adopted by Lomazzo and Gallucci, carrying Ficino's understanding of the dissemination of knowledge to the end of the century. But the Neo-Scholastic camp also embraced a model of universal knowledge. Zuccaro, in his explanation of the two processes of art production in *disegno interno* and *disegno esterno*, related man's capacity for ideation to that of God. In his *Idea* of 1607, Zuccaro defined *disegno interno* as

> a concept formed in our mind, that enables us explicitly and clearly to recognize any thing, whatever it may be, and to operate practically in conformance with the thing intended.[157]

As *disegno* is God's «divine spark» in humanity, a *scintilla della divinità* (a part of God's own substance), and it is evidence of the Godlike nature of man, it enables him «to bring forth a new intelligible cosmos» and «to compete with Nature».[158] However, the charge of competing with Nature did not only refer to reproducing the appearance of the natural world for the artist; the ability afforded to man (and artists) allowed him to operate as Nature does in the creative mechanism implanted from the divine mind, and «bring forth» the entire «idea of Creation» in himself.

Universal Measure: Microcosm and Macrocosm in the *Della Simmetria*

The inexhaustible resources of an artist's intellect discussed by Lomazzo and Dürer were joined by their source and function with the internalization of all Creation, and the constituents of the universe. As such, the desire to categorize and classify «all types» of human figures resulted in the paradigmatic universal classification systems that abounded in the last two decades of the cinquecento. Gallucci affirms this belief in his additional chapter where, after discussing the three steps that must be taken by artists, according to Ficino, in order to prepare material to receive beauty, that artists have developed a "universal measure". Noting the careful observance of all members of anatomy and their relationships, he writes:

> And these are the universal measures that are used by modern painters, which they say have comprised more choices with nature and with the antique statues.[159]

The "measure" itself is not a single, uniform set of ratios, but includes «every sort of body that is found among humans», while the "universal" is not merely used to describe something that is «all encompassing», but is itself related to the universe.[160] In both philosophical systems, but especially the Platonic, the cosmos was imprinted on the soul, giving the artist access to a knowledge of all things through his intellect. Likewise the epistemological model assumed the relationship between the body of man and the universe. As Panofsky noted,

> The theory of human proportions was seen as [...] an expression of the pre-established harmony between microcosm and macrocosm; and it was seen, moreover, as the rational basis of beauty.161

In such a way, proportion studies fused a cosmological interpretation with the classical notion of "symmetry" as the fundamental principle of aesthetic perfection. In other words, a synthesis was sought between «the metaphysical spirit and the rational, between Neo-Platonism and Aristotelianism», between «harmonistic cosmology and normative aesthetics».[162] The basis for such a confluent system ultimately derived from the ancient source that was, tenably, the catalyst for proportion studies, Vitruvius.

Throughout the cinquecento, *De Architectura* of Vitruvius remained an indispensible source for writers on proportion evinced in commentaries like Barbaro's. The metaphysical and cosmological postulates inherent in the Vitruvian system of proportion was echoed in each treatment of the sub-

ject. In the case of Gallucci, the knowledge of this system is set forth at the outset of the treatment where in his Preface, the astronomer relates that the painter and the poet are responsible for «representing this divine animal».[163] As he continues

> And deservedly certain. Because that something is man, who is a compendium of the visible and invisible things? This was known to the wise Grecks, who named it the Microcosm, this is smaller world, because in him are all of these things that are in this entire universe: [which is treated by writers, sacred and profane]. Because so much more they speak of beauty worthy of authority, through these beautiful bodies, so that they are able to conclude that it is the position of the painter to imitate all natural things, and principally human.[164]

Because the painter represents in his works «all natural things», he is, consequently, responsible for representing the beauty of bodies through the Microcosm of man, in which is reflected all things in the «entire universe». Such a universal notion of proportion, Gallucci concludes, caused Pliny to praise Vitruvius and Aristotle.[165] The idea is carried through to the end of *Della simmetria*, where Gallucci concludes his *Libro quinto* with contemporary paintings, comparing them with the Vitruvian canon, which is fixed in the mind by the universality of the extensive Dürerian typology in order to acquaint oneself with «every sort of body that is found among humans».[166]

The canon of proportions that was developed out of the Vitruvian formulation is perhaps best expressed in the well-known illustration of the conception by Leonardo da Vinci in his drawing of the *Vitruvian Man* in the Academy of Venice (FIG. 9). The belief that man is geometrically perfect, reflected by the creation of a perfect square and a perfect circle through the extension of the limbs, illustrates the Vitruvian belief that man, being created in God's image, is a microcosmic reflection of the entire universe. Pythagoreanism accepted the circle and the sphere as the most beautiful shapes, and we find in Plato's *Timaeus* that the rounded figure is the most perfect; while both the circle and the square can be interpreted as the macrocosm because they are ideal forms.[167] Additionally, in Pythagorean number symbolism (which was accepted by Plato) the decad, or ten, was assigned as the number of the macrocosm, along with a corresponding geometrical shape, the decagon. The microcosm, on the other hand, has the number five, and its geometrical shape is the pentagon.[168] In the *Vitruvian Man* we find both shapes treated in the representation of the well-proportioned human figure.

Nevertheless, while the Vitruvian premise is illustrated by Leonardo the canon of proportions has been altered from the original set enumerated by the Roman architect. In the «emended measurements of Vitruvius» (seen in FIG. 9) we find that the proportions have been changed to one-fourth of the total length of the body being equal to the middle of the breast to the crown of the head; as well as from the pit of the throat to the crown of the head being equal to one-sixth of the total length. Early in his studies of proportion,

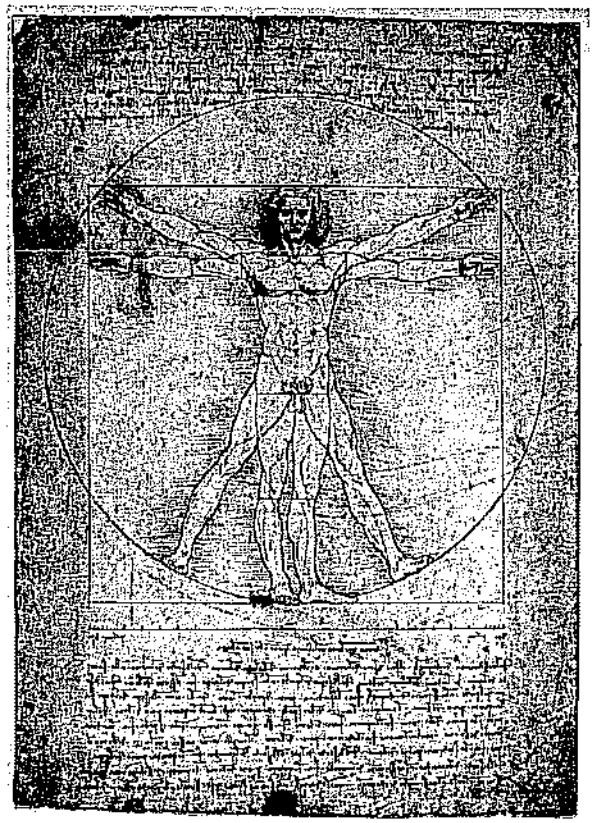

FIG. 9 Leonardo da Vinci, *Vitruvian Man*, ca.1485-1490. Pen and ink, 13 ½ x 9 ⅝ inch. Venice, Gallerie dell'Accademia

Dürer further modified the proportions to one-sixth of the total length being equal to the pit of the throat to the middle of the waist; and the middle of the waist to the crotch equaling one-sixth of the total length.[169] Consequently, the measurement for the distance from the crown, and again from the ground to the crotch equaled half of the total length of the body (FIG. 3).[170] Therefore, the artists seminal to the development of a canon of proportions freely modified the Vitruvian canon, illustrating that mathematical relationships were not the primary value inherent in the ancient system. Instead, what Renaissance artists took away from Vitruvius, in particular, was not a mere mathematical formula for reproducing a well-proportioned human figure, but the belief that proportion theory itself revealed a «metaphysical postulate» elucidating man's place in the universe and relationship with God.[171]

While the microcosm-macrocosm pair could be represented, and thus determined numerically, the interrelationship between the universe and the human body sympathetically affected all matter; and all things could be found to be connected to man. This system of relationships was expressed early on by Ficino, demonstrating the applicability of Vitruvian cosmology to Neoplatonism. In fact, the body measurements given by Ficino in Speech V Chapter VI of his *Convivio* are derived in part from the canon of Vitruvius, where we find that: «eight heads will make the length of the body; this same length the spread of the arms to the side and likewise of the legs and feet will also measure», and the division of the face into three lengths of the nose.[172] Elaborating on the notion of the balance and constitution of figures, Ficino then enumerated the three steps that were to be taken to ensure matter's acceptance of beauty. Within each of these steps (order, mode, form) appropriateness and balance in preparation are paramount to ensure pleasingness and harmony. But as he continues, the theory of the four elements and humors are cited as the actual basis for this beauty

> The basis of these three conditions is the harmonious constitution of the four elements in such a way that our body most resembles heaven, the substance of which is harmonious, and does not rebel against the formation of the soul due to an excess of some humor. In such a way the splendor of heaven easily appears in the body as similar to heaven. And this perfect form of man, which the spirit possesses, will be more integral in peaceful and obedient matter.[173]

The body and the universe from microcosm to macrocosm are here related, not by geometrical relationships, but rather metaphysical balance. The same elements that made up the physical universe also constituted the human body. The conception has its origin in Greek cosmology where Plato's *Philebus* finds Socrates voicing the thesis that the elements in man's body are derived from elements in the body of the cosmos; whatever man has, the cosmos must also have. Therefore, Socrates posits: «Whence can a human body have received its soul, if the body of the universe does not posses a soul?».[174] As the world, and subsequently the universe, is balanced by the four elements (earth, air, fire, and water), so to is the human body, and subsequently the soul, balanced by the four humors (black bile, yellow bile, phlegm and blood).[175] For physicians, deriving their ideas from Hippocrates and Galen, restoring health meant reducing the excesses through the introduction of opposites in processes including bloodletting.[176] For the artist, philosophers and those concerned with astronomy and astrology, balance and harmony- in the universe, human body and art- resulted in order, health and beauty. Therefore, according to Ficino, if the proper preparation for beauty, which includes these concerns, is observed then the «splendor of heaven easily appears in the body as similar to heaven».[177]

Body as Projection: Cosmology, Proportions, and Universal Mapping

The interconnected nature of man and the universe naturally extended to heavenly bodies, and as such astronomy and astrology became intertwined with human proportion. For those interested in mapping

the cosmos, such as Gallucci, the microcosm-macrocosm pair allowed the extension of knowledge of man to that of the universe, as they were self-reflective.[178] This was made possible through the dispersion of the same four elements throughout the universe, as well as the belief that the universe was organized in a similar fashion to man. As Conford has summarized Plato's *Timaeus*:

> The visible universe is a living creature, having soul (*psyche*) in body and reason (*nous*) in soul [...] Man is also composed of reason, soul, and body; but his body will be dissolved back into the elements, and the two lower parts of his soul are also mortal. Only the divine reason in him is imperishable.[179]

In a model that would appeal to Christian thinkers, the human body is derived from the elements, and will return to them after death. The constitution of these elements can be found in the different planets, and these in turn influence the makeup of bodies born under their astrological agency. The manner in which celestial bodies affected earthly ones reflected the organization of the cosmos. For as Elias Ashmole, antiquarian and founding member of the Royal Society, related in his *Theatrum Chemicum Britannicum* (1652) the universe is divided into supercelestial, celestial, and natural realms; the sublunary world being the final recipient of divine ideas transmitted by the planets and stars.[180]

The applicability of the belief to the arts was already demonstrated in treatises on art. Case in point, Lomazzo related proportions to astrology when in Chapter XXVI of his *Idea del Tempio* he followed the Ficinian definition of beauty and importance of humoral theory with a detailed list of each planet and their appropriate corresponding proportions. The material is again derived from Ficino, in this case his *De triplici vita*.[181] Citing the works of «mathematicians and astrologers», Lomazzo notes:

> But when it comes to fashioning the bodies, beauty is taken from the qualities that make all our bodies dissimilar, changing from one to the other more or less.[182]

This diversity is caused by the elements and planets:

> There can be however only four main types of dissimilarity, in accordance with the number of elements and the strength of their qualities, which the mathematicians assert are the bases of all the forms or rather types of human bodies.[183]

Each planet is associated with a particular quality inherent in the elements, and is thus transferred to earthly bodies. For instance, the hot and dry nature of fire causes Martian types to have larger limbs, whereas the cool and humid nature of water restricts the size of Lunar types. The same is true for Jovian types (where air produces full-bodied figures) and Saturnine types (where earth produces straight and concave limbs).[184]

Furthermore, as man was considered as a microcosm in astrological terms, it was already asserted that the twelve zodiacal signs affected different parts of the body.[185] Enumerated in his *De triplici vita*, Ficino's model of human life held that there were thousands of lines of influence connecting every organ and part of the body and soul to a particular star and planet.[186] The nature of this exchange is likened to the transmission of light, as he notes

> every spirit is therefore instantly moved one way or the other and formed by these things. And however it turns out, such in turn in some degree it makes the mind, and absolutely such, the quality of the body. Then as soon as it is opportunely exposed to the Graces through things pertaining to them, being also naturally in accord with those things, it immediately gains wondrous gifts of the Graces through their rays, which both flourish everywhere and are akin to it.[187]

This symbolism was carried on in the seventeenth century by Robert Fludd (1574-1637) in his *Utriusque Cosmi Historia* (1617-21). As seen in the title page of his work illustrating the macrocosm-microcosm (FIG. 10), the right foot is in Leo, while the left in Libra. The right hand is in Gemini, the left in Capricorn, and the head

FIG. 10 R. Fludd, *Title page*, 1617. Engraving from *Utriusque Cosmi Historia*, Oppenheim 1617. London, British Library

is at the Pisces-Aries cusp. The five classical planets are said to rule these signs. Thus, for the cusp of Pisces-Aries there corresponds Jupiter and Mars; for Capricorn, Saturn; for Gemini, Mercury; for Libra, Venus. In addition, Leo is ruled by the sun, but none of the five members is found in Cancer, which is ruled by the Moon. Fludd shows the Sun and Moon above, along with the other planets, in the macrocosm; man, of course, is in the microcosm. The fact that man has these five chief members, arranged in such a correspondence, led to the pentagram becoming adopted as the special symbol of man as microcosm.[188] The influence of the zodiacal spheres on different parts of the body is appropriate in their convenient juxtapositions. Their assigned adjacency or propinquity in space renders allowed for an appropriate understanding of the different areas of the body to correspond to different parts of the universe.[189]

Importantly, the interest in astrology demonstrated by Lomazzo paralleled a shift in arts education seen in the Accademia del Disegno. While the study of mathematics and anatomy formed the core of the Academy's studies, around 1590 (the same year as the publication of Lomazzo's *Idea*) natural philosophy was joined to the program by the second generation of members. As part of the original curriculum, the mind and eye had been trained to discover the mathematical relationships of the parts of the body one to another, which would enable the artist to depict ideal human forms of perfect proportions. With an understanding of the mechanics of the body, the artist could animate his ideal forms and set them convincingly in motion. However, external movements of the body were but visible manifestations of the internal movements of the soul: pose, gesture, and facial expression, all aspects of physiognomy including hair color, skin tone and texture, were dictated by the various humors and emotional states to which

men were subject. According to these principles, men of sanguine, melancholic, choleric and phlegmatic temperaments had their own pathological traits and idiosyncrasies. The artist would have to be able to distinguish among men of different humors when subject to various emotional states (*affetti dell'animo*), which also condition the external movements of the body.[190] Thus natural philosophy, which encompassed such branches of knowledge as physiognomy and astrology, became part of the curriculum. A general knowledge of the discipline broadly defined was assumed as a context for narrower discussions of physiognomy, because certain correspondences existed among all natural things. It was thus that the humors corresponded to the four elements of the sublunary world, which in turn corresponded to the four ages of man as well as to the twelve zodiacal figures divided into four groups of three. These twelve zodiacal figures were each associated with one of the twelve gods and goddesses of the ancient world, and so the correspondences continued.[191]

The delay in the inclusion of natural philosophy and serious interest in astrology for arts education relates to the acceptance of the discipline itself. For astrology had only recently been acknowledged as part of natural philosophy. As recently as 1547, the mathematician and astrologer Girolamo Cardano (1501-76) found it necessary to argue for its acceptance in his *Libelli*, which included the *Aphorismorum astrologicorum segmenta septem*.[192] In his impassioned plea, Cardano also wished to elevate and classify astrology as an art (not a science) and compared its revival in the Renaissance to that of medicine in Galen's time.[193] The classification by astrologer is informative of the perceived difference in the roles of astrology and astronomy at the time. Elaborated on by Ashmole in his *Theatrum Chemicum Britannicum*, the two distinct disciplines are described as such:

> In the operative part of this Science [i.e., alchemy] the Rules of *Astronomie* and *Astrologie* (as elsewhere I have said) are to be consulted with [...] So that Elections, (whose Calculatory part belongs to *Astronomie*, but the Judiciary to *Astrologie*) are very necessary to begin this work with.[194]

Therefore we find the idea expressed, which had slowly emerged at the outset of the preceding century, that viewed the purpose of astronomy to be calculative in nature, while astrology would then judge and interpret these findings. Nevertheless, the two disciplines still worked hand in hand to increase mankind's understanding of the universe and their relationship to it.[195] The interpretation can be seen to be evidenced in the publications of Gallucci himself, for while he is primarily remembered for his work in astronomy and astronomical instrumentation, Gallucci helped edit publications on astrology. In the most pertinent example for this study, he edited and published a series of pseudo-Galenic pamphlets on astrological medicine in 1584 with texts by Johann Virdung von Hassfurt, Hermes Trismegistus, as well as Ficino's *De triplici vita*.[196] The edition demonstrated the applicability of astrological explication to medicine and astronomy.

However, the text that made Gallucci a preeminent astronomer throughout Europe was his *Theatrum mundi et temporis*, published in Venice in 1588 (reprinted in 1589). The publication came in the wake of an increased interest in celestial mapping in the second half of the century, spurred on by the papacy (especially that of Pius IV and Gregory XIII).[197] In the same manner, the highly influential treatment was dedicated to Sixtus V, and was reprinted numerous times and even translated into Spanish. Divided into six parts, the text is dedicated to the description and mapping of the entire celestial and terrestrial worlds.[198] As the first modern celestial atlas, the maps use a coordinate and trapezoidal system of projection that allow for the accurate determination of the star positions, which are derived from the Copernicum catalog. However, in this and earlier publications, such as *Coeli et terrae* (1586), Gallucci also consulted the celestial models of Ficino.[199]

The *Theatrum* is illustrated with forty-eight maps of the Ptolemaic constellations with correspon-

ding mythological figures (FIG. 11). The personification of constellations anthropomorphizes the universe, much as in Vitruvian cosmology. The attempt is made, as such, to categorize and relate the heavens and earth through the microcosm-macrocosm pair. Moreover, the very title of Gallucci's work reveals its relationship to other mapping systems that were common around the same time. There were several publications throughout the sixteenth and seventeenth centuries that used *Theatrum* as an encompassing description.[200] Of the most famous and influential of those discussed by Frances Yates was Giulio Camillo's (ca.1480-1544), which was developed in Venice.[201] In his *Idea del Theatro*, which was lost after his death, Camillo sought to encapsulate «a complete treatment of its theme».[202] The notion of a "theatre" was widespread in many diverse treatments from calligraphy to women's fashion, and came to denote an extensive treatment of any given subject. From astrological treatments, Yates also noted that the *Utriusque Cosmi Historia* by Fludd represented Shakespeare's *Theatrum Mundi*.[203] The same can be said of Gallucci's *Theatrum mundi et temporis*, whereby the "theatre" seeks to encapsulate all of the «world and time».[204] However, the Venetian system developed by Camillo was not merely an exhaustive treatment. The theatre itself was merely a «mnemotechnic tool» originally intended to provide orators with well-ordered material for their thought.[205] A system of «places and images» had been arranged, «sufficient for the location and management of all human concepts and of all things in this world, not only those which belong to the various fields of knowledge, but also to the noble arts and the mechanical».[206] Through the careful classification of all knowledge, an ideal ordering of all possible topics, the human mind itself could be made a perfect reflection of the macrocosm.

The interest in universal mapping, illustrated in Camillo's system, was well-known in Venetian academic circles around mid-century. In 1560 Federico Badoer, founder of the Venetian Academy, sent a letter to the Procurators of St. Mark's concerning the 'Programme of Universal Knowledge'. In the letter, the academy sought the sole rights in publishing in Venice and wished to be put in charge of the library that it might impress visiting dignitaries. The quest for a "universal knowledge" was further elucidated as Badoer continued

> In short, the whole nobility, and anyone else of whatsoever condition, who comes to listen to the matters under discussion in the Academy everyday, both morning and evening, will obtain two precious and delicious forms of nourishment. One of these is the taste of true virtue, the left hand of God on earth and the empress of the world, served by the twenty queens who are the sciences and faculties. What I mean to say is that not only will everything which the whole of mankind needs to know for necessity, profit, contentment and self-enhancement become attainable, but, as I can readily affirm, everything concerning all the virtues will be attained easily by listening to the discussions and their resolutions.[207]

The same interest can certainly be related to Gallucci in his academic endeavors at the Academy, as well as his publications that sought to encompass *theatrum omnia*. Also, the benefit of the organization to the upper-class that Badoer claims, the «nobility in particular will receive [...] instruction» relates to Gallucci's own professional obligations later in his life as he tutored young nobles.[208]

Dürerian Affiliation: *Della Simmetria* and Venetian Politics

Though the basis for connecting astrology and human proportions in mapping the cosmos extended to other publications that sought to capture all the information on a given topic and organize it, the connection to Venice was, arguably, carefully considered by the translator. While Dürer had an ambivalent relationship with Venice and its artists, the city had represented his conduit to the Italian Renaissance, and ideas proliferated through the printing center established there.[209] Moreover, the connections that the artist had with the city were exploited by Gallucci, who

reintroduced the ideas of Dürer while consciously underscoring the artist's ties with the Germanic courts. This intent on the part of the author is made clear through the dedication to Maximilian III, Archduke of Austria, or as he prefers to profess, «to the holy majesty of Maximilian the elected King of Poland».[210] Although the importance of Maximilian III can be understated by modern historians (as he did not, in fact, attain the title of King of Poland), his position as the Archduke of Austria, as well as a contender to the Polish crown, ensured that he was not merely a figure head. In addition to his own political importance, given the proximity of Austria to Venice, he was also influential through his brother Rudolf II, who ruled as the Holy Roman Emperor throughout Gallucci's most prolific period.[211]

In currying favor with the neighbors to the north, Gallucci translated one of the most famous German publications into Italian and upheld the importance and ideas of its original author. The connection of the dedicatee of the *Della simmetria* dedicatee to Dürer's greatest patron later in his career, the Holy Roman Emperor Maximilian I, would have been intentional on the part of Gallucci and would also not have gone unnoticed by his intended audience. As he notes in his *Vita di Alberto Durero*, Dürer was sought after by many kings and princes, «and in particular, by Maximilian»[212] While in Nuremberg in 1512, Maximilian I (FIG. 9) enlisted Dürer into his service, and the artist continued to work mainly for the emperor until 1519.[213] The connection between Venice and the ruling Habsburg line goes beyond Dürer working for Maximilian I. Maximilian II, in fact, had an important influence on Venice and was in turn effected by it. He had negotiated peace with the Turks in 1567. The eastern power was a continued threat to Venetian trading in the Mediterranean.[214] Throughout much of the sixteenth century the Austrian Habsburgs were at war with the Turks, while all of Italy, as well, was armed against the increasing threat to religion and trade.[215] Moreover the connection between the two political powers was further evinced through art and artists. Just as Dürer had traveled to Venice and worked there, from 1557 onward the Venetian Jacopo da Strada (1515-1588) stayed at the court of Maximilian II and acted as an art consultant and courtier.[216] In as much as can be inferred, there was a maintained Venetian presence and interest in the Germanic courts throughout the cinquecento, clarifying the dedication by Gallucci and conscious connection with Dürer.[217]

As such, Gallucci's translation of the *Proportionslehre* of Dürer deliberately attempted to connect with the intellectual and political interests of the original author. Through an association with one of the greatest patrons of the artist, Maximilian I, the astronomer demonstrated that his association with Dürer was political, as well as theoretical. In doing so the *Della simmetria* is a testament to the applicability of astrology to the arts and arts to astrology. The astronomer's interest in mapping the universe through Vitruvian cosmology naturally lent its mnemonic tool to the theory of human proportion. In turn the anthropromorphization of astronomical phenomena

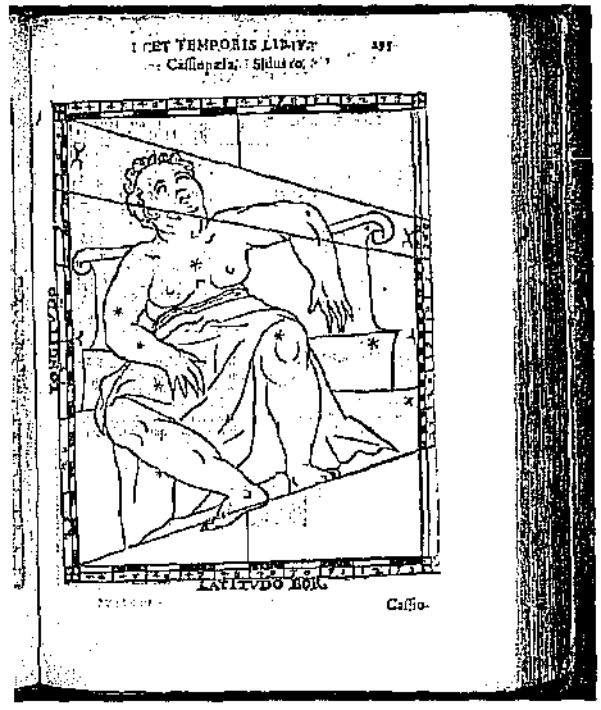

FIG. 11 G. P. Gallucci, *Cassiopea*, 1588. Woodcut from *Theatrum mundi et temporis*, Venice 1588, p. 293r. Washington, Library of Congress

can be seen to have been influenced by Dürer's systematization and schematization of the human form, which the artist then translated to his own astrological maps.[218] Furthermore, the publications surrounding that of Gallucci's, which also utilized universal mapping systems, like Lomazzo's *Trattato* and *Idea*, demonstrate that the translation was reflective of the dominant interests of art theory late in the cinquecento. As proportion studies had evolved, we find in the work of Dürer, and illustrated in that of Gallucci, that the intent of the German artist foretold the evolution of art theory. For by the century's end beauty in human proportion theory had metamorphosed from a general "notion" in the artist's mind, and related to «harmonious arrangements», to a regularized concept that is formed and infused in matter through a specific stratagem. The emphasis on quantifying and, subsequently, qualifying mathematical interrelationships between objects, resulted in a continued effort to distill a universally valid set of harmonious relationships in the parts of human anatomy. The resultant canon of proportions that derived from study of Vitruvius was coupled with the incorpo- real conditions of universal Forms. In the tradition of Neoplatonism, developed Ficino and used by Dürer, Lomazzo and Gallucci, a system was developed whereby the intellective faculty for «universal knowledge» gave the human mind the ability to perceive, comprehend, and expectantly express all of Creation. A parallel analysis of this evolution was set forth by Robert Williams as he discussed the transition from art as a technique to an «all-comprehending form of knowledge» in itself.[219] In a similar fashion, proportion theory became a way in which to train artists to express not only the motions and emotions of figures in their works, but offered a metaphysical basis for the construction of perceived or intended visual phenomena. The epistemological model allowed the whole of the universe to be comprehended in the Microcosm of man and resultantly be reproduced in art, as man had the intellective and creative power of Nature to create imbued by God.

Notes:

Unless otherwise indicated, all translations are mine.

[1] G. P. Gallucci, *Della simmetria dei corpi humani, libri quattro*, (ed.) Domenico Nicolini, Venice 1591, Reprinted (ed.) Roberto Meietti, Venice 1594.

[2] A. Blunt, *Poussin's Notes on Painting*, Journal of the Warburg Institute, I, 1937/38, pp. 344-351. G. P. Bellori, *Le vite de'pittori, scultori e architetti moderni*, 1672, E. Borea and G. Previtali (eds.), Turin 1976, pp. 460-462.

[3] V. Carducho, *Dialogos de la Pintura. Su defensa, origen, esencia, definición, modos y diferencias*, F. Ca.vo Serraller (ed.), Madrid 1979, pp. 396-404; Rossi has also suggested that copies were also in the private collections or available to several artists in the seicento. M. Rossi, *Un metodo per le passioni negli Scritti d'arte del tardo Cinquecento* in *Il volto e gli affetti: fisiognomica ed espressione nelle arti del Rinascimento: atti del convegno di studi, Torino 28-29 novembre 2001*, Firenze 2003, pp.83-84.

[4] G. Bartrum (ed.), *Albrecht Dürer and his Legacy: the graphic work of a Renaissance artist*, Princeton 2002, p. 240; E. Castelnuovo, *Dürer scrittore e scienziato* in K. Fiore (ed.), *Dürer e l'Italia*, Milano 2007, pp. 98.

[5] Blunt deduced that the sources for the 'Observations' were quite varied and included poetic, literary and art theory such as: Tasso's *Discorsi del poema eroico* (1594), Agostino Mascardi's *Dell'arte historica* (1636), Paolo Aresi's *L'Arte di predicar bene* (1611), Ludovico Castelvetro's commentary on Aristotle's *Poetics* (1570), and Giovanni Paolo Gallucci's *Della simmetria dei corpi humani libri quattro* (1591). Blunt, *cit.* (a nota 2), pp. 344-351.

[6] *Ibidem*.

[7] *Ibidem*, p.347.

[8] A. Colantuono, *Poussin's* Osservazioni Sopra la Pittura*: Notes or Aphorisms?*, Studi Secenteschi 16, 2000, pp. 285-311.

[9] «*Non siamo, evidentemente, in presenza del libro che Dürer avrebbe potuto aggiungere, ma piuttosto di un'interpretazione estrema, radicale, ispirata alla furia fantasonomica contemporanea che cerca e rilancia precedenti di forte sintonia*». Rossi, *cit.* (a nota 3), p.99.

[10] Rossi, *cit.* (a nota 3), pp. 83-84; P. Doorly, *Dürer's Melencholia I: Plato's Abandoned Search for the Beautiful*, The Art Bulletin, 86, 2004, 2, pp. 255-277.

[11] K. Barzman, *Perception, Knowledge, and the Theory of* Disegno *in Sixteenth-Century Florence*, in L. Feinberg (ed.), *From Studio to Studiolo: Florentine drafts*

manship under the first Medici grand dukes, Seattle 1992, p. 40.

[12] C. Camilli, *Imprese illustri di diversi*, Francesco Ziletti (ed.), Venetia 1586, vol. 2, pp.72-74, 93-95.

[13] G. P. Gallucci, *Della fabrica et uso di diversi stromenti di astronomia et cosmografia ove si uede la somma della teorica et pratica di queste due nobilissime scienze*, Venice 1597; G. P. Gallucci, *Theatrum mundi, et temporis*, Venice 1588, second edition 1589.

[14] Gallucci, *cit.* (a nota 1).

[15] Rossi, *cit.* (a nota 3), pp.83-102.

[16] E. Panofsky, *Idea: a concept in art theory*, Columbia 1968, pp. 53-55; W. Tatarkiewicz, *The Great Theory of Beauty and Its Decline*, The Journal of Aesthetics and Criticism, 31, 1972, 2, pp. 168-170.

[17] Alberti dedicates Book II of his *De Pictura* (1435) to the problem of symmetry and harmony in *istoria*, focusing on the relationship of members. L. Alberti, *On Painting*, J. Spencer trans., New Haven and London 1966, Book 2, pp. 70-79.

[18] «*la proporzionalità solamente fa pulchritudine*». L. Ghiberti, *I Commentarii*, O. Morisani (ed.), Naples 1947, Book 2, p. 96.

[19] Quoted in: Panofsky, *cit.* (a nota 16), p. 54.

[20] Alberti, *cit.* (a nota 17), p. 111.

[21] Alberti used various Latin and Italian words to describe the concept: *concinnitas, consensus, conspiratio partium, consonantia, concordanza*. Cited in: Tatarkiewicz, *cit.* (a nota 16), p. 168.

[22] The terms *harmonia* and *simmetria* were connected to the theory after it was developed by the Pythagoreans. Tatarkiewicz, *cit.* (a nota 16), p. 167; See also: C. Celenza, *Piety and Pythagoras in Renaissance Florence*, The Symbolum Nesianum, Leiden 2001.

[23] Tatarkiewicz, *cit.* (a nota16), p. 169.

[24] The treatise on architecture, also known as the *Ten Books on Architecture*, was rediscovered in 1414 by the Florentine humanist Poggio Bracciolini. However, it would not be until ca.1450 that Leon Battista Alberti would finish his seminal treatise based on Vitruvius, *De re aedificatoria*.

[25] Vitruvius, *De Architettura*. Book 3, ch. 1. Quoted in: Tatarkiewicz, *cit.* (a nota 16), p. 169.

[26] Vitruvius, *The Ten Books on Architecture*, Morris Hicky Morgan trans., Cambridge 1926, pp. 73-75.

[27] *Ibidem*, p. 73.

[28] J. Koerner, *The Moment of Self-Portraiture in Renaissance Germany*, Chicago 1993, p. 189.

[29] E. Panofsky, *The History of the Theory of Human Proportions as a Reflection of the History of Styles*, in *Meaning in the Visual Arts*, New York 1955, pp. 93-99.

[30] *Ibidem*, p.94.

[31] L. Pacioli, *De Divina Proportione*, Venice 1509. While Pacioli used Leonardo's proportion studies to illustrate his text, he also published widely on mathematics in works such as *Summa de arithmetica, geometrica, proportioni et proportionalita*, Venice 1494, and *De viribus quantitatis*. G.M. Biggiogero, *Luca Pacioli e la sua 'Divina proportione'*, Rendiconti dell'Istituto lombardo di scienze e lettere, 94, 1960, pp. 3-30.

[32] C. Maccagni, *Augusto Marioni, Luca Pacioli e Leonardo*, in *Hostinato rigore: Leonardiana in memoria di Augusto Marinoni*, Milano 2000, pp. 55-60. See also: A. Pellegrino, *Sacre Scritture, Divine Proportioni e Honnêteté nell'Architecture di Philibert de L'Orme*, in *Il sacro nel Rinascimento: atti del XII convegno internazionale*, Chianciano-Pienza, 17-20 luglio 2002, pp. 181-207. For more on the *Divina Proportione* of Pacioli and its connection to Ficino see: A. van der Schoot, *De ontstelling van Pythagoras: Over de geschiedenis van de goddelijke proportie*, Kampen 1998, pp. 95-98, 113-115, 338-339.

[33] L. Justi, *Konstruierte Figuren und Köpfe unter den Werken Albrecht Dürers*, Leipzig 1902, pp. 28-35.

[34] A. Dürer, *Die Unterweisung der Messung mit Zirkel und Richtscheid*, Nuremberg 1525; A. Dürer, *Vier Bücher von menschlicher Proportion*, Nuremberg 1528.

[35] J. Białostocki, *Dürer and his Critics 1500-1971: Chapters in the History of Ideas Including a Collection of Texts*, Baden-Baden 1986, p.28.

[36] E. Giusti, *Luca Pacioli e la matematica del Rinascimento*, Firenze 1994, p. 16.

[37] K. Luber, *Albrecht Dürer and the Venetian Renaissance*, Cambridge 2005, pp. 106-107.

[38] Panofsky, *cit.* (a nota 29), p.56.

[39] Alberti and Leonardo thoughtfully considered the difficulty inherent in balancing artistic judgment with mathematics and similar disciplines. L. da Vinci, *On Painting*, Martin Kemp and Margaret Walker trans., New Haven and London 1989, pp. 200-205; L. Alberti, *On Painting and On Sculpture*, Cecil Grayson trans., London 1972, pp. 199-201; Panofsky, *cit.* (a nota 16), p. 51.

[40] A. Dürer, *Schriftlicher Nachlaß*, Hans Rupprich (ed.), Berlin 1956, vol. 2, p. 100. Quoted in: Koerner, *cit.* (a nota 28), p. 187.

[41] Bartrum (ed.), *cit.* (a nota 4), p. 172.

[42] Koerner, *cit.* (a nota 28), p. 154. For the changing nature of approach in Dürer's figures throughout his oeuvre see: L. Justi, *Konstruierte Figuren und Koepfe unter den Werken Albrecht Dürers*, Leipzig 1902.

[43] Bartrum (ed.), *cit.* (a nota 4), p. 172.

[44] Dürer, *cit.* (a nota 34), Books 1-2.

[45] Dürer, *cit.* (a nota 34), Book 3.

[46] «*Dan zw gleicher weis, wÿ sÿ dy schönsten gestalt eines menschen haben zw gemessen frem abgot Abblo, also wollen wÿr dy selb mos prawchen zw Crÿsto dem herren, der schönste aller welt ist*». Dürer, *cit.* (a nota 40), vol. 2, p. 104.

[47] J. Pelikan, *The Christian Tradition: A History of the Development of Doctrine*, vol. 2, *The Spirit of Eastern Christendom (600-1700)*, Chicago 1974, pp. 75-90.
[48] Koerner, *cit.* (a nota 28), p. 188.
[49] Dürer, *cit.* (a nota 40), vol. 3, p. 272. Quoted in: Koerner, *cit.* (a nota 28), p. 195.
[50] «*Vnder dem haüffen aller menschen begriffen*». Dürer, *cit.* (a nota 40), vol. 3, p. 272.
[51] Koerner, *cit.* (a nota 28), pp. 155-156.
[52] Dürer, *cit.* (a nota 40), vol. 2, p. 101. Quoted in: Koerner, *cit.* (a nota 28), p. 156.
[53] Doorly, *cit.* (a nota 10), p. 261.
[54] «*Es lebt awch kein mensch awff erden der beschlislich sprechen möcht, wy dy aller schönest gestalt des menschen möcht sein. Nymantz weis daz dan gott allein. Dy schön zw vrteilen, dofan ist zw rat schlagen. Nach geschichlikeit mus man sy j nein jdich ding pryngen. Dan wir sehen jn etlichen dingen ein ding vür schön an, jn eim anderen wer es nit schön. Schön vnd schooner is uns nit leicht zw erkennen. Dan es ist woll müglich das zwey underschildiche bild gemacht warden, keins dem anderen gemes, dircker und düner; das wir nit woll vrteillen künen, welches schooner sey. Dy schönheit, was das ist, daz weis ich nit, wy woll sy vill dingen anhangt. Wöll wir sy jn unser wreck pringen, so kumt uns das gar schwer an*» Dürer, *cit.* (a nota 40), vol. 2, p. 120.
[55] Doorly, *cit.* (a nota 10), p. 261.
[56] Dürer, *cit.* (a nota 40), vol. 2, p. 100. Quoted in: Koerner, *cit.* (a nota 28), p. 156.
[57] Leonardo, *cit.* (a nota 39), pp. 200-205; Alberti, *cit.* (a nota 39), pp. 199-201; Panofsky, *cit.* (a nota 16), p. 51.
[58] M. Ficino, *Commentary on Plato's Symposium on Love*, Sears Jayne trans., Dallas 1985, p. 88.
[59] Dürer, *cit.* (a nota 40), vol. 3, p. 294. Quoted in: Koerner, *cit.* (a nota 28), p. 142.
[60] Ficino, *cit.* (A nota58), p.88.
[61] As Plotinus notes: «For he who contemplates physical beauty must not lose himself therein, but he must recognize that it is an image and a vestige and a shadow, and he must flee to that of which it is a likeness». Plotinus, *Ennead*, Stephen Mackenna trans., London 1917, p. 68.
[62] Ficino, *cit.* (a nota 58), p. 93.
[63] *Ibidem*, pp. 93-94.
[64] Alberti, *cit.* (a nota 17), p. 111; Ficino, *cit.* (a nota 58), p. 93.
[65] «*Pulchritudo in corporibus est expressior ideae similitudo*», Ficino, *Opera*, Book 2, p. 210. Quoted in: Panofsky, *cit.* (a nota 16), p. 53.
[66] Doorly, *cit.* (a nota 10), pp. 255-277.
[67] D. Hemsoll, *Beauty as an aesthetic and artistic ideal in late fifteenth-century Florence*, in F. Ames-Lewis and M. Rogers (eds.), *Concepts of Beauty in Renaissance Art*, Vermont 1998, p. 67.
[68] M. Ficino, *Three Books on Life*, C. Kaske and J. Clark trans., The Renaissance Society of America, Binghamton, New York 1989, p. 377; Bartrum contradicts Doorly's belief in her catalog entry on *Melencholia I* by asserting that Dürer's interpretation likely stems from Florentine Neo-Platonic thought, expressed in Ficino's *De triplici vita*, Florence 1489. Bartrum (ed.), *cit.* (a nota 4), p. 188. Wojciech Bałus further connected the iconography of Dürer's engravings to Ficino's writings. Bałus pointed to Ficino's description of melancholy and the humors in volume I of his *De triplici vita*, in *De studiosorum sanitate tuenda, sive eorum, qui literis operam navant, bona valetudine conservanda*. W. Bałus, '*Melancolia I': Melancholy and the Undecidable*, Artibus et Historiae, 15, 1994, 30, pp. 9-21; esp. p. 18.
[69] Bartrum (ed.), *cit.* (a nota 4), p. 188.
[70] N. Wilson, *From Byzantium to Italy: Greek Studies in the Italian Renaissance*, London 1992, p. 93; M. Ficino, *Divus Plato*, Florence 1484; Plato, *Omnia Platonis Opera (Hopanta tat ou Platonos)*, Venice 1513; Doorly, *cit.* (a nota 10), p. 257; Günter Grass has also noted that the artist had been made familiar with Ficino's principle work, *De vita triplici*, during his travels in Italy. G. Grass, *Variations on Albrecht Dürer's Engraving* 'Melencholia I', in G. Bartrum (ed.), *Albrecht Dürer and his Legacy: The Graphic Work of a Renaissance Artist*, p. 65.
[71] Dürer, *cit.* (a nota 40), vol. 1, p. 221.
[72] Doorly, *cit.* (a nota 10), p. 260; Pacioli, *cit.* (a nota 31). M. Emmer has demonstrated the intimate knowledge Dürer had with Pacioli's treatise. M. Emmer, *Art and Mathematics: The Platonic Solids*, Leonardo, 15, 1982, 4, pp. 277-282.
[73] Plato, *Timaeus*, Benjamin Jowett trans., New York 1985, pp. 87a-92c.
[74] M. Davis, *Beyond the 'Primo Libro' of Vincenzo Danti's 'Trattato delle perfette proporzioni'*, Mitteilungen des kunsthistorischen Instituts in Florenz, 26, 1982, 1, pp. 63-84, esp. p. 68.
[75] A. Condivi, *The Life of Michelangelo*, A. Wohl trans., Pennsylvania 1999, pp. 98-99.
[76] V. Danti, *Primo libro del Trattato delle perfette proporzioni*, Perugia 1830, pp. 44, 52.
[77] P. Barocchi (ed.), *Scritti d'arte del cinquecento*, Milan 1971, vol. 2, p. 1824. Quoted in: D. Summers, *Michelangelo and the Language of Art*, Princeton 1981, pp. 370-71.
[78] G. Vasari, *La vita di Michelangelo nelle radiazioni del 1550 e del 1568*, P. Barocchi (ed.), Milan-Naples 1962, vol. 1, p. 117. Quoted in: Summers, *cit.* (a nota 77), p. 371.
[79] Condivi, *cit.* (a nota 75), pp. 98-99.
[80] Leonardo, *cit.* (a nota 39), pp. 117-143.
[81] Pacioli, *cit.* (a nota 31); Dürer, *cit.* (a nota 34).
[82] Condivi, *cit.* (a nota 75), pp. 98-99.
[83] «*Le misure* [...] *è cosa necessaria à sapere; ma con-*

siderar si dee, che non sempre fa luogo l'osseruarle. Conciosiacosa che spesso si facciamo figure in atto di chinarsi, d'alzarsi, e di volgersi, nelle cui attitudini hora si distndono ed hora si raccolgono le braccie di maniera, che à voler dar gratia alle figure bisogna in qualche parte allungare ed in qualche altra parte ristringere le misure. La qual cosa non si può insegnare; ma bisogna che l'artefice con giudicio del naturale la imprenda». R. Borghini, *Il Riposo*, Florence 1584, p. 150.

[84] B. Mitrović, *Paduan Aristotelianism and Daniele Barbaro's Commentary on Vitruvius' De Architectura*, Sixteenth Century Journal, 29, 1998, 3, pp. 667-688.

[85] Alberti, *cit.* (a nota 17), p. 43.

[86] «*Ma dico bene e so, che dico il vero, che l'arte della pittura non piglia i suoi principi, nè ha necessità alcuna di ricorrere alle mattematiche Scienze, ad imparare regole e modi alcuni per l'arte sua, nè anco per poterne ragionare in speculazione; però non è di essa figliuola, ma bensì della Natura e del Disegno*». D. Heikamp (ed.), *Scritti d'Arte di Federico Zuccaro*, Florence 1961, pp. 249-250.

[87] «*perchè oltre gli scorci e forma del corpo sempre sferico, cotali regole non servono ne convengono alle nostre operazioni*». *Ibidem*, p. 250.

[88] «*Sicchè il Durero per quella fatica, che non fu poca, credo, che egli a scherzo, a passatempo e per dar trattenimento a quelli intelletti, che stanno più su la contemplazione, che su le operazioni, ciò facesse, e per mostrare, che il Disegno e lo spirito del pittore sa e può tutto ciò, che si presuppone fare*». *Ibidem*, p. 251.

[89] «*Dirò bene, che queste regole mattematiche si devono lasciare a quelle scienze e professioni speculative della geometria, astronomia, arimmetica, e simili, che con le prove loro acquietano l'intelletto*». *Ibidem*.

[90] «*Sicchè il pittore, oltre i primi principi ed ammaestramenti avuti da' suoi predecessori, oppure dalla Natura stessa, dal giudizio stesso naturale con buona diligenza ed osservazione del bello e buono divento valent' uomo senz' altro ajuto o bisogno della mattematica*». *Ibidem*, p. 250.

[91] «*Ma conviene, disse egli, che tu ti facci sì familiari queste regole e misure nell' operare, che tu abbi nelli occhi il compasso e la squadra: e il giudizio e la pratica nelle mani*». *Ibidem*.

[92] «*Ma noi altri professori del Disegno non abbiamo bisogno d'altre regole, che quelle, che la Natura stessa ne dà, per quella imitare*». *Ibidem*, p. 251.

[93] G. Armenini, *On the True Precepts of the Art of Painting*, R. Baldick trans., New York 1977.

[94] Danti, *cit.* (a nota 76), Preface, Ch. 16.

[95] G. P. Lomazzo, *Trattato della pittura*, Milano 1584, Book 1, Chs. 5-8; Book 4, Ch. 3. Rossi, *cit.* (a nota 3), pp. 97-98.

[96] Alberti, *cit.* (a nota 17), p. 43.

[97] Of those available in the sixteenth century: L. Pacioli, *De Divina Proportione* (1509); V. Danti, *Il primo trattato delle perfette proporzioni* (1567); J. Valverde, *Historia de la composicion del cuerpo humano* (1556) (1560 Italian); A. Vesalius, *De humani corporis fabrica libri septum* (1543).

[98] Concerned with individual aesthetic judgment, Dürer had questioned the usefulness of his studies: «In the rigid postures in which they are drawn up on the foregoing pages», he says of his numerous, elaborate paradigms, «the figures are of no use whatever». E. Panofsky, *Dürers Kunsttheorie*, Berlin 1915, pp. 81 ff.

[99] J. Koerner, *Albrecht Dürer: A Sixteenth-Century* 'Influenza', in G. Bartrum (ed.), *Albrecht Dürer and his Legacy*, p. 22.

[100] G. Mancini, *Considerazioni sulla pittura*, L. Salerno (ed.), Rome 1956, Book 1, p. 105. Quoted in: P. Sohm, *The Artist Grows Old: The Aging of Art and Artists in Italy 1500-1800*, New Haven 2007, p. 137.

[101] G. Vasari, *Le vite de' più eccellenti pittori scultori e architettori nelle redazioni del 1550 e 1568*, P. Barocchi (ed.), Firenze 1966, vol. 2, p. 31.

[102] Sohm has pointed out that there was a spike in publications in the 1560s, and then later in the 1580s and 1590s. Sohm, *cit.* (a nota 100), p. 140.

[103] *Ibidem*.

[104] «*come tanti Volcani vanno zoticando e come orbi vanno e tentoni e per sodisfare all'ignorante volgo riempiono di più colori che nel caos originario*». Gallucci, *cit.* (a nota 1), Preface, p. 7r.

[105] «*Et questa sono le misure universali, che si usano da i moderni pittori, le quali dicono essi, havere comprobate, si col natuale, si con le statue antiche più scelte. Veddino non dime no come le misure del nostro Durero, sono più esquistite, & più certe, che queste misurando quelle ciascheduna particella, quantunque piccola, & queste solo i membri pricipali, oltre acciò dando quelle misure ad ogni sorte di corpi, che si possa ritrovare fra gli huomini, & queste solo a quelli che costano di nove, & diece teste. Non rincresca dunque alli studiosi l'affatiscarsi nelle misure del Durero, come più certe, & in questi discorsi, c'hanno forza di spiegare le nature de gli huomini, accioche imitado bene la natura come deono, ne portino quel frutto, che menitano le loro fatiche*». Gallucci, *cit.* (a nota 1), Book 5, Ch. 57, p. 144v.

[106] K. Barzman, *The Florentine Accademia del Disegno: Liberal Education and the Renaissance Artist*, in A.W.A. Boschloo (ed.), *Academies of Art between Renaissance and Romanticism*, SDU Uitgeverij 1989, p. 14.

[107] Vasari, *cit.* (a nota 101), vol. 1, pp. 168-69.

[108] Barzman, *cit.* (a nota 106), p. 15.

[109] C. Westfall, *Painting and the Liberal Arts: Alberti's View*, Journal of the History of Ideas, 1967, pp. 487-506.

[110] G. Bottari and S. Ticozzi, *Raccolta di lettere sulla pit-*

tura, scultura ed architettura scritte da' più celebri personaggi dei secoli XV, XVI, e XVII, Milan 1822, vol. 6, p. 83.

[111] Hence the Academy's teachings were modeled on the universities, where one would read and comment on authoritative texts, such as Euclid and Vitruvius. Barzman, *cit.* (a nota 106), p. 15.

[112] Dürer, *cit.* (a nota 34).

[113] Alberti, *cit.* (a nota1 7), Book 3, Ch. 55-60.

[114] Biblioteca Nazionale Centrale di Firenze, magi. II, I, 399, Ch. 2 «*Dell'ordini, governo, e ufficiali dell'Accademia*». Quoted in: Barzman, *cit.* (a nota 11), p. 41.

[115] Although dissections were held only annually in the hospital of S. Maria Nuova, the corpse was probably viewed for longer than the medical professionals would have advised in order to have the maximum number of students view it. Barzman, *cit.* (a nota 11), p. 20.

[116] *Ibidem*, p. 41.

[117] Rossi, *cit.* (a nota 3), pp. 740-43; The interest that Gallucci had in physiognomy and the expression of the passions has also been related to Tasso in: *Da Dürer a Tasso: proporzioni, fisiognomica e passioni per la retorica figurativa di Giovan Paolo Gallucci*, in *Torquato Tasso e le arti*, atti del convegno di studi promosso nel Cinquantesimo di fondazione del Centro di studi tassiani, 1950-2000, Bergamo, 30 settembre 2000, Bergamo, Centro di studi tassiani, 2002, pp. 25-66.

[118] See especially Chapter 3 of Lomazzo's *Trattato, Delle passioni dell'animo e loro origine e differenza*, and *Dell'amicizia et inimicizia de i moti e loro accoppiamenti* in Chapter 18. Lomazzo, *cit.* (a nota 95), pp. 103, 153; Rossi, *cit.* (a nota 3), p. 101.

[119] Barzman, *cit.* (a nota 11), p. 47; Baldinucci noted that the treatise covered these topics in his *Notizie*. F. Baldinucci, *Notizie de' Professori del disegno*, 1681, Florence 1974, vol. 3, p. 71.

[120] Ciardi discusses Allori's text and recommendations for artists in: R. Ciardi, *Le regole del disegno di Alessandro Allori e la nascita del dilettantismo pittorico*, Storia dell'arte, 12, 1971, p. 277, n. 38.

[121] For a discussion of Benedetto Varchi's reuse of Aristotle see: P. Barocchi (ed.), *Trattati d'arte del Cinquecento*, Bari 1960, vol. 1, p. 7; «*Questo disegno ha bisogno, quando cava l'invenzione d'una qualche cosa dal guidizio, che la mano sia mediante lo studio et essercizio di molti anni spedita et atta a disegniare et esprimere bene qualunche cosa ha la natura creato, con penna, con stile, con carbone, con matita o con altra cosa*» Vasari, *cit.* (a nota 101), vol. 1, pp. 111-114.

[122] Vasari's definition of *disegno* seems to be a paraphrase of the *Metaphysics*, for as Aristotle states: «*[A]rt arises, when from many notions gained by experience one universal judgment about similar objects is produced*». Aristotle, *Metaphysics*, Book 1, sec. 1, II, p. 981a, 5-7.

[123] Barzman, *cit.* (a nota 11), pp. 42-43.

[124] The stages of cognition and perception have been discussed in: D. Modrak, *Aristotle: the power of perception*, Chicago 1987, pp. 113-132.

[125] «*Quantunque, nel principio di questo libro habbiamo ditto in qual cosa consiste la bellezza de i corpi humani con l'auttorita di Aristot. & de i Poeti in questo luogo, nondimeno habbiamo determinato di parlare della bellezza de i corpi humani, secondo la dottrina di Platone spiegata da Marsilio Ficino sopra il convivo dell'istesso, & insieme narrare, quale siano quelle misure, che i moderni pittori usano, si perche il nostro libro sia concluso nella bellezza, la quale deono servire i pittori havere per scopo nelle loro tavole, si perche li studiosi non habbiamo da ricercr altrove queste misure, che volgarmente si usano. Hora i pittori ascoltino il Ficino, chea cosi dice*». Gallucci, *cit.* (a nota 1), Book 5, Ch. 57, pp. 143v-143r.

[126] «*Che cosa è finalmente la bellezza del corpo? Una certa vivacita di attione, & una certa gratia, che risplende nella istessa cosa bella per l'influsso della sua idea. Questo fulgore non descende in quello, fin che la materia non sia preparata più, che sia possibile, ora questa preparatione del corpo, che vive consiste in tre cose, nell'ordine, nel modo, & nella specie, l'ordine significa l'intervalli delle parti, il modo la quantita, la specie le linee, & i colori*». *Ibidem*, Book 5, Ch. 57, p. 143r.

[127] Ficino, *cit.* (a nota 58), p. 93.

[128] «*Percioche bisogna, che tuti i membri del corpo habbiano il suo sito naturale: La specie poi metiamo noi in una soave concordia di lumi, di ombre, di linee, non nella materia. Da tutte queste cose è manifesto, che la bellezza in tutto lontana dalla materia del corpo, non mai communichi se stessa al corpo, se non sara disposta con queste preparationi incorporte, le quali ho io raccontato*». Gallucci, *cit.* (a nota 1), Book 5, Ch. 57, p. 143r.

[129] E. Holt (ed.), *A Documentary History of Art*, Princeton 1982, vol. 2, p. 74.

[130] «*Finalmente la bellezza del corpo non è altro, che un certo atto, vivacità e grazia, che in lui risplende per lo influsso della sua idea, il quale non discende nella material se ella non è attissimamente preparata. E tal preparazione del corpo vivente in tre cose si compisce, che sono ordine, modo e spezie. L'ordine significa le differenze delle parti, il modo la quantità, e la specie i lineamenti ed i colori* [...]. *Queste tre cose benchè nella material siano. Niente di meno parte alcuna del corpo essere non possono, [siccome afferma il Ficino sopra il Convivio di Platone], dicendo che l'ordine dei membri non è membro alcuno, perchè l'ordine è in tutti i membri, e nessuno membro in tutti i membri si ritrova* [...]. *E per questa ragione si prova la bellezza essere dalla material corporale tanto discosta, che non si comincia da essa material, se non è disposta con queste tre preparazioni*

dette incorporali». G. P. Lomazzo, *Idea del Tempio della Pittura*, Milan 1590, Ch. 26, pp. 83-84.

[131] «*E prima abbiamo da sapere, che la bellezza non è altro che una certa grazia vivace e spiritale, la qual per il raggio divino prima s'infonde negl'Angeli, in cui si vedono le figure di qualunque sfera, che si chiamano in loro esemplari ed idée; poi passa negli animi, ove le figure si chiamano ragioni e notizie, e finalmente nella material, ove si dicono immagini e forme*» *Ibidem*.

[132] Rossi, *cit.* (a nota 3), p. 87.

[133] «*La Pittura, come opera divina per li occhi, che in noi rapresentano quei divini lumi, che per natura immortali sono, come per fenestre dell'animo nostro, mentre elli sta rinchiuso in questa prigione, penetra sì nelle più secrete parti, che lo fa e dolersi e rallegrarsi, e desiderare, e temere secondo le diversitadi delle cose, che per li buoni pittori li vegono con colori e line rapresentate*». *Alle Sacra Maestà di Massimiliano eletto Re di Polonia, etc.* [...], Gallucci, *cit.* (a nota 1), Dedication, p. 2r.

[134] «*E di quì è, ch'egli non risguarda questa bellezza, che in lui di continuo risplende, infino che il corpo non è già cresciuto, e la ragione svegliata, con la quale considera quella, che agli occhi della macchina del mondo riluce e in essa soggiorna*». Lomazzo, *cit.* (a nota 130), Ch. 26, pp. 83-84.

[135] Koerner, *cit.* (a nota 28), p. 161.

[136] Plotinus, *cit.* (a nota 61), Book 6, Ch. 7, p .22.

[137] M. Ficino, *Commentarium Marsilii Ficini Florentini in Convivium Platonis de Amore* in *Opera Omnia*, Basle 1576, Book 5, Ch. 3; Lomazzo, *cit.* (a notav130), Ch. 26, pp. 83-84.

[138] A. Nifo, *Augustini Niphi medicis libri duo: De Pulchro primus; De Amore secundus*, Lugundi 1549, p. 34.

[139] B. Varchi, *Libro della beltà e grazia*, in *Opere di Benedetto Varchi*, Trieste 1858, vol. 2, pp. 733-755.

[140] Varchi, *cit.* (a nota 139), vol. 1, p. 679. Quoted in: Mitrović, *cit.* (a nota 84), p. 673.

[141] Daniele Barbaro's 1556 Commentary on Vitruvius (second edition 1567) is divided into sixteen 'Commentaries': these cover pneumatology, epistemology, and cognitive powers of the soul, scientific methodology, dialectics and the problem of universals. D. Barbaro, *I dieci libri dell'architettura tradotti et commentati*, 1ª ed., Venice 1556.

[142] *Ibidem*, pp. 34, 97.

[143] Barbaro, *cit.* (a nota 141), p. 162. Quoted in: Mitrović, *cit.* (a nota 84), p. 674.

[144] Barbaro, *cit.* (a nota 141), p. 33.

[145] «*Ma prima abbiamo da sapere che il fondamento di tutto, cioè delle parti principali e dei suoi generi, sopra il quale ogni cosa come sopra saldissima base si riposa, e donde deriva tutta la bellezza, è quello che i Greci chiamano euritmia e noi nominiamo disegno*». Lomazzo, *cit.* (a nota 130), pp. 43-44.

[146] «*l'euritmia, la quale per entrare per tutte le parti dell'arte dee ridursi ad una sola proportiamente, come cosa che tutte le parti riguarda, non dee mostrarsi fastidiosa, né troppa in abbondanza, ma con tal misura che quella parte dell'opera che ha da mirarsi paia al riguardante fatta senza fatica o stento*». *Ibidem*, p. 146.

[147] «*in tutti i corpi fa risplendere il disegno, over euritmia*». Ibidem, p. 66.

[148] «*Nella quale si mostra la similitudine c'ha la pittura con la poesia*» Gallucci, *cit.* (a nota 1), Preface, p. 6r.

[149] «*Percioche non solo ha dato i precetti dei corpi bene proportionate; ma gli ha dato regole, & insignato i precetti, & ritrovato proportione nei corpi in tutto sproportionati. Percioche sapeva egli molto bene, che dovendo il Pittore (come habbiamo ditto disopra) spiegare in Pittura ogni sorte di gente, & formare ogni idea di naturali inclinationi, le quali tutte hanno corpi diversi, & che proportionatamente corn'spandavo alla sua natura, li fù bisogno formar ancora diversi precetti, che dessero il modo di variare tutti i corpi, & parti sue, come ricercasse il bisogno della persona, che volessimo rappresentare in tal modo però, che quantunque deviasa alquànto alcuno corper da quella vera proportione, che si ritrova ne i perfetti corpi, nò si allontanassero però tanto, che in tutto perdessero l'humana forma, & facessero cosa intutto mostruosa, e ridicolosa*». *Ibidem*, Preface, p. 7r.

[150] *Ibidem*, *Vita di Alberto Durero*, p. 5v.

[151] Panofsky, *cit.* (a nota 16), p. 123.

[152] *Ibidem*.

[153] «*Die gross Kunst der Molerei ist vor viel hundert Johren bei den mächtigen Künigen in grosser Achtbarkeit gewesen, dann sie machten die fürtrefflichen Künstner reich, hieltens wirdig, dann sie achteten solche Sinnreichigkeit ein gelichformig Geschopf noch Gott. Dan nein gutter Maler ist inwendig voller Figur, und obs müglich wär, das ser ewiglich lebte, so hätt era us den inneren Ideen, dovan Plato schreibt, allweg etwas Neus durch die Werk auszugiessen*». Dürer, *cit.* (a nota 40), vol. 2, p. 113.

[154] Lomazzo, *cit.* (a nota 130), pp. 4-5.

[155] B. McGinn, *The Mystical Thought of Meister Eckhart*, New York 2001.

[156] Ficino, *cit.* (a nota 58), p. 89.

[157] «*Però cominciando da questo capo, dichiarerò, che cosa io intenda per questo nome Disegno interno, e seguendo la commune intelligenza così appresso de'dotti come del volgo, dirò, che per Disegno interno intend il concetto format nella mente nostra per poter conoscere qualsivolia cosa, ed operar di fuori conforme alla cosa intesa*» Heikamp (ed.), *cit.* (a nota 86), p. 152.

[158] «*Questo Dissegno interno humano si chiama* [....] *Scintilla della Divinità, cioè parte della sustanza Divina*». *Ibidem*, p. 162.

[159] «*Et questa sono le misure universali, che si usano da i moderni pittori*» Gallucci, *cit.* (a nota 1), Book 5, Ch. 57, p. 144v.

[160] «*ad ogni sorte di corpi, che si possa ritrovare fra gli huomini*» *Ibidem*.

[161] Panofsky, *cit.* (a nota 29), p. 89.

[162] *Ibidem*, pp. 89-90.

[163] «*rappresentino questo divino animale*» Gallucci, *cit.* (a nota 1), Preface, p. 7v.

[164] «*E meritamente certo. Perciache, ch'altro è l'huomo, che un compendio delle cose visibili, & invisibili? Ciò conobbero quei sapient Greci, che lo chiamarono Microcosmo, ciò è minore mondo, perche in lui siano tutte quelle cose, che sono in tutto questo universe: nello scrivere la qual cosa ci sono stancate le penne di molti scrittori si profane, si anco ecclesiastici. Perciache quanto più dicevano Bellezza degna d'imperio, per essere questi corpi belli, talche si può conchiudere, che essendo l'officio del Pittore imitare tutte le cose naturali, & principalmente l'huomo*». *Ibidem*.

[165] *Ibidem*, p. 7r.

[166] «*ad ogni sorte di corpi, che si possa ritrovare fra gli huomini*». *Ibidem*, p. 144r.

[167] W. Burkert, *Weisheit und Wissenschaft: Studien zu Pythagoras, Philolaos und Platon*, E. Minar, Jr. trans. as *Lore and Science in Ancient Pythagoreanism*, Cambridge 1972, p. 51; F. Conford, *Plato's Cosmology*, New York 1957, pp.54, 171; A. Wayman, *The Human Body as Microcosm in India, Greek Cosmology and Sixteenth-Century Europe*, History of Religions, 22, 1982, 2, p. 188.

[168] Wayman, *cit.* (a nota 167), p. 187.

[169] See also: W. Strauss, *The Human Figure by Albrecht Dürer: The Complete Dresden Sketchbook*, New York 1972.

[170] A. Wolf, *Jacopo de' Barbari's Apollo and Dürer's Early Male Proportion Figures*, The Art Bulletin, 25, 1943, 4, pp. 363-365. See also: J. Coombs, *The Truth and Falsity of Modal Proportions in Renaissance Nominalism*, Ph.D. Dissertation, Austin 1990; Panofsky, *cit.* (a nota 29), pp. 99-100.

[171] Panofsky, *cit.* (a nota 29), p. 88.

[172] Ficino, *cit.* (a nota 58), p. 93.

[173] *Ibidem*, pp. 93-94.

[174] D. Hahn, *The Origins of Stoic Cosmology*, Columbus 1977, p. 138.

[175] See: A. Debus, *The Chemical Philosophy: Paracelsian Science and Medicine*, New York 1977; W. Pagel, *Paracelsus: An Introduction to Philosophical Medicine in the Era of the Renaissance*, Basel 1958.

[176] Hippocrates, *Places in Man*, E. Craik (ed.), New York 1998, pp. 3-4.

[177] Ficino, *cit.* (a nota 58), p. 94.

[178] Wayman, *cit.* (a nota 167), p. 174.

[179] Conford, *cit.* (a nota 167), p. 38; See also: R. Onians, *The Origins of European Thought about the Body, the Mind, the Soul, the World, Time and Fate*, Cambridge 1954

[180] E. Ashmole, *Theatrum Chemicum Britannicum*, A.G Debus (ed.), New York 1967, facsimile of London 1652, p. 446. W. Newman and A. Grafton, *Secrets of Nature: astrology and alchemy in early modern Europe*, Cambridge, 2001, p. 16.

[181] Lomazzo, *cit.* (a nota 130), Ch. 26, pp. 83-86. The seven pillars of Lomazzo's 'temple of painting' correspond to seven artists (Michelangelo, Gaudenzio Ferrari and Polidoro, Leonardo, Raphael, Mantegna, and Titian) and are related to the seven planets where they derive their celestial influences; Ficino, *cit.* (a nota 68), pp. 293-297.

[182] «*Ma venendo alla temperature dei corpi ella si cava dalla qualità, per le quail tutti i corpi nostril vegono ad essere tra se dissimili, trasferendosi l'una al'altra più e meno*». Lomazzo, *cit.* (a nota 130), Ch. 26, p. 85.

[183] «*Ma non possono però essere se non quattro principali maniera di dissimiglianza secondo il numero degli elementi e la forza delle loro qualità, che i mathematici affermano essere come fondamenti di tutte le forme over maniera dei corpi umani*». *Ibidem*.

[184] Ibid, pp.85-86.

[185] Wayman, *cit.* (a nota 167), p. 173.

[186] A. Grafton, *Cardano's Cosmos: the worlds and works of a Renaissance astrologer*, Cambridge 1999, p. 184.

[187] Ficino, *cit.* (a nota 68), p. 297.

[188] Wayman, *cit.* (a nota 167), p. 185.

[189] *Ibidem*, pp. 179-180.

[190] Barzman, *cit.* (a nota 106), p. 23.

[191] Of the last two specific parts of the curriculum, notably the study of inanimate forms and the teaching of architectural principles, Barzman found little record listing specifics. *Ibidem*, pp. 23-25.

[192] G. Cardano, *Peroratio, Opera*, V, pp.90-92; G. Ernst, *Veritatis amor dulcissimus*, in W. Newman and A. Grafton (eds.), *Secrets of Nature*, 45-46.

[193] A. Grafton and N. Siraisi, *Between the Election and My Hopes*, in W. Newman and A. Grafton (eds.), *Secrets of Nature*, 105-106.

[194] Ashmole, *cit.* (a nota 180), p. 450. Quoted in: Newman and Grafton, *cit.* (a nota 180), p. 16.

[195] Newman and Grafton, *cit.* (a nota 180), p. 9.

[196] The volume itself concluded with brief booklets and astrological indexes by Gallucci, *De Cognoscendis, et Medendis Morbis Ex Corporum Coelestium Positione Libri IIII*, in G. Ernst, *Giovanni Paolo Gallucci*, in *Dizionario Biografico Italiani*, LI, Roma 1998, pp. 740-741.

[197] This is especially evident in the creation of the *Galleria delle carte geografiche* in the Vatican and in the *Sala dei brevi*. J. Hess, *On Some Celestial Maps and Globes of the Sixteenth Century*, Journal of the Warburg and Courtauld Institutes, 30, 1967, pp. 406-409.

[198] Rossi, *cit.* (a nota 3), pp. 84-85.

[199] Ernst, *cit.* (a nota 196), p. 741.
[200] Aside from Elias Ashmole's *Theatrum Chemicum Britannicum* of 1652, Father Charles Scribani wrote his *Amphitheatrum Honoris* in 1605. Newman and Grafton, *cit.* (a nota 180), pp. 15-16.
[201] F. Yates, *The Art of Memory*, Chicago 1966, pp. 160-172.
[202] R. Bernheimer, *Theatrum Mundi*, The Art Bulletin, 38, 1956, 4, p. 226.
[203] Yates, *cit.* (a nota 201), pp. 321-41.
[204] Gallucci, *cit.* (a nota 13).
[205] In the Renaissance the «memorative art», which was founded by Cicero and Quintilian in antiquity, allowed the extension of man's natural power of recall by a discipline extending its scope. Bernheimer, *cit.* (a nota 202), p. 226.
[206] G. Camillo, *Trattato del'imitatione*, in *Opere*, Venice 1581. Quoted in: Bernheimer, *cit.* (a nota 202), p. 229.
[207] D. Chambers and B. Pullan (eds.), *Venice: A Documentary History 1450-1630*, Cambridge 1992, p. 366.
[208] Rossi, *cit.* (a nota 3), p. 84.
[209] In a letter that Dürer sent to Pirckheimer in 1506, he wrote: «*Amongst the Italians I have many good friends who warn me not to eat and drink with their painters. Many of them are my enemies and they copy my work in the churches and wherever they can find it, and then they revile it and say that the style is not 'antique' and so not good*». Chambers and Pullan (eds.), *cit.* (a nota 207), p. 437.
[210] *Alle Sacra Maestà di Massimiliano eletto Re di Polonia, etc.*, Gallucci, *cit.* (a nota 1), p. 2r.
[211] P. Fichter, *Emperor Maximilian II*, New Haven 2001, p. 202.
[212] «*Egli s'acquistò il favore, & liberalità de i Rè, & Prencipi, & in particolare, di Massimilano*» Gallucci, *cit.* (a nota 1), *Vita di Alberto Durero*, p. 4r.
[213] Dürer produced two portraits of the Emperor around 1519, as well. For more on the artistic projects of Maximilian I and Dürer see: Koerner, *cit.* (a nota 28), pp. 227-230.
[214] Fichter, *cit.* (a nota 211), pp. 76, 98.
[215] Fichter, *cit.* (a nota 211), p. 124; M. Hughes, *Early Modern Germany, 1477-1806*, Philadelphia 1992, pp. 64-65.
[216] E. Scheicher, *Die Kunst- und Wunder Kammer der Habsburger*, Vienna 1979, pp. 137-140; D. Jansen, *The Instruments of Patronage: Jacopo Strada at the Court of Maximilian II, A Case Study*, in Edelmayer and Kohler (eds.), *Maximilian II*, pp. 182-202. Maximilian also brought to his court Arcimboldo and Bartholomäus Spranger. For more on Habsburg patronage see: K. MacHardy, *War, Religion and Court Patronage in Habsburg Austria*, New York 2003.
[217] This was continued by his son Rudolf II, who was a significant patron of the arts as well. Hughes, *cit.* (a nota 215), p. 65.
[218] In 1515 Dürer published his forty-eight wood engravings of the classical constellations. Roberta J.M. Olson, *...And They Saw Stars: Renaissance Representations of Comets and Pretelescopic Astronomy*, Art Journal, 44, 3, Art and Science: Part II, Physical Sciences, Autumn, 1984, p. 220; Gallucci also connected the work produced by Dürer for Maximilian to astronomy: «*Vi sono gli Encomi di Massimiliano, & l'immortali opera dell'historia Astronomica*». Gallucci, *cit.* (a nota 1), *Vita di Alberto Durero*, p. 4r.
[219] R. Williams, *Art, Theory, and Culture in Sixteenth-Century Italy: From Techne to Metatechne*, Cambridge 1997, p. 22.

COMPENDIO

Accurata e penetrante analisi del trattato *Della simmetria dei corpi humani* di Giovan Paolo Gallucci, un testo edito nel 1591 dove si pubblicano per la prima volta in traduzione italiana i quattro libri delle *Proportionslehre* di Albrecht Dürer. L'autore mostra quanto Dürer si sia allontanato dal pensiero neoplatonico per avvicinarsi alla metafisica ficiniana: filosofia, quest'ultima, più attuale e dominante nella cultura italiana del Rinascimento. Lo stesso Gallucci accosta la teorizzazione delle proporzioni del corpo umano alla complessa visione astrologica e cosmologica dell'uomo e del mondo, propria del Ficino.