

## Sun-Symbolism and Cosmology in Michelangelo's Last Judgment

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A cosmological interpretation of Michelangelo's Last Judgment proposes new sources for the circular design of the fresco around a central Apollonian Sun-Christ. These are dependent upon the common ground shared between the Catholic Reformation revival of the traditional Christian analogy between the Deity and the Sun, the Neoplatonic cult of Sun-symbolism, literary sources in Dante, and the actual scientific theory of heliocentricity as developed by Copernicus. A new biblical source for the fresco is suggested that lends weight to the central theme of the hypothesis.

*IN THE MIDST OF ALL assuredly dwells the Sun. For in this most beautiful temple who would place this luminary in any other or better position from which he can illuminate the whole at once? Indeed, some rightly call Him the Light of the World, others, the Mind or the ruler of the Universe: Trismegistus names him the visible God, Sophocles' Electra calls him the all-seeing. So indeed the Sun remains, as if in his kingly dominion, governing the family of Heavenly bodies which circles around him.*

Nicholas Copernicus, *De Revolutionibus*<sup>1</sup>

LINES WHICH COULD BE CONSTRUED AS DESCRIPTIVE OF MICHELANGELO'S Last Judgment were in fact written by Nicholas Copernicus in his revolutionary heliocentric cosmology, published in 1543 (see fig. 1). The idea that Michelangelo's equally revolutionary design for the traditional scheme of the Last Judgment in the Sistine Chapel<sup>2</sup> (fig. 2) was an expression of Copernican theories of heliocentricity was considered by De Tolnay as early as 1940.<sup>3</sup> Subsequently, De Tolnay expanded his hypothesis of the depiction of Christ

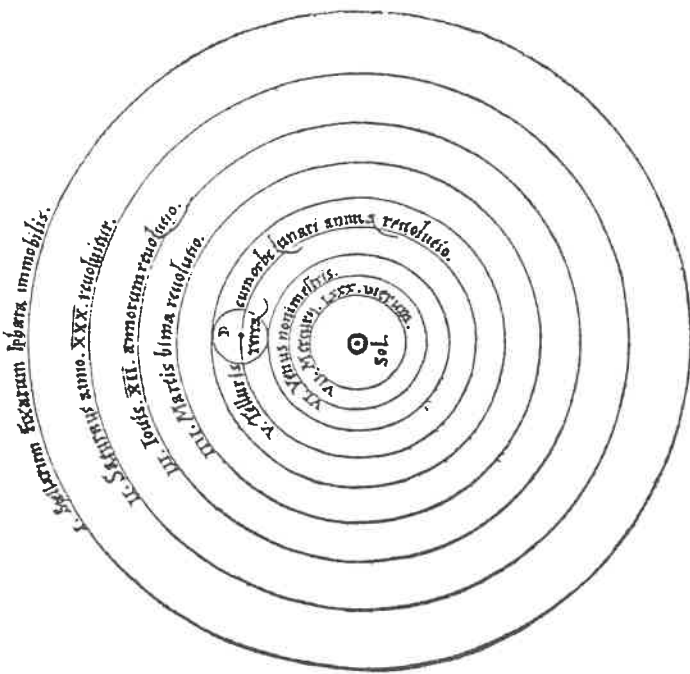
<sup>1</sup>Nicholas Copernicus, *De Revolutionibus Orbium Coelestium*, Nuremberg, 1543, ed. J. Dobrzycki (London: Macmillan, 1978), Book 1, chap. 10 (my translation). See fig. 1 which includes the Latin text.

<sup>2</sup>Although the painting of the fresco was not begun until 1535/36. See C. De Tolnay, *Michelangelo*, 5 vols. (Princeton: Princeton University Press, 1943-60), 5:21; the inception of the commission is usually regarded as having taken place earlier (cf. letter of Sebastiano del Piombo, July 17, 1533 and Agnello's report, March 2, 1534, *ibid.*, 19). Details were almost certainly discussed during the meeting of Michelangelo and Pope Clement VII at San Miniato al Tedesco on September 22, 1533. See *ibid.*, and Linda Murray, *Michelangelo, His Life, Work and Times* (London: Thames & Hudson, 1984), 157. The work was finished and unveiled on All Saints' Eve, October 31, 1541.

<sup>3</sup>C. De Tolnay, "Le Jugement Dernier de Michel Ange. Essai d'interprétation," *Art Quarterly* 3 (1940): 125-46, esp. 144. At this stage, De Tolnay detected a "curious correspondence" between Michelangelo's vision of the universe and that of Copernicus, but he foresaw the comparison as problematic.

NICOLAUS COPERNICUS

net, in quo terram cum orbe lunari tanquam epicyclo contineri diximus. Quinto loco Venus nono mente reducitur. Sextum denique locum Mercurius tenet, octuaginta dierum spacio circū currens. In medio uero omnium residet Sol. Quis enim in hoc



pulcherrimo templo lampadem hanc in alio uel meliori loco ponere, quam unde totum simul possit illuminare. Siquidem non inepte quidam lucernam mundi, alij mentem, alij rectorem uocant. Trimegistus uisibilem Deum, Sophoclis Electra intuentē omnia. Ita profecto tanquam in solio regali Sol residens circum agentem gubernat Astrorum familiam. Tellus quoque minime fraudatur lunari ministerio, sed ut Aristoteles de animalibus ait, maximā Luna cū terra cognationē habet. Concipit interea à Sole terra, & impregnatur annuo partu. Inuenimus igitur sub hac

Fig. 1. Copernicus, *De Revolutionibus Orbium Coelestium*, Book I, chapter 10, in its printed form, Harvard College Library. Reproduced by permission of the Houghton Library, Harvard University.

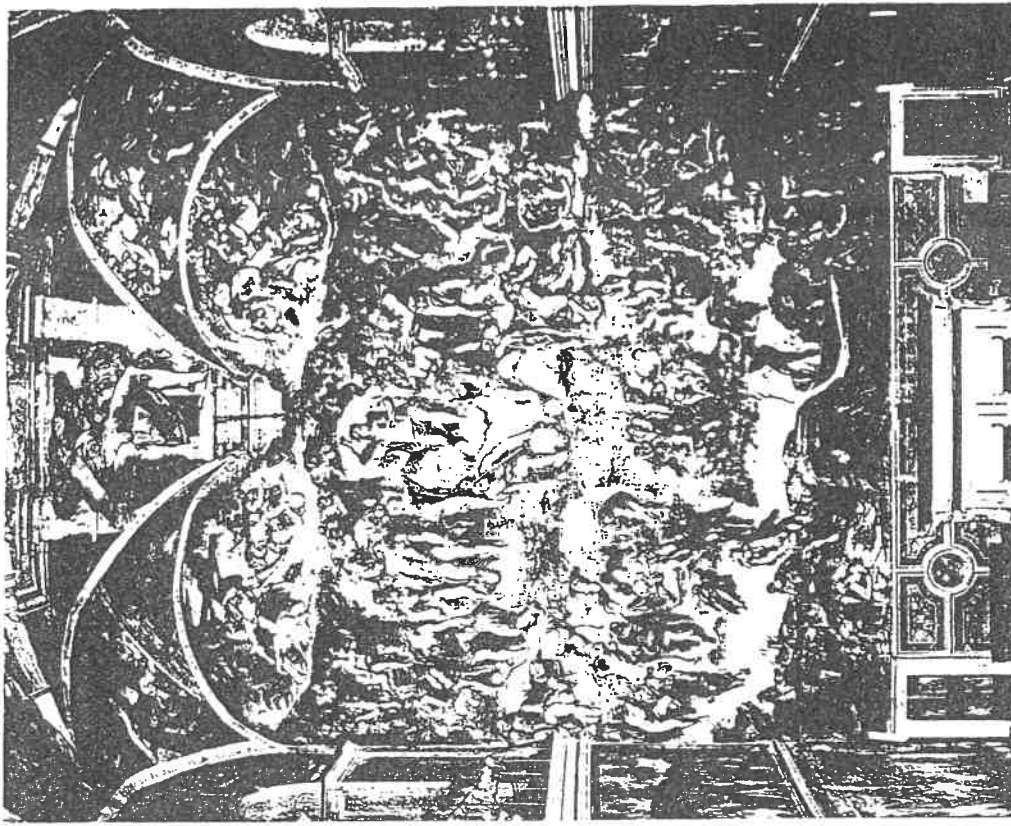


Fig. 2. Michelangelo, *The Last Judgment* (1533-41), Sistine Chapel, Vatican. Photo: Monumenti Musei e Gallerie Pontificie, Città del Vaticano. Reproduced by permission.

as Sun-symbol but dismissed any direct Copernican influence on the grounds that the date of publication of Copernicus's theory post-dated the creation and final unveiling of the Last Judgment. In Volume 5 of his definitive work on Michelangelo, he wrote:

By means of the central place which Michelangelo reserved in his composition for the Sun (Christ-Apollo) whose magic power determines the unity and the movement of his macrocosmos, the artist came, of himself, to a vision of the universe which, surprisingly, corresponds to that of his contemporary Copernicus. Yet he could not have known Copernicus' book which was published in 1543—at least seven years after Michelangelo conceived his fresco.<sup>4</sup>

De Tolnay therefore pursued the specifically Copernican argument no further but looked for sources and an explanation for the depiction of the symbolic "Sun-Christ" in ancient astral myths and legends.<sup>5</sup>

Even though any direct and concrete influence of contemporary cosmology was thus dismissed by De Tolnay, his cosmic view of Christ-Apollo centered within the circular format has continued to receive attention in the literature. Although no specific examination has been made with respect to sixteenth-century scientific and cosmological theory, De Tolnay's cosmological interpretation of the fresco seems to have influenced the majority of art historians since the 1940s. References to "the cosmic design," "the circularity and circular motion," and to the "Apollo Sun-Christ" are legion.<sup>6</sup> Only Salvini, it seems, has made any attempt to examine De Tolnay's theory in detail, and he also, like De Tolnay, dismisses the possibility of any direct Copernican link. Salvini also rejects De Tolnay's theory of Sun-symbolism in general as unconvincing on the grounds that the sources argued by De Tolnay in ancient astral myths

<sup>4</sup>De Tolnay, *Michelangelo*, 5:49. In n. 70 on p. 120, he adds that "Michelangelo's Last Judgment is a heliocentric image of the infinite macrocosmos antcipating the Copernican universe." See also C. De Tolnay, *Michelangelo: Sculptor, Painter, Architect* (Princeton: Princeton University Press, 1975), 59-60: "The artist has arrived by his own means at a vision of the universe which strangely anticipates that of his contemporary Copernicus. The idea of Michelangelo's composition precedes Copernicus's discovery by seven years." De Tolnay's suggestion that Michelangelo independently derived the same astronomical theory as Copernicus seems rather improbable.

<sup>5</sup>De Tolnay, *Michelangelo*, 5:47-49. The ancient astral myths he proposes are, he says, linked with the Tellurian and Uranian systems of astrology, derived from sources in Cicero and Lucretius. In the later volume (*Michelangelo*, 1975) 60, De Tolnay argues the rotatory movement as dependent on "the sidereal vortex of Uranus" which is an idea depicted "in primitive Bronze Age rock engravings," the Ixion myth and the Manichean wheel. He gives no further explanation or sources for these influences which he proposes.

<sup>6</sup>Major examples include: D. R. De Campos, *Michelangelo, Last Judgment* (New York: Doubleday, 1978; 1st ed. in Italian 1944), 89 (who touched on De Tolnay's theory but found the wheel of fortune more probable); Herbert von Einem, *Michelangelo*, trans. Ronald Taylor (London: Methuen, 1973; rev. tr. of German ed., 1959), 143ff.; Johannes Wilde, *Michelangelo: Six Lectures*, ed. John Shearman and Michael Hirst (Oxford: Clarendon, 1978), 159-60; Rudolf Schott, *Michelangelo* (London: Thames & Hudson, 1963), 183; F. Hartt, *Michelangelo* (New

are too complex and contrived and thus totally out of character with the artist.<sup>7</sup>

The identification and relative importance of the various biblical and literary sources Michelangelo might have used for the Last Judgment continues to be a matter of major controversy. Alternative sources will be proposed in the pages that follow, in the light of new-found evidence, in order to support the argument that a cosmological interpretation of the fresco is a valid one and that Sun-symbolism and Copernican heliocentricity could be regarded as a major overriding theme in the fresco. The sources proposed here are derived from four different areas of contemporary interest but these are at the same time very much interlinked: Neoplatonic Sun-symbolism in the tradition of Ficino; the Catholic revival in mid-century of Early Christian concepts which analogized Christ with the Sun; the Italian literary tradition, especially Dante; and finally the actual scientific theory of the heliocentric universe proposed by Copernicus who was in turn also strongly influenced by both Neoplatonism and the Catholic religion.

While De Tolnay's cosmological interpretation of Christ as Sun-symbol in the fresco does appear to have had some measure of influence, it was weakened by his references to the impossibility of Michelangelo having

York: Abrams, 1965), 50. M. Salmi, ed., *The Complete Works of Michelangelo* (New York: Reynal, 1965), see especially the chapter on painting by R. Salvini, 223-24, 234; R. Coughland, *The World of Michelangelo, 1475-1564* (New York: Time-Life, 1966), 27; Ettore Camesasca, *Michelangelo Buonarroti: The Complete Paintings* (London: Weidenfeld & Nicholson, 1969), 12-13; Howard Hibbard, *Michelangelo* (London: Allen Lane, 1975), 245-46; Leo Steinberg, "Michelangelo's Last Judgment as Merciful Heresy," *Art in America* 63 (1975): 49; M. Hall, "Michelangelo's Last Judgment: Resurrection of the Body and Predestination," *Art Bulletin* 58 (March 1976): 89; Roberto Salvini, *The Hidden Michelangelo* (London: Phaidon, 1978), 123-24; Leo Steinberg, "A Corner of the Last Judgment," *Daedalus* 109 (1980): 207; Robert S. Liebert, *Michelangelo: A Psychoanalytic Study of His Life and Images* (New Haven: Yale University Press, 1983), 352ff.; Murray, *Michelangelo: His Life, Work and Times*, 171; C. Pietrangeli, et al., *The Sistine Chapel: Michelangelo Rediscovered* (London: Muller, Blond & White, 1986), 182-83, 202-3; D. Lamarche-Vadel, *Michelangelo* (New Jersey: Chartwell, 1986), 136-37. Especially in more recent interpretations, such references are sometimes alluded to in connection with the idea of the fresco as possibly expressing heretical ideas. Steinberg, "Last Judgment as Merciful Heresy," for example, describes Christ as "centered, Sunlike, Copernican" in arguing that Michelangelo's Last Judgment is the expression of heretical ideas "behind the very throne of the Pope." Cf. De Tolnay, *Michelangelo* 5:122, n. 80, where he refers to "the heliocentrism which was rejected by the official theology of the sixteenth and seventeenth centuries." The existence of "profound allegorical meanings understood by few" in Michelangelo's fresco of the Last Judgment was acknowledged by his contemporaries, namely Aretino and Gilo. See R. J. Clements, *The Poetry of Michelangelo* (London: Owen, 1966), 30, and D. Summers, *Michelangelo and the Language of Art* (New Jersey: Princeton University Press, 1981), 9, 19.

<sup>7</sup>Salvini, "Painting," 234, and *Hidden Michelangelo*, 131-32. Salvini finds that the "ingenious suggestion" of a heliocentric theme is based on too many references to obscure myths. Salvini also finds in general that the idea of the fresco being based on light and a solar myth does not fit in with its dark pessimistic atmosphere (cf. n. 38 below). In scientific publications, such ideas are also dismissed: B. Bienkowska, ed., *The Scientific World of Copernicus* (Dordrecht: Reidel, 1973), 104, writes that "the interpretations which say that the great fresco is a pictorial vision of heliocentrism might go a bit far."

known of heliocentric cosmology, hence the idea was never fully and seriously explored. Michelangelo, however, could well have drawn on concepts of Sun-symbolism and cosmology from the Catholic religion, Neoplatonism, Dante, and even Copernicus. Nurtured on Neoplatonism and Dante and involved, at the time of the Last Judgment commission, in the Catholic revival of Early Christian themes, Michelangelo was quite definitely in a position to have heard of Copernicus's theory as will be demonstrated below.

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The links between cosmology and religion, which existed up to about the seventeenth century, are well known.<sup>8</sup> Christian art and architecture, in turn, were frequently linked to the prevailing, official view of the universe which was, of course, derived originally from scriptural sources.<sup>9</sup> Hierarchical schemes of Being, derived from the arrangement of the cosmos, were based on the notion of ascent by degrees to Heaven, together with the opposing notion of descent to Hell. The codification of these hierarchical schemes in the real and celestial worlds by Pseudo-Dionysius the Areopagite became standard treatises in both eastern and western churches.<sup>10</sup> This type of arrangement is reflected in church architecture and also in the depiction of specific iconographical schemes. The Last Judgment in particular was suited to this type of cosmological interpretation as the one scene in Christian theology where Heaven, Earth and Hell, together with their relative physical positions in the cosmos, would naturally be depicted, at one time, together. The immediate and obvious relationship between the traditional hierarchical depiction

of this scene in art and the scriptural view of the flat Earth situated below the Dome of Heaven with Hell beneath the Earth's surface can be understood easily in many Byzantine, medieval, and Renaissance depictions of the Last Judgment which are based on this formula. As an example, the analogy is demonstrated quite specifically in the earliest surviving example of the Last Judgment, in the manuscript *The Christian Topography of Cosmas Indicopleustes* of the sixth century (written ca. 536-47).<sup>11</sup> Strongly influenced by Pseudo-Dionysius, Cosmas relates the physical world directly to the spiritual and uses diagrams as an integral part of his text. His depiction of the universe (fig. 3) forms the foundation and ordering of his drawing in the same manuscript of the Last Judgment (fig. 4). The hierarchical scheme of superimposed layers, surmounted by the dome or arch of Heaven (seen in cross-section) with Christ positioned at the top, corresponds exactly to the contemporary vision of the universe based on the concept of "Heaven above, Earth in the middle, Hell beneath." The ordering and organization of the complex scene was therefore achieved by relating it to the current cosmological and hieratic framework which developed in superimposed registers, as did apparently the universe itself. In general terms, subsequent versions of the Last Judgment conform to this format with Christ situated at the top of the pictorial space. This arrangement thus acts as metaphor for the fixed hierarchy of universe and Christian Church. It formed the basis of the scene's iconography until Michelangelo, in his version, dramatically altered the arrangement and in particular with respect to Christ who assumes a position in the center of the circular composition.

Better known examples of the Last Judgment that adhere to the structured, layered format include Early Christian and Italo-Byzantine versions like S. Angelo in Formis (1075) or Torcello (early twelfth century)<sup>12</sup> which could well have been seen by Michelangelo, and reflect the hierarchical arrangement which relates to the scriptural view of the universe. A large group of French

<sup>11</sup>Cosmas Indicopleustes, *Χριστιανική Τοπογραφία*, ed. W. Wolska-Conus (Paris: De Cefis, 1968). It is probably significant that the two original surviving manuscripts of this document are in the Medicean Library in Florence (from 1495) where Michelangelo was concurrently working and in the Vatican Library at Rome (since at least 1517). For Cosmas Indicopleustes, see also D. V. Anisimov, *The Hellenistic Origins of Byzantine Art* (New Brunswick: Rutgers University Press, 1961; reprint of 1900-1 ed.), 33-34. He cites N. P. Kondakov, *Histoire de l'Art Byzantin* (Paris, 1886), 1:150.

<sup>12</sup>Other examples of this period include St. George Oberzell, tenth century (a number of manuscript versions which circulated widely issued from this center and were based on the design of the fresco in the church itself); the Palatine Chapel, Palermo, mid-twelfth century; Monreale, late twelfth century. In Greece itself, Panaghia ton Halikon, Salonika, early eleventh century, and Christ in Chora, Constantinople (ca. 1320) exemplify the standard type with separate bands arranged in hierarchical levels.

<sup>8</sup>See, for example, W. Yourgrau and A. D. Breck, *Cosmology, History and Theology* (New York: Plenum, 1977); M. Wildiers, *The Theologian and his Universe: Theology and Cosmology from the Middle Ages to the Present* (New York: Seabury, 1982); C. A. Russell, *Cross-Currents: Interactions between Science and Faith* (Leicester: Intervarsity, 1978); A. Koestler, *The Sleepwalkers: A History of Man's Changing Vision of the Universe* (Harmondsworth: Penguin, 1959), parts 1 and 2, *passim*; J. L. E. Dreyer, *A History of Astronomy from Thales to Kepler* (New York: Dover, 1953). Works which deal with the separation and consequent "war" between science and religion after about the seventeenth century include: A. D. White, *A History of the Warfare of Science with Theology in Christendom*, (New York: Dover, 1960; reprint of 1896 ed.); J. W. Draper, *Religion and Science* (London: King, 1875), and B. Russell, *Religion and Science* (Oxford: Oxford University Press, 1935).

<sup>9</sup>A case in point would be, for example, the domed churches, related to the observational view of the universe as a flat earth covered by the Dome of Heaven (see K. Lehmann, "The Dome of Heaven," in W. Kleinbauer, *Modern Perspectives in Western Art History* [New York: Holt, Reinhart & Winston, 1971]). R. Wittkower, *Architectural Principles in the Age of Humanism* (London: Tiranti, 1962) comments on the revival of the domed church and its religious symbolism in the Italian Renaissance. Traditional zonal schemes of church decoration developed from the starting point of the dome and were closely related to the symbolic, hierarchical schemes of the cosmos. See O. Demus, *Byzantine Mosaic Decoration* (London: Routledge & Kegan Paul, 1948), 16-29.

<sup>10</sup>Pseudo-Dionysius the Areopagite, *On the Celestial Hierarchy* and *On the Ecclesiastical Hierarchy* (5th century) in J. Parker, ed., *The Works of Dionysius the Areopagite* (New York: Richwood, 1976). See E. Mâle, *The Gothic Image* (London: Collins, 1961), for the influence of these works in the West.

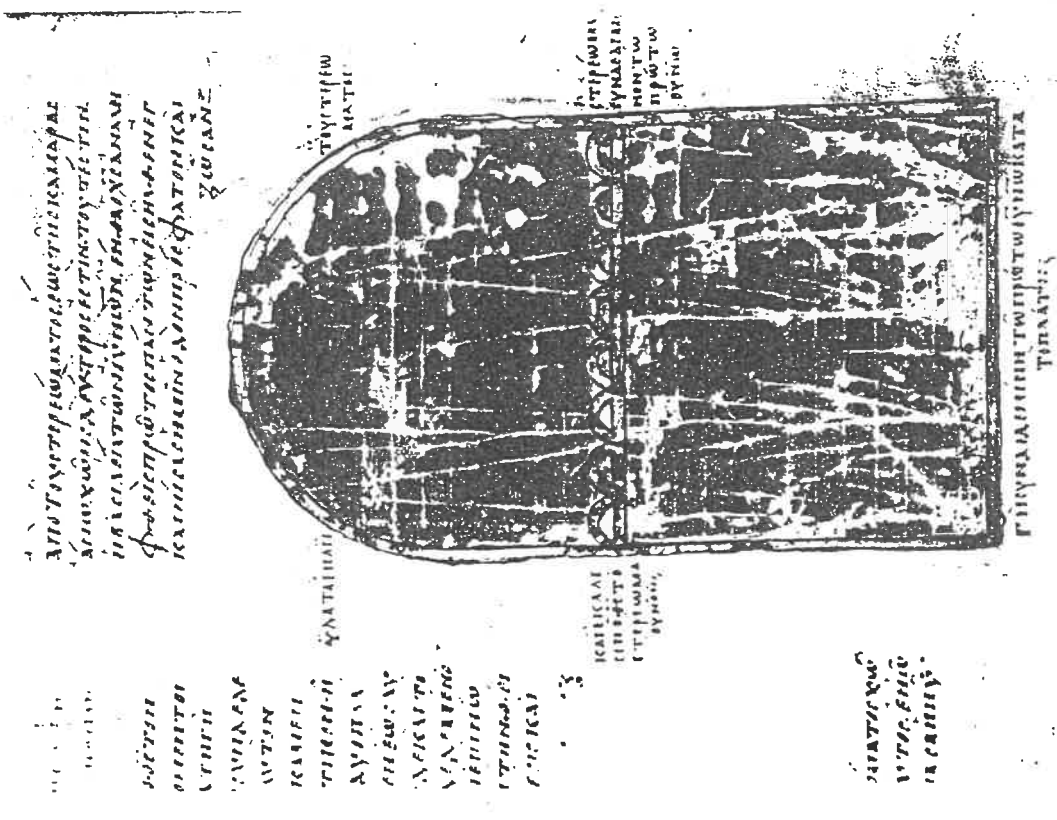


Fig. 3. Cosmas Indicopleustes, *Christian Topography* (Vat. Gr. 699), detail, cross-sectional diagram of the Universe, Vatican Library, Rome. Photo: Biblioteca Apostolica Vaticana. Reproduced by permission.

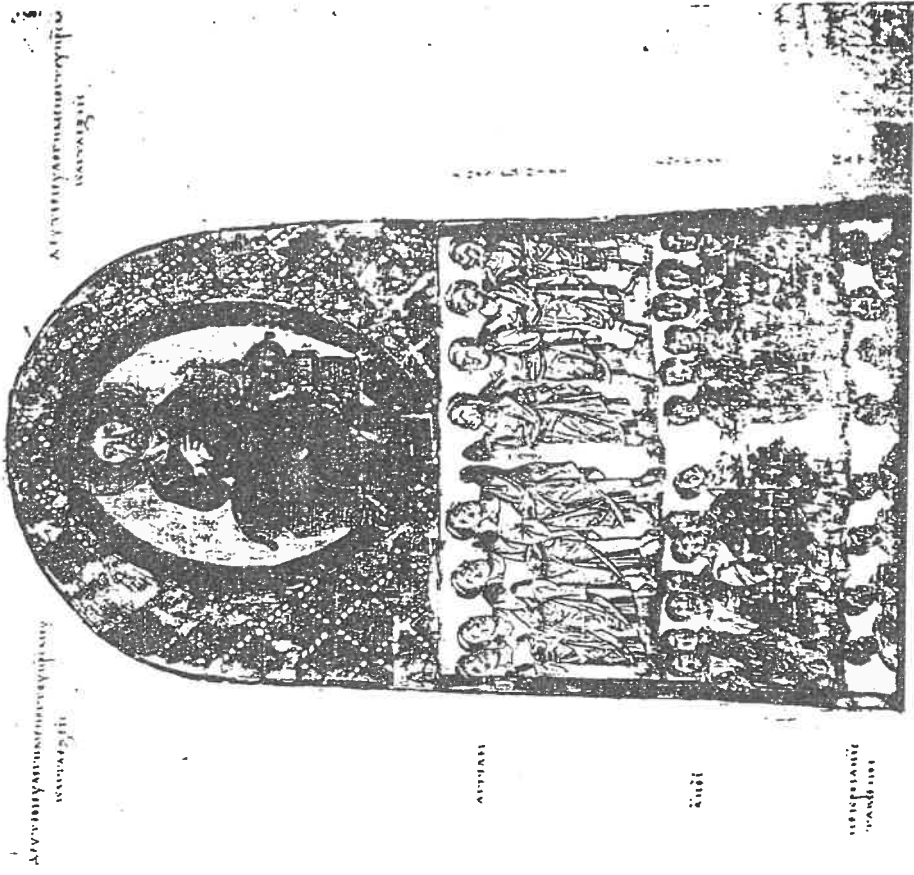


Fig. 4. Cosmas Indicopleustes, *Christian Topography* (Vat. Gr. 699), detail, Last Judgment, Vatican Library, Rome. Photo: Biblioteca Apostolica Vaticana. Reproduced by permission.

portal sculptures<sup>13</sup> and northern European examples<sup>14</sup> are also based on the layered hierarchical formula and, whilst not available to Michelangelo, do confirm the very widespread nature of the cosmological basis for Last Judgment iconography.

Renaissance examples of the Last Judgment in Italy, prior to Michelangelo's version in the Sistine Chapel, are similarly based on the same precepts. The structured, layered format with Christ positioned at the topmost point corresponds to the basic cosmological formula of the "Up" for Heaven, "Down" for Hell approach. Many of these examples would have been known to Michelangelo: in Florence the mosaics of the Baptistery, Orcagna's frescoes in the Sta. Croce, Nardo di Cione's version in Sta. Maria Novella (Strozzi Chapel) and Fra Bartolommeo's fresco in Sta. Maria Nuovo; in Pisa, the cycle in the Camposanto; and perhaps also Giotto's version in Padua, Cavallini's in Rome, and later on Signorelli's version at Orvieto.<sup>15</sup> Some of the later, Renaissance versions do vary more in emphasis and detailing and are more loosely organized than the strict, medieval or Byzantine compartmentalized format. The overall hierarchical scheme is the same, but a certain "loosening up" of the medieval iconographical formula has taken place which may be attributed to two possible factors.

First, the flat-earth view of the universe which was based on scripture and underlay the iconography of Byzantine and medieval examples of the Last Judgment had started, gradually, to give way to the view of a spherical

<sup>13</sup>For example, Autun, 1130-40; St. Denis, mid-twelfth century; Beaulieu, ca. 1130-40; and Chartres, Rheims, Bourges and Paris, Notre Dame in the thirteenth century.

<sup>14</sup>Northern examples of the fifteenth century include those by Van Eyck (ca. 1424), Lochner (1430), Rogier van der Weyden (1445-52), Petrus Christus (1455), Bouts (ca. 1470), Memlinc (1473), and Schongauer (1490). Versions by Cranach (ca. 1500), Bosch (1503-4), Provost (1525), and Lucas van Leyden (1526) date from the early sixteenth century. Again, these examples conform to the basic plan of Christ above with descending levels of saints and angels, saved and damned below. In these altarpieces, Hell is sometimes displaced to Christ's left and the different levels are not so strictly separated by bands. Christ is invariably seated on an *arc-en-ciel* (celestial arch), a motif that carries on the idea of the semicircular tympanum or Dome of Heaven.

<sup>15</sup>Italian examples with which Michelangelo could have been acquainted include the twelfth-century altarpiece in the Vatican; Florence Baptistery, attributed to Coppo di Marcovaldo (late thirteenth century; note the "arcs" of Heaven); Guido da Siena and Cimabue (late thirteenth century); Cavallini, Sta. Cecilia, Rome (ca. 1293); Giotto, Arena Chapel, Padua (ca. 1305); Francesco Traini, Campo Santo, Pisa (fourteenth century); Orcagna, fragments in Sta. Croce (fourteenth century); Nardo di Cione, Strozzi chapel, Sta. Maria Novella (mid-fourteenth century; distinct hierarchical layers relate very closely to the different levels of Hell explained and described by Dante in *Inferno*); Lorenzo Maitani, marble relief at Orvieto (1310); Fra Angelico (ca. 1425; more than one version); Fra Bartolommeo, Sta. Maria Nuova (1499-1500; now in the museum of San Marco); Signorelli, San Brizio Chapel, Orvieto Cathedral (1500; here a series of separate wall frescoes together express a Last Judgment theme, but especially with the inclusion of additional scenes like the preaching of the Anti-Christ, this series is not strictly comparable to the iconography of the Last Judgment when expressed in a single picture space). See also L. Réau, *Iconographie de l'Art Chrétien* (Paris: Presses Universitaires de France, 1957), 727-57.

earth. This view had come under discussion in the early Middle Ages,<sup>16</sup> but the idea of a spherical Earth and spherical universe received increasing attention throughout the medieval period. By the time of the early Renaissance, the concept of the spherical earth was becoming acceptable and was also reflected in contemporary art.<sup>17</sup> In the literature, too, Dante's writings, for example, quite clearly relate to a spherical Earth in a spherical universe.<sup>18</sup> This system remained problematic, however, since, when it was combined with the biblical concepts of ascent to Heaven and descent to Hell beneath the Earth's surface, the resultant spherical universe would necessarily be "haidocentric"—with Hell as the center of the concentric spheres.

The growing realization of the scientific inadequacies of the flat-earth theory and its questioning in Renaissance Italy could well have led to the "loosening up" of the cosmological structure of the Last Judgment and the slight moving away from the traditional format. Giotto's version is a case in point. His contacts with Dante are well known, suggesting probable knowledge of the spherical system. Examples also occur where the scene is spread across more than one area and hence not to be regarded as Last Judgment proper.<sup>19</sup>

A second probable cause for changes in Last Judgment iconography in Renaissance Italy was the alteration in the positioning of the Last Judgment itself. In Early Christian and Byzantine examples, the tendency had always been for the Last Judgment to be depicted on the west wall of a church; versions in French portal sculpture were usually placed on the exterior of the west portal, to face the setting Sun. With the advent of portable altarpieces, the scene's representation against the east or altar wall became more frequent. In order to avoid, it seems, the placement of Hell directly on the altar, it was often displaced from its central low position toward the viewer's right

<sup>16</sup>Koestler, *Sleepwalkers*, 94ff. The astronomer Pope, Sylvester II (999-1004) contributed to the recognition of the Earth as a sphere but the flat-earth concept obviously continued alongside as a popular concept in the minds of the masses well into the medieval period, *ibid.*, 102-3, "The Age of Double-Think." The sphericity of the Earth was finally confirmed by such phenomena as the shadow cast by the Earth on the Moon during an eclipse and the voyages of discovery and circumnavigation.

<sup>17</sup>The landscape backgrounds of Piero della Francesca's *Triumphs of Federico da Montefeltro and Battista Sforza* (ca. 1470) and Antonio del Pollaiuolo's *Martyrdom of St. Sebastian* (1475) may be cited as examples.

<sup>18</sup>Especially the *Divina Commedia*. The importance of Dante's writings for Michelangelo will be dealt with below.

<sup>19</sup>Versions by Traini, Nardo di Cione, Fra Angelico (Orvieto), and Signorelli do not adhere so closely to the layered format since they are spread over several areas. They are therefore not strictly comparable to other Italian Renaissance versions including Michelangelo's in which the iconography is expressed in a single image on one area of wall surface. However, even in these composite works, the overall hierarchical scheme where saints, angels, and Christ himself are arranged according to specific levels above the sinners and damned is maintained. The idea of arrangement of persons in ranks, according to merit, with Heaven above and Hell beneath remains basically the same.

(i.e. Christ's sinister).<sup>20</sup> It had, anyway, already become customary for the Blessed and Damned to be separated and placed respectively on Christ's dexter and sinister (according to Matt. 25:33-34), as was also common in French portal sculpture. This arrangement operates too in the case of Giotto at Padua where, in addition, an increased interest in the broader depiction of naturalistic space may also be argued as having influenced the arrangement of the figures. Modifications were also clearly made at Padua owing to the problematic architectural features: Christ is placed lower down because of the intrusive window; Hell is removed to the right of the doorway. Local architectural conditions overcome the, by now, less powerful traditional schema.<sup>21</sup>

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Some variation and "loosening up" of Last Judgment iconography had therefore taken place in central Italy since the medieval age. It would be unreasonable, of course, to attempt to trace a historically continuous identification between Last Judgment composition and contemporary cosmology and maintain it in absolute terms of precise detail, but as far as the basic up/down format is concerned, the correspondence undoubtedly exists. Some departures from the cosmological formula are evident, as stated, but these minor adjustments in accordance with the growing debate on the traditional view of the cosmos provide a plausible precedent for Michelangelo's adjustment of his iconography of the Last Judgment in accordance with the sixteenth-century debate. In general terms, the traditional formula of a layered composition, dependent on the notion of ascent to Heaven and descent to Hell, still formed the basis for major versions of the scene when treated as a single image, up to the sixteenth century.

The startling change from this well established traditional formula in Michelangelo's Last Judgment was immediately noted by his contemporaries. The hierarchical compartmentalized layers of the former tradition are overruled as Christ appears in the center of the main design with a *mêlée* of saints and angels, saved and damned, twisting and turning all around and even above him on the wall surface.<sup>22</sup> The circularity and circular movement of the

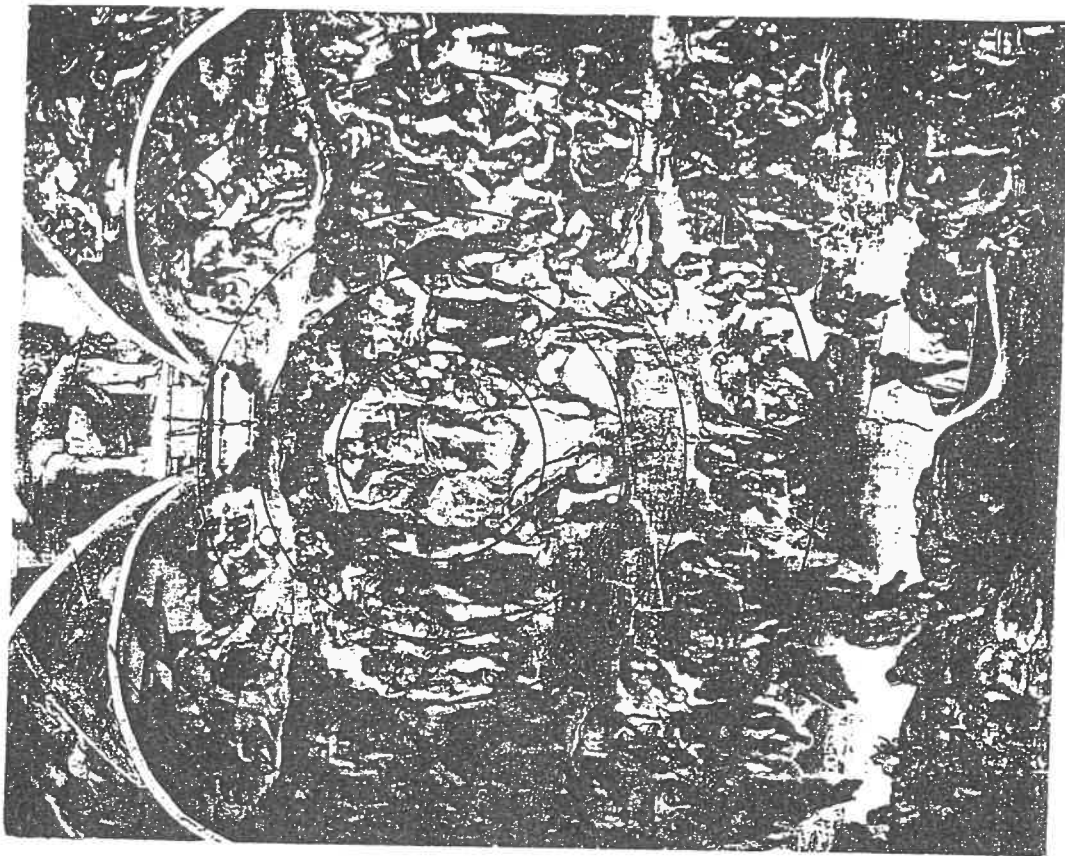


Fig. 5. Michelangelo, Last Judgment, schematic diagram (circles). Photo: Monumenti Musei e Gallerie Pontificie, Città del Vaticano. Reproduced by permission.

<sup>20</sup>The altarpiece in San Marco (1430) usually attributed to Fra Angelico is a good example of this type. Most of the northern altarpieces listed in n. 14 above also conform.

<sup>21</sup>Michelangelo's fresco poses a unique problem in this context since, owing to the reverse orientation of the Sistine Chapel, it is at the same time on the west as well as on the altar wall—an unusual position for a Last Judgment fresco. Figures are being propelled toward Hell which seems to exist "offstage" to the viewer's right but a "cave of Hell" also appears to be curiously situated over the altar itself. This problem will be dealt with in a forthcoming paper.

<sup>22</sup>Christ's position is not central on the wall itself. He is still in the upper section of the painting and also situated slightly to the viewer's left, evidently in order to counteract the implied movement of his pose, which would otherwise make him appear off-center to the

fresco's design has been commented upon by critics as early as the sixteenth century and a formal analysis also amply demonstrates this point (fig. 5).<sup>23</sup> In 1553, Condivi detected figures "in a circle or crown in the clouds of the sky around the Son of God; in 1568 Vasari described prophets and apostles "in a circle around the figure of Christ."<sup>24</sup> The cosmic dimension was also recognized early on since Aretino in 1545 wrote to Michelangelo concerning "your picture of the *universe* and Heaven and Hell."<sup>25</sup> In the twentieth century, Alois Riegl (1908) once more drew attention to the revolving circular movement of the fresco, and although other writers had perceived a spiral (Stendhal, 1828), strong diagonals (Wölfflin, 1889), an arch (Dvorak, 1918) or an ellipse (Pastor, 1901-28), after De Tolnay reemphasized the circular composition around the Sun-Christ at the center of the design in the 1940s, the majority of art historians have followed suit.<sup>26</sup>

It is true that Michelangelo does not totally abandon the "up for Heaven, down for Hell" idea in his fresco, since the Saved rise as the Damned fall; nor does Michelangelo abandon the right/left contrast of the traditional formula. There is some resemblance in general terms to the compositions at

viewer's right were he centrally placed, below the corbel of the vault. Visually, however, he is in the center of the overall composition, an arrangement which contrasts greatly with Italian examples of the preceding two centuries such as those by Nardo, Traini, Fra Angelico, Fra Bartolommeo, and Signorelli. Unlike Giotto, Michelangelo did not permit the architectural features of the wall to affect the positioning of the figures; he had the windows filled in.

<sup>23</sup>It is important to note that the idea of circularity is far more important than the exact placement of the circles in the diagram which is not so significant, and merely indicates areas where the circularity is particularly emphasized. The divisions here broadly relate to the limits of the inner and outer circles. The arms of Christ seem to generate the circularity and circular movement of the design. (The swastika formation in which the arms are arranged is, of course, a pre-Christian Sun-symbol which was subsequently adopted by the Christians.) Two distinct circles are created with areas of void in between. The subtle positioning and foreshortening of arms and legs of saints (e.g. Saint John the Baptist and Saint Peter, which are almost as if in mirror image) lead us to deduce that the circular suggestion was contrived and intentional. The grill of Saint Lawrence and the leaning pose of Saint Bartholomew complete the inner circle at the bottom. The outer circle is completed at the top, across the lunettes, by the placing of the cross and column, two traditional iconographic elements applied in a very unusual manner. It is tightly closed at the bottom by the group of trumpeting angels. Even the tops of the books they hold are arranged and sloped so as to fit in (fig. 5). This circularity around Christ including the golden aureole has not really been adequately explained. The presence of a circular halo of light, a nimbus or mandorla in previous Renaissance examples seems to be insufficient precedent for Michelangelo's unique interpretation of the overall design. The idea that the circularity of Michelangelo's design is simply derived from the mandorla or nimbus would appear seriously to underestimate the artist.

<sup>24</sup>A. Condivi, *Life of Michelangelo*, 1553, ed. H. Wohl (Oxford: Phaidon, 1976), 84-85; G. Vasari, *Lives of the Most Eminent Painters, Sculptors and Architects*, 1568, ed. G. Bull (Harmondsworth: Penguin, 1971), 380.

<sup>25</sup>R. Klein, *Italian Art, 1500-1600: Sources and Documents* (New Jersey: Prentice Hall, 1966), 124.

<sup>26</sup>Alois Riegl, *Entstehung der Barockkunst in Rom* (Vienna, 1908), cited in De Tolnay, *Michelangelo*, 5:121.

Pazza and Torcello. Yet these aspects of the design are totally incorporated into the circularity and circular motion of the composition. The Christ-centered circling movement is clearly superimposed upon, and warps into, the pattern of the familiar layers and divisions, as has been recognized. For example, following other observations by Vasari and Condivi, Wilde noted that it is possible to detect horizontal divisioning in the fresco according to the traditional manner, but he also conceded that the circular movement is more powerful and that the central position of Christ in the composition is innovative.<sup>27</sup> Steinberg returns to the idea of diagonals previously suggested by Wölfflin,<sup>28</sup> but, as we shall see, the diagonal element (see fig. 6) which also contrasts with the traditional horizontal/vertical layering, can be viewed in a linked relationship with the circularity of the composition since both of the "new" elements (circles and diagonals) would seem to have the same point of origin.

It is important to note, in addition, that not only the finished scheme for the Sistine Last Judgment but also a preliminary drawing from the outset of the commission reflects the idea that a circular design was clearly uppermost in the artist's mind even as early as 1533. The Bayonne sketch (fig. 7) dated by De Tolnay to 1533 is based on a circular format and actually has circular movement around Christ still visibly forming the basis of the composition. The intention of the artist, to base the design on a circular, not hierarchal, schema becomes absolutely clear.

In the finished fresco, in spite of some horizontal emphasis reminding us of traditional arrangements (which is used further to order the vast complex design), the circular movement around the central Christ, depicted as suggested by De Tolnay in the guise of a Sun-Apollo, is the predominant theme. It overrules traditional hierarchical layers as saints and common people swirl on the same level and even above and behind Christ. In this argument we propose however that, just as before, the ordering of the complex scene was achieved by relating it to the contemporary view of the cosmos. It was simply the current cosmological framework which had changed. The radically new composition was not imposed for its own sake or for purely pictorial reasons. The implication of this hypothesis is that the relationship between figure 1 and figure 2 is the same as the relationship between figure 3 and figure 4.

The heliocentric concept of the universe which placed a spherical Earth in a circular Sun-centered system proposed an entirely different approach to astronomy which was fundamentally to change humanity's outlook on the universe.<sup>29</sup> The resultant difficulties of placing Heaven, Earth, and Hell in

<sup>27</sup>Wilde, *Six Lectures*, 164.

<sup>28</sup>Steinberg, "Corner of Last Judgment," 107-73, and L. Steinberg, "The Line of Fate in Michelangelo's Painting," in *The Language of Images*, ed. W. J. T. Mitchell (Chicago: University of Chicago Press, 1980), 85-128.

<sup>29</sup>Koestler, *Sleepwalkers*, *passim* but esp. 219ff.; T. S. Kuhn, *The Copernican Revolution* (Cambridge: Harvard University Press, 1957), esp. chaps. 5-7.



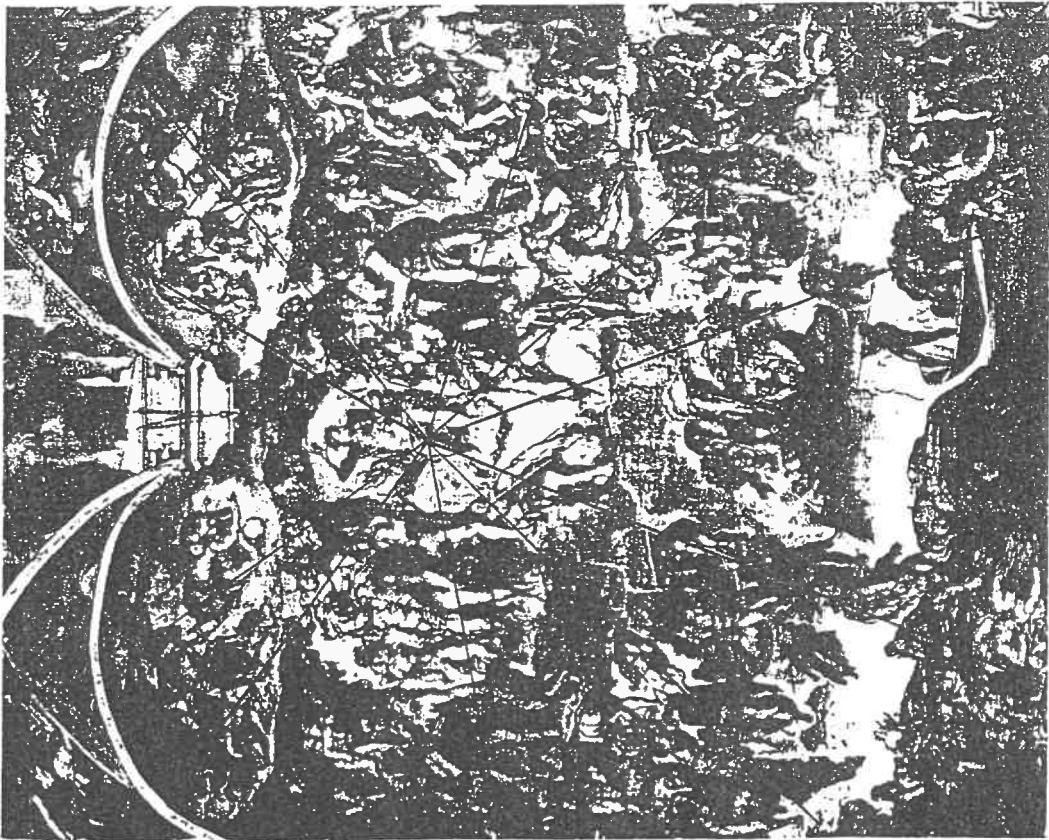


Fig. 6. Michelangelo, Last Judgment, schematic diagram (diagonal rays).  
 Photo: Monumenti Musci e Gallerie Pontificie, Città del Vaticano.  
 Reproduced by permission.



Fig. 7. Michelangelo, study for the Last Judgment, 1533, Bayonne,  
 Musée Bonnat. Photo: Arch. Phot. Paris/S.P.A.D.E.M. Reproduced by  
 permission.

their relative physical and symbolical positions, which had previously been so straightforward, was to lead to the Church's eventual condemnation of these theories, but not, it must be remembered, until 1616—very much later than the time at which Michelangelo was working on his fresco of the Last Judgment.<sup>30</sup>

In assessing sixteenth-century attitudes toward the heliocentric view, the traditional, Christian, symbolic attitude toward the Sun must be taken into account. We are not here concerned with the ancient traditions of Sun-symbolism in all its forms,<sup>31</sup> but with the specific analogy between Christ and the Sun. The concept of the Deity as a Sun-symbol is an important aspect of biblical cosmology and is expressed in both Old and New Testaments.<sup>32</sup> The theme is particularly emphasized in the Gospel of John, the so-called Gospel of Light, where light is given strong allegorical meaning.<sup>33</sup> The theme was also emphasized by Pseudo-Dionysius and Saint Augustine. The tendency to identify Christ with the Sun is given expression in Early Christian iconography, and Christ's depiction as a beardless Apollonian type of Sun god is well known. The use of this iconographic type was perhaps not dissociated from an intent to gain converts in the early days of Christianity and examples of

<sup>30</sup>Copernicus's *Revolutionibus* was not placed on the *Index of Prohibited Books* until seventy-three years after its first publication and author's death (Kuhn, *Copernican Revolution*, 192). It survived the Counter-Reformation; therefore, any attempt to equate Copernicanism with heresy in the early 1540s is unwarranted (cf. Steinberg, "Merciful Heresy," 49).

<sup>31</sup>See, for example, J. G. Frazer, *The Worship of Nature* (London: MacMillan, 1926); A. Whitrick, *Symbols, Signs and their Meaning* (London: Hill, 1960); J. B. Hannay, *Symbolism in Relation to Religion* (Washington, D.C.: Kennikat, 1971). The worship of the Sun was common to the cults of Mazdaism and Zoroaster.

<sup>32</sup>References to the Sun as a symbol for the Deity in the Old Testament occur in the Psalms which are noted for their light symbolism in general (esp. Ps. 74:16 and 84:11, "the Lord God is a sun and a shield"). More specifically, in Mal. 4:2, the coming of the Messiah on Judgment Day is described in terms of a Sun-symbol. In the New Testament, the comparison is continued in the description of Christ at the Transfiguration (Matt. 17:2). References to light symbolism are common in the New Testament but further specific references to Christ as the Sun are to be found in Revelation in the vision of the day of Judgment, at which time, significantly, the Sun analogy is emphasized (Rev. 1:16, 11:1, 21:23). The concept of Christ as *Judge* appearing like the Sun at the very moment of judgment seems highly significant for Michelangelo's interpretation.

<sup>33</sup>See especially John 1:1-10; 3:19-20; 5:35; 8:12; 9:5; 11:9; 12:35, 46, and cf. Acts 9:3; 26:23; 2 Cor. 4:6; 2 Tim. 1:10, Rev. 21:23. For this line of thought in general in Christian writings suffice it to quote from Saint Augustine: "the only begotten Son of God, who in many places in Holy Scripture is allegorically termed the sun" (Migne, *Patrologia Latina*, 36, 131-33). In addition to his emphasis on the Sun-Christ analogy, Augustine's writings are also relevant for his analysis of the perfect form of the circle, which is discussed below.

this iconography are not hard to find.<sup>34</sup> The Sun-Christ theme has recently been argued as one expressed by Michelangelo on the Sistine Chapel ceiling, according to the writings of Saint Augustine as interpreted by Egidio da Viterbo.<sup>35</sup>

An interest in the early forms of Christianity underlay the idea of restoring a primitive Christianity in the simple and sincere forms of the Early Christian church. This idea was one which was adhered to by many of the Catholic reformers of the mid-sixteenth century and the Early Christian idea of Christ as a symbol of light or, more specifically, the Sun was emphasized by these reformers, especially the group known as the Spiritual. Michelangelo's involvement with this movement and his association with reformers like cardinals Pole, Morone, and Contarini, particularly through his links with Vittoria Colonna, are well known.<sup>36</sup> Many of the ideas of this group were

<sup>34</sup>Examples in Rome, Venice, Florence, and Pisa would have been accessible to Michelangelo (including frescoes, mosaics, and sarcophagi). The Sun-Christ symbolism in Early Christian art is dealt with by M. Shapiro, *Late Antique, Early Christian and Medieval Art* (London: Chatto and Windus, 1980), 115-25, especially 117-18. Dealing mainly with Castelseprio, he draws comparisons with major Early Christian examples of the depiction of a beardless Apollo type of Sun-Christ "the conception of Christ as the true Sun replacing the pagan Solar gods. . . . Cf. also J. Seznec, *The Survival of the Pagan Gods: The Mythological Tradition and its Place in Renaissance Art* (New York: Harper, 1961); H. Rahner, *Greek Myths and Christian Mystery* (London: Burn and Oates, 1963), and C. N. Cochrane, *Christianity and Classical Culture* (Oxford: Oxford University Press, 1974). Examples of the Early Christian beardless type of Sun-Christ exist in Florence in the form of sarcophagi, in Venice in a mosaic in St. Mark's, in Rome in fresco and mosaic church decoration, including an example discovered in the Vatican grottoes in the sixteenth century noted in E. Kirschbaum, *The Tombs of St. Peter and St. Paul* (London: Secker and Warburg, 1959), 34-35, in Pisa, Milan, Ravenna, etc. While the beardless Christ was admittedly less common, the revival of this type in the Italian Renaissance was not as unusual as is often supposed (cf. Steinberg, "Merciful Heresy," 49, "not a Christ known to the faithful," and Steinberg, "Corner of Last Judgment," 208). Examples by Castagno, Resurrection, Lamentation, and Crucifixion, 1447; Bellini, Lamentation, 1440s; and Botticelli, Lamentation, 1492 for the Neoplatonist Poliziano, and Transfiguration, 1490s come to mind.

<sup>35</sup>E. G. Dotson, "An Augustinian interpretation of Michelangelo's Sistine Ceiling," pt. 1, *Art Bulletin* 61 (1980): 244-45. According to Dotson, the allegorical image of the Sun for Christ and his appearance in glory (as symbolized on the ceiling) is based on Egidio da Viterbo's Neoplatonic interpretation of Augustine. See also J. Bakusaitis, "Quelques survivances de symboles solaires dans l'Art du Moyen Age," *Gazette de Beaux Arts* 17 (1937): 75-82.

<sup>36</sup>See V. Shrimplin-Evangelidis, "Michelangelo and Nicodemism: The Florentine Pietà," *Art Bulletin* 71, no. 1 (March 1989): 58-66, which includes a summary of the literature. See also D. Fenlon, *Heresy and Obedience in Tridentine Italy* (Cambridge: Cambridge University Press, 1972); E.-M. Jung, "On the Nature of Evangelism in Sixteenth Century Italy," *Journal of the History of Ideas* 14 (1953): 511-27; Roland H. Bainton, "Vittoria Colonna and Michelangelo," *Forum* 9 (1971): 35-41. Bainton, p. 40, argues that Michelangelo's iconographic use of "wide-awake and alive" crucified Christ is part of this revival of Early Christian iconographic themes. The same principle could be applied to Michelangelo's wingless angels and haloless saints which are also more common in Early Christian and Late Antique art; see G. Schiller, *Iconography of Christian Art* (London: Lund Humphries, 1972). Michelangelo's involvement with the Catholic reformers could well have caused him to look afresh at Early Christian iconography in which examples of the beardless Apollo-type Christ are common. De Tolnay, *Michelangelo* 5:38, does

founded on the writings of Juan Valdés who, again, emphasized the theme of Christ as Sun-symbol. The Valdesians were also known as "Illuminists," and the influence of their thought concerning Christ as a symbol of light on Michelangelo should not be excluded as a possibility.<sup>37</sup> This type of emphasis on Christ as the light and the truth according to the biblical metaphor seems also to fit in well with the sort of findings which have resulted from the cleaning of the Sistine frescoes as the works are gradually restored to their original, pure, bright colors. Indeed, descriptions of "the dark, desperate atmosphere" of the Last Judgment may also prove to be inappropriate.<sup>38</sup> The Christian notions of Light and Truth, the majesty of Christ and belief and hope in salvation, rather than darkness, pessimism, and fear, appear to fit in much more succinctly with the recent revelations of the cleaning operations in the chapel, and to suggest themselves as the underlying themes of this powerful description of Christ.

The scriptural view of Christ analogized to the Sun is continued in the Italian literary tradition. Important examples are to be found in the work of

Dante and in the poetic works of Vittoria Colonna and Michelangelo himself.<sup>39</sup> Vittoria Colonna's poems are full of such references, in particular in her sonnet, *The Cross*, in which she describes Christ: "He is the sun whose brilliance blinds our eyes. . . ."<sup>40</sup> Here, the Catholic idea of Christ as the Sun-symbol is linked with the Italian literary traditions. The influence of similar themes on mid-sixteenth-century religious reformers has been noted above.

The work of Dante Alighieri, especially his *Divina Commedia*, has already been widely recognized as an influence on particular elements in Michelangelo's Last Judgment.<sup>41</sup> The theme of Christ as Sun-symbol, which is fundamental to Dante's text and which occurs so frequently, has not yet however been viewed as potential source material. In the *Divina Commedia*, God as a metaphysical concept is represented on a continuous basis by the specific symbol of the Sun or a point of light.<sup>42</sup> This analogy between the Deity and the Sun appears to be more fundamental as a source for the iconography of Michelangelo's Last Judgment than isolated references to Charon and Minos which have previously been discussed.

Light symbolism is evident in each section of Dante's great work. *Inferno* opens with the famous metaphor of being lost in a dark wood, and this symbolic comparison continues throughout the book until Dante reaches the

mention the traditional Sun-Christ analogy but clearly views the Apollo aspect of Michelangelo's Christ as a pagan and classical form rather than in the context of a revival or, or reference to, the Early Christian one.

<sup>37</sup>For Valdés' use of the Sun metaphor and the doctrine of Illuminism, see José Nieto, *Juan Valdés and the Origins of the Spanish and Italian Reformation* (Geneva: Droz, 1970), esp. 202-5 where "natural light" and "spiritual light" are discussed; 212-13 where Nieto quotes from Valdés' *Consideraciones* concerning the Christian who is like a traveller walking by night "till the sun be risen to show him the way"; 231-39 which examines Illuminism as the basis of Valdés' work; also 247 n. 170 where, again, quotations from his writings allude to God as the Sun and the Spirit of God illuminating humans like the rays of the Sun. For Illuminism, see also H. Daniel-Rops, *The Catholic Reformation* (London: Dent, 1962), 7-8, 87.

<sup>38</sup>That the Christ of the Last Judgment is actually powerful (in the image of the Pantocrator), but not angry, has been observed by Steinberg and others; see Steinberg, "Merciful Heresy," 49. The original position and gesture of blessing of Christ's left thumb which is clearly visible in detail (fig. 9) confirms this notion of blessing as much as condemnation. An atmosphere of darkness and pessimism seems not to have been the intention. Hope and belief in salvation was predominant at the time of the Reformation: it was only the criteria (works or faith) that were called under discussion. This was the particular creed of the Nicodemists who emphasized that Christ came to save mankind, not to condemn (John 3:17). The Gospel of Nicodemus has recently been argued as a source for Michelangelo's thought in the 1530s and 1540s (see above n. 36). This gospel also includes references to the Sun-symbol and light metaphor in connection with Christ and places a major emphasis on Christ's victory over Hell and Death. This confirms the notion that the theme of Michelangelo's fresco is connected with the power and authority of Christ; with hope and salvation as much as gloom and despair. See M. R. James, *The Apocryphal New Testament* (Oxford: Clarendon, 1969), 123-24. For commentary on the cleaning of the frescoes see Pietrangeli, et al., *The Sistine Chapel*, and A. Levy, "All of Michelangelo's Work will have to be Restudied," *Art News* 80 (October 1981): 114-21.

<sup>39</sup>In his poems, Michelangelo frequently indicates the symbolic power of the Sun and uses it as a metaphor for the source of life and well-being; see R. N. Linscott, ed., *Complete Poems and Selected Letters of Michelangelo*, trans. C. Gilbert (Princeton: Princeton University Press, 1980), nos. 101, 102, 206, 273, 327. Michelangelo's interest in Sun-symbolism is also attested by his examination of different Sun and Apollo themes in the "presentation" drawings (mainly for Cavalieri) of the 1530s, i.e. the Fall of Phaeton series and the Tityos drawing, as well as the David-Apollo sculpture.

<sup>40</sup>Vittoria Colonna, *Rime* CXLV:305, quoted by Bainton, "Vittoria Colonna," 38; D. J. McAuliffe, *Vittoria Colonna: Her Formative Years as a Basis for an Analysis of Her Poetry* (Ann Arbor: University Microfilms, 1978), shows how the image of the Sun is transferred from her husband to Christ in the later poems (especially 75, 76, 79, 106, 107, 114, 115).

<sup>41</sup>For particular references see De Tolnay, *Michelangelo*, 5:34-35: "Only the motifs of Charon and that of Minos seem to revert directly to Dante," he writes, although the fact that Varchi, Vasari, and Condivi had mentioned the *Divina Commedia* as a source might suggest a wider importance. The theme of Sun-symbolism which is so crucial to Dante is not discussed. Other references in Dante, to Apollo and Marsyas (*Purgatorio* I:13-21). Ganymede (*Purgatorio* IX:22-30), Tityos (*Inferno* XXXI:124), Phaeton (*Purgatorio* IV:73; *Paradiso* XVII:1f, XXXI:124-26) are also significant since they are all themes connected with the Apollo legend, which Michelangelo examined in the 1530s.

<sup>42</sup>Sun-symbolism in Dante's *Divina Commedia* is examined by H. Flanders Dunbar, *Symbolism in Medieval Thought and its Consummation in the Divine Comedy* (New York: Russell and Russell, 1961); J. A. Mazzeo, *Structure and Thought in the Paradiso* (New York: Greenwood, 1968), chap. 6, and P. Priest, *Dante's Incarnation of the Trinity* (Ravenna: Longo Editore, 1982), in the course of his discussion on the tripartite symbolism of the work. According to Priest, the rising, noonday, and setting aspects of the Sun correspond respectively to Priest, the rising, Trinity. For Dante's interest in and knowledge of astronomy, see M. A. Orr, *Dante and the Early Astronomers* (London: Kennikat, 1956); also J. G. Demaray, "Dante and the Book of the Cosmos," *Transactions of the American Philosophical Society* 77 (1987): pt. 5.

innermost area of Hell from which the light of the savior is excluded. In the second section, *Purgatorio*, the metaphor is continued as the Sun gradually breaks through. But it is in the final section, *Paradiso*, that the theme of light symbolism, together with the specific analogy between Deity and Sun is given fullest expression.<sup>43</sup>

Apart from light and Sun-symbolism itself, Dante's writings are also concerned with wider concepts of world-view and cosmology. Dante's universe is clearly spherical and as such is evidence that by the fourteenth century this view was held by the educated classes. As already mentioned, the main problem attached to this system was the haidocentric nature it attained when combined with the traditional concept of Heaven above and Hell beneath the earth's surface—as in Dante's work. Dante overcame the problem of the heavens rotating with Hell as their center by introducing a specific "point" in the empyrean around which the heavens revolved. Dante combined this important concept of the "point" with the parallel between Sun and Deity.<sup>44</sup> Dante emphasizes the way that, from this intense "point" of light identified with the godhead, movement extends to the universe in perfect, eternal, circular motion and also that the rays of grace extend from the same point down to earth.<sup>45</sup> Toward the end of the *Paradiso*, the emphasis on Sun-symbolism increases, alongside a description of the way in which the deity propels the heavens in their circular motion.<sup>46</sup> Dante's analogy, here, with a revolving wheel seems to be a more likely source for the circularity and circular motion of Michelangelo's fresco than the medieval wheel of fortune.

<sup>43</sup>See A. Mandelbaum, *The Divine Comedy of Dante Alighieri*, 3 vols (New York: Bantam, 1984), esp. *Inferno*, Canto I:1-3, 16-18; IX:28-29; *Purgatorio*, Canto I:107; II:1-9; IV:16; VII:26; XII:74; XIII:13-21; XXX:25; *Paradiso*, Canto I:1-3; II:32-36; II:80; III:1-3; V:133-39; X:40; XII:15, 51; XIX:4-6; XXI:79-80; XXIII:8, 28-29, 72, 79-80; XXIX:98, 136, 145; XXX:11, 46-54, 61-69, 80-114; XXXI:28; XXXIII:52-53, 67-68, 82-83, 100-1, 142-45. In *Paradiso*, especially the last three cantos, the references to the Sun and light symbolism in general are far too numerous to list definitively. Descriptions of the revolving, circular motion of the heavens also seem to hold relevance for Michelangelo's fresco.

<sup>44</sup>Dante himself had considered the idea that the Sun held the central position in the universe and that it was the Earth which revolved around the Sun. He knew the idea had been considered by the ancients (Plato and Philolaus) and he wrote a short dissertation on the subject in *Convivio* III, chap. 5. See Orr, *Dante and the Early Astronomers*, esp. 164.

<sup>45</sup>*Paradiso*, XXI:79-80, 136-38; XXIV:10-18, 130-32, and XXVII:106-14 refer to the concept of circular motion around the central point of God, who sets the whole in motion. The "rays" of grace extend outward: *Paradiso* XXIX:25; XXX:106; XXXI:22-25; XXXIII:52-53, 76, in the same way as "rays" appear to extend outward in Michelangelo's fresco (fig. 6).

<sup>46</sup>Botticelli's series of illustrations to Dante's *Divine Comedy* also amply reflects this theme. A central Sun-symbol is included in his diagrams of Paradise. See R. Lightbown, *Botticelli: Life and Work*, 2 vols. (London: Elek, 1978). In 2:203, figs E103, E104, E105 "Dante is shown marvelling at the vision of Christ, described in the text as the sun"—a Sun-symbol is clearly used for the Deity; the gesture employed by Botticelli in E107 bears a remarkable resemblance to that of Michelangelo's Christ in his Last Judgment fresco. (Botticelli's illustrations to Dante were associated with Landino's Neoplatonic commentary on Dante, 1481, circulated under the patronage of the Medici, 1:56).

Finally, in Canto 28, Dante describes the "point" in detail: "I saw a Point that sent forth so acute / a light, that anyone who faced the force / with which it blazed would have to shut his eyes. . ." and Beatrice explains its significance: ". . . On Yonder Point / depend the heavens and the whole of nature."<sup>47</sup> Christ, who is analogized with the Sun, is positioned at the central point of both Dante's poem and of Michelangelo's huge rotating circular fresco. Christ forms the focal point on which the composition and everything else is dependent. This evidence seems to suggest that *Paradiso* as much as *Inferno* provided major source material for the fresco.

In his view of the circular universe, Dante was no doubt familiar with Augustinian writings on the symbolism of the circle. Saint Augustine's writings exerted great influence during the Italian Renaissance and in his tracts concerning *Immortality of the Soul* and *Magnitude of the Soul* he accorded special significance to the geometric form of the circle, its symbolic meaning, and especially the central point of it which generated its form.<sup>48</sup> Augustinian writings also exerted a measure of influence upon the Florentine Neoplatonists such as Marsilio Ficino, whose writings similarly reflect the significance of Sun-symbolism and circular cosmology.

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The third major source for sixteenth-century Sun-symbolism lies in the tradition of Neoplatonism with which, again, Michelangelo is known to have been well acquainted.<sup>49</sup> The writings of Marsilio Ficino are a major source for the symbolic identification of the Sun and Deity as it is found repeatedly in Renaissance literature and philosophy.<sup>50</sup> Probably Ficino's most important work, and one which Michelangelo is known to have read, is his

<sup>47</sup>*Paradiso*, Canto XXVIII:16-27 (cf. XXX:10-12); XXVIII:41-45, ". . . Da quel punto / dipende il cielo e tutta la natura. . ."

<sup>48</sup>Augustine, *On the Magnitude of the Soul*, ed. L. Schopp in vol. 4 of *Fathers of the Church Series* (New York: Catholic University of America Press, 1947), chaps. 7-12, esp. chap. 12, p. 80: "Although reason has shown that the circle, because of its equality, surpasses all other plane figures . . . what else is the regulator of this symmetry than the point placed in the center? Much can be said of the function of the point. . ."

<sup>49</sup>Neoplatonic influences upon Michelangelo have been extensively dealt with in the literature and almost universally acknowledged; see E. Panofsky, "The Neoplatonic Movement and Michelangelo," in *Studies in Iconology: Humanistic Themes in the Art of the Renaissance* (New York: Harper and Row, 1962), 171-230, esp. 180. Also N. A. Robb, *Neoplatonism of the Italian Renaissance* (London: Unwin, 1935), chap. 8; R. J. Clements, "The Poetry of Michelangelo" (London: Peter Owen, 1966), chap. 12, and De Tolnay, *Michelangelo, passim*, especially vol. 3 on the Medici chapel. Most writings have been concerned with Michelangelo's expression of the Neoplatonic attitude towards love and ideal beauty, and are usually related to his earlier period. The possible influence of the Neoplatonic doctrine of Sun-symbolism has received little attention thus far.

<sup>50</sup>Kuhn, *Copernican Revolution*, 130-31. This will be further demonstrated in the course of this article.

*Commentary on Plato's Symposium*.<sup>51</sup> Cosmology plays a major role in this work and the Neoplatonic idea of the Sun as a symbol of the Deity as well as the cosmological ordering of the universe are fully examined in this manuscript. The concept refers back to Plato whose reference to the sun as a metaphor for the Good (*γαθόν*) was interpreted as a literal equation between Sun and Deity by Renaissance Platonists who were trying to integrate Christian and antique themes.<sup>52</sup>

In chapter 2 of Part II of the *Commentary on Plato's Symposium*, Ficino discusses God as the central force in the circular universe and the continuous attraction of all things. The symbolic meaning of the circular basis which Ficino gives to God and universe is explained, and Ficino refers to Pseudo-Dionysius, showing that even the supporter of the layered hierarchical system accepted the Sun-Deity concept. Ficino thus continues:

Further Dionysius is quite justified in comparing God to the sun, because just as the Sun illuminates and warms the body, so God provides to our spirits the light of truth and the ardor of love.<sup>53</sup>

Ficino draws a direct comparison between this theme and Plato's writing in the sixth book of the *Republic* thereby acknowledging this source as well as the *Symposium* itself. In the following chapter in the *Commentary on Plato's Symposium*, chapter 3, entitled "Beauty is the Radiance of the Divine Goodness and God is the Center of Four Circles," Ficino is quite specific about his concept of the arrangement of the universe which is closely derived from

<sup>51</sup>Clements, *Poetry of Michelangelo*, and Summers, *Michelangelo and the Language of Art*, 9. See Sears Reynolds Jayne, *Marsilio Ficino's Commentary on Plato's Symposium* (Columbia: University of Missouri, 1944), cf. new edition with notes (Dallas: Spring Publications, 1985). This work was proposed by De Tolnay, *Michelangelo*, vol. 3, as the source for the Neoplatonic themes in the Medici Chapel, Florence, which Michelangelo was working on up to the time of the Last Judgment, and for the same patron, Clement VII. See Salvini, *Hidden Michelangelo*, 113-14.

<sup>52</sup>Plato, *Republic*, Book 6, trans. P. Shorey (London: Heinemann, Loeb, 1935), 2:100-7, and also see the edition by Radice and Baldock (Harmondsworth: Penguin, 1971), 265, 272-74. Ficino himself acknowledges this source (*Commentary on Symposium*, 206-7). For Plato's view of the universe in general, see F. M. Cornford, *Plato's Cosmology* (London: Routledge & Kegan Paul, 1937) and W. K. C. Guthrie, *A History of Greek Philosophy*, vols. 4 and 5 (Cambridge: Cambridge University Press, 1978), esp. vol. 5, chap. 6, *Timaeus*. Plato's view of the cosmos is discussed in *Timaeus* and high regard for this book in the sixteenth century is attested to by the fact that Raphael's Plato of the *School of Athens* in the Vatican stanza bears the volume under his arm.

<sup>53</sup>Ficino, *Commentary on Plato's Symposium*, 133-34: "there is one continuous attraction, beginning with God, going to the world and ending at last in God, an attraction which returns to the same place whence it began as though in a kind of circle. This single circle, from God to the world and from the world to God, is identified by three names. Inasmuch as it begins in God and attracts to him it is Beauty; inasmuch as, going across into the world, it captivates the world, we call it Love; and inasmuch as it returns to its source and with him joins in its labors we call it Pleasure. It is this that Hierocleus and Dionysius the Areopagite mean in the famous hymn in which they sing "Love is a circle of Good, revolving from good to good perpetually. . . ." In the following chapter, Ficino discusses God as "Goodness" personified, at the center of a series of circles.

Plato's scheme of "the good," viewed by Ficino as equivalent to the Christian God. He writes:

The single center of everything is God. Around this continually revolve four circles: Mind, Soul, Nature, and Matter . . . I shall explain why we call God the center of them all.<sup>54</sup>

Ficino's description follows with a passage remarkably similar to Dante, for he too emphasizes the central, generating point of the circle, where God is situated. Parallels may also be drawn with Augustine's writings, mentioned above, where not only the significance of the circle, but also of its central, generating point is discussed. Ficino describes how the circular composition of the universe is dependent upon that specific point of the center of its circular formation and how, again, diagonal lines strike out from the same point to all parts of the universe, recalling, again, the metaphor of the Sun and its rays:

the center of the circle is a point, single, indivisible and stationary. From it, many divisible, mobile lines strike out to their respective circumferences. This divisible circumference revolves around the center as though on a hinge, and the nature of the center is such that, although it is single, indivisible and fixed, nevertheless, it is found in many, or rather all of the separate moving lines. . . .<sup>55</sup>

Christ is the center of Michelangelo's fresco in the same way that the deity is the center of Ficino's cosmology, in a new world system which contrasts with that of the medieval era.<sup>56</sup> Ficino draws the parallel between the Sun and the Deity continuously throughout this *Commentary* and especially again

<sup>54</sup>*Ibid.*, 134-37. Ficino describes the four different regions around God: Mind, Soul, Nature, and Matter, which proceed from God. The Angelic Mind is immovable, "it is movable only in that it turns towards God." The World-Soul is a movable circle, "mobile but orderly." Nature is mobile but confused. Matter concludes the scheme. Cf. also Ficino's *Commentary*, 170-71, 211-12, 230-31. This scheme is discussed by E. H. Gombrich, *Symbolic Images* (Oxford: Phaidon, 1975), 168-70. Whether there is a correspondence between this scheme and the distinct areas of Michelangelo's fresco (respectively, the angelic Mind-lunettes; Soul-the inner circle; Nature-the outer circle; Matter-the earthly zone) is a matter for further investigation. See also chap. 5, p. 140.

<sup>55</sup>Ficino, *Commentary on Plato's Symposium*, 135-36; see also 140, where he refers to the "beauty of the Sun." Cf. the Augustinian concept of the significance of the central point of the circle, as in n. 48 above.

<sup>56</sup>Although Ficino's *Commentary on Plato's Symposium* is here proposed as a very definite source for Michelangelo's Last Judgment, it is not necessary to force the fresco into Ficino's precise format. Ficino frequently refers to either four or five cosmic areas (see above n. 54). Dante's scheme, discussed above, contains nine concentric circles in the heavens. Copernicus' scheme, fig. 1, contains seven numbered circles, as well as the moon's epicycle. (Copernicus' final scheme contained an even larger number of circles and epicycles which actually circled around a "point" next to the Sun; see Koestler, *Sleepwalkers*, 195-97). We are here dealing with the heliocentric or Sun-centered idea and Michelangelo's own synthesis of merging concepts amongst these highly probable sources. The main idea of the Sun/Deity at the

in chapter 5, linking the Christian Sun-symbol with cosmology in general.<sup>57</sup> He relates the theme to the famous Neoplatonic concept of the immortality of the soul<sup>58</sup> since the central God is viewed as pure spirit, the Good or World Soul to which the human soul is united on death—a theme which also held demonstrable interest for Michelangelo.<sup>59</sup>

As a source for Michelangelo's Last Judgment, Ficino's *Commentary on Plato's Symposium* emphasizes both the circularity of the cosmos and the analogy of the Sun as Deity situated at the center. It is interesting to note that in a later chapter of the book, a physical description of the God of Love is included as Agathon discusses the ways in which this allegorical and symbolical God can be clothed in human form as the incarnate God. A not implausible correspondence may be read between Agathon's physical description of God "in the image of a handsome man—youth, tender, flexible or rather agile, well-proportioned and handsome," and Michelangelo's Christ of the Last Judgment.<sup>60</sup>

Ficino's important emphasis on God as the Sun and center of the circular universe thus suggests the *Commentary* as very probable source material for

Michelangelo's design around the central figure of Christ<sup>61</sup> but the analogy between Sun and deity was not only dealt with by Ficino in this particular text. Similar themes were also discussed in his *Platonic Theology* (1482), in various letters, and more importantly, in the *Orphica Comparativa Solis ad Deum* and the *Liber de Sole* (published together in 1493).<sup>62</sup> *De Sole*, especially, is a good example of the solar literature of the period. Here, Ficino begins by discussing the significant analogy between the light of the Sun and God, the Supreme Good, with reference to Pseudo-Dionysius (chapter 2), and he emphasizes the role of the Sun, as the illuminating Lord and regulator of the skies. He refers directly to the Solar Deity (chapter 4), and stresses the sun's role in cycles of birth and death (chapter 5). Conscious of the ancient reverence paid to the Sun and Apollo (chapter 6), he refers to the Sun as metaphor for the Trinity and as the visible image of God which lies in *medio coelo* (chapters 7-12). The work as a whole is strongly suggestive of source material for Michelangelo's fresco since the influence of these texts and commentaries on contemporaries was known to be wide reaching. Well known in Italian circles, Ficino's translations and commentaries also circulated

<sup>61</sup>Ibid., 135-36, "Who will deny that God is rightly called the center of everything? Whether Michelangelo's Christ is in motion or not appears to be intentionally ambiguous. The traditional concept of God as The Unmoved Mover, derived from Aristotle's *De Caelo* which held sway during the Middle Ages, appears to be combined with the Platonic concept that motion was an essential prerequisite for immortality (derived from Plato's *Phaedrus*, 245D-246A, *Law*, X 874C, and *Timaeus*, 37A-E, where the circular motion of the World Soul is discussed). Plato contrasts the state of being with that of becoming; see Guthrie, *History of Greek Philosophy*, vol. 5, esp. chap. 6, 253ff. and 291ff.

<sup>62</sup>A manuscript of *De Sole* is available in the University Library, Cambridge (class mark L.9.23). The work is also available in translation in A. B. Fallico and H. Shapiro, ed., *Renaissance Philosophy*, Vol. 1, *The Italian Philosophers* (New York: Modern Library, 1967), 118-41. The entire text appears to be highly relevant source material. See also Kuhn, *Copernican Revolution*, 129-30 who quotes Ficino's *Liber de Sole*, 130 ("Nothing reveals the nature of the Good which is god more fully than the light of the sun. . . . The sun can signify God himself to you and who shall dare to say that the Sun is false?"), as a probable influence on Copernicus. The themes of Sun and light symbolism and the symbolism of the circle also occur in Ficino's *Platonic Theology*. See extracts translated by J. Burroughs in *Journal of the History of Ideas* 5 (1944): 227-39, and in E. Cassirer, P. O. Kristeller, J. H. Randall, eds., *The Renaissance Philosophy of Man* (Chicago: University of Chicago Press, 1965), 185-214. Compare with the comments of Ficino's contemporary Pico della Mirandola, on the Sun/Deity analogy and the "true Apollo" in his *Oration on the Dignity of Man* reproduced in the same volume, 235. For Ficino see P. O. Kristeller, *Il Pensiero Filosofico di Marsilio Ficino* (Florence: Sansoni, 1953, English ed. trans. V. Conant, New York: Columbia University Press, 1943), esp. 93 for *De Sole*; also M. J. B. Allen, *The Platonism of Marsilio Ficino* (Los Angeles: University of California Press, 1984) and *The Letters of Marsilio Ficino*, 4 vols., ed. Language Dept., School of Economic Science (London: Shephard-Walwyn, 1981). A. Koyré, *The Astronomical Revolution* (London: Methuen, 1973), also summarizes Ficino's approach to the Sun as "master and king of the visible universe" and hence symbolic of God. Neoplatonic traditions are examined by Koyré in the context of Copernicus' attitude toward the Sun (65). At 115, n. 26 Koyré quotes further references of this attitude as expressed by Copernicus in his writings. Copernicus is linked firmly with the Neoplatonic tradition which distinctly contributed to his inspiration.

center of the universe is what concerns us rather than precise analogies to specific numbers of circles or epicycles. The planets, for example, do not figure in Last Judgment iconography and it is therefore not relevant to force correspondences with planetary orbits or to look for analogies with Venus, Mercury, etc. in Michelangelo's fresco. Copernicus' reference to the Sun surrounded by "heavenly bodies" (*astrorum*) or stars (see n. 1 and fig. 1) does correspond well in Michelangelo's fresco with the Neoplatonic concept of the transmutation of souls into stars after death. The Last Judgment fresco is, rather, concerned with the respective roles of Heaven, Earth, and Hell and their placement according to Michelangelo's synthesis of these different religious, philosophical, literary, and scientific ideas.

<sup>57</sup>Ficino, *Commentary on Plato's Symposium*, 140.

<sup>58</sup>See Hall, "Michelangelo's Last Judgment," 87.

<sup>59</sup>This idea is also derived from Plato, in the *Phaedo*. The doctrine of rebirth of the soul was regarded as prophetic of the Christian doctrine of resurrection by the Florentine Platonists trying to reconcile Plato's thought with Christianity. The interpretation of Michelangelo's portrait in the flayed skin of Saint Bartholomew in the fresco fits in with this concept, owing to the idea of the shedding of the outer flesh to release, by painful purification, the inner soul; see E. Wind, *Pagan Mysteries of the Renaissance* (Oxford: Oxford University Press, 1980), 171-76. The same concept is also frequently alluded to by Michelangelo in his poems; see Gilbert, *Complete Poems*, esp. nos. 150, 159. Cf. Hall, "Michelangelo's Last Judgment," 87-88, who interprets the fresco in terms of the Catholic doctrine of Resurrection of the Body, rather than the Neoplatonic doctrine of Immortality of the Soul. It seems probable, however, that Catholic and Neoplatonic doctrines may be combined in Michelangelo's work and are not necessarily to be regarded as mutually exclusive. Cf. De Tolnay's interpretations of the Julius tomb and the Medici chapel, De Tolnay, *Michelangelo*, esp. 3:63-75.

<sup>60</sup>Ficino, *Commentary on Plato's Symposium*, 175-76.

throughout Europe as far as Cracow. Their possible influence on Copernicus has been discussed in the literature and will be dealt with below.<sup>63</sup>

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Besides the religious, philosophical, and literary sources for Sun-symbolism and cosmology in mid-sixteenth-century Italy, there are also the purely scientific. Although the religious-philosophical argument may in itself be regarded as sufficient source for Michelangelo's interpretation of Christ in the Last Judgment, a direct scientific and Copernican influence is not to be excluded since newfound evidence demonstrates a detailed knowledge of Copernican heliocentric theory in Vatican circles at exactly the time of the commission of the Last Judgment.

Copernicus' outline of his heliocentric system *De Revolutionibus Orbium Coelestium* was published in 1543, so strictly speaking De Tolnay was correct in saying that Michelangelo could not have read the book before he completed his fresco. However, it was not necessary then, as now, for anyone to read Copernicus' book in order to grasp his idea of the Sun-centered universe.<sup>64</sup> In addition, the date of publication of *Revolutions* actually coincided with Copernicus' death at the age of seventy;<sup>65</sup> that date clearly does not mark the date of origin of his ideas. In the preface of *Revolutions*, Copernicus acknowledges his debt to previous proponents of the heliocentric theory, both in the ancient world and in the more recent past.<sup>66</sup> Apart from the ancient philosophers,<sup>67</sup> Renaissance writers such as Buridan (1297-1358) and

Oresme (1323-82)<sup>68</sup> in the fourteenth century and Cusanus (1401-64)<sup>69</sup> had already considered similar theories of the motion of the earth (and a stationary central Sun) well before the sixteenth century and Copernicus admitted that his own work drew on the writings of such predecessors. It has also convincingly been argued that Copernicus was influenced by the writings of Ficino and Neoplatonic Sun-symbolism in the formation of his theory,<sup>70</sup> and that more generalized Neoplatonic concepts of perfection and harmony also contributed to Copernicus' view of the universe. Nor is it necessary to exclude the Christian emphasis concerning the traditional importance of the Sun as an influence on Copernicus for, far from being heretical or an atheist, he was a canon of the Catholic Church and remained a sincere Christian. He continuously credits God with the creation of the universes, albeit a Sun-centered one.<sup>71</sup>

Copernicus' heliocentric theory thus originated well before the time of its publication (and his death) in 1543, even if his ideas were not at first made public. He explains his reasons for the long delay in his preface to *Revolutions* which was actually dedicated and addressed to Pope Paul III, patron of Michelangelo's fresco. The preface confirms that Copernicus' ideas had originated well before the time of publication.<sup>72</sup> In addition, Copernicus had been widely recognized as a leading astronomer for decades and reports

<sup>63</sup>For Buridan, see J. North, "The Medieval Background to Copernicus" in A. Beer and K. Strand, eds., *Copernicus in *Vistas in Astronomy**, vol. 17 (Oxford: Pergamon, 1975), 11-12. Buridan's writings were required reading at Cracow when Copernicus was a student (Bienkowska, *Scientific World of Copernicus*, 8, 86). For Oresme, see E. Grant, ed., *Nicholas Oresme and the Kinematics of Circular Motion* (Madison: University of Wisconsin Press, 1971). Oresme considered the basics of relative motion, fundamental to Copernicus' theory, (Kuhn, *Copernican Revolution*, 115; cf. Copernicus, *Revolutions*, Book 1, chaps. 5, 8, especially 11-12, 16).

<sup>64</sup>It is significant that Nicholas of Cusa was a cardinal of the Catholic Church and leading Neoplatonist, but his theories were not criticized by the Church. See Kuhn, *Copernican Revolution*, 197, 233; Koestler, *Sleepwalkers*, 209-10; E. Cassirer, *The Individual and the Cosmos in Renaissance Philosophy* (Oxford: Blackwell, 1963), chaps. 1 and 2, especially p. 69; Wind, *Pagan Mysteries*, 54, notes the influence of Cusanus on Ficino.

For precursors of Copernicus, see also Kuhn, *Copernican Revolution* chap. 4; E. Grant, "Late Medieval Thought, Copernicus and the Scientific Revolution," *Journal of the History of Ideas* 23 (1962): 197-220, and "Medieval and Seventeenth-Century Conceptions of an Infinite Void Space beyond the Cosmos," *Isis* 60 (1969): 39-60. Cf. with Hartt's comment on Michelangelo's fresco: "The airy background of the fresco, of course, should not be construed as infinity; the notion of infinite space had occurred to nobody in the 1530s," F. Hartt, *Michelangelo*, (New York: Abrams, 1964), 50, which appears to be incorrect. See also G. McCollay, "Nicholas Copernicus and the Infinite Universe," *Popular Astronomy* 44 (1936): 525-35.

<sup>70</sup>Rybka, "Origin of Heliocentric Theory," especially 166-67; Koyré, *Astronomical Revolution*, 65, 115.

<sup>71</sup>So we find underlying this ordination [i.e., the heliocentric system] an admirable symmetry in the Universe and a clear bond of harmony in the motion and magnitude of the spheres such as can be discovered in no other wise. . . . So great is this divine work of the Great and Noble Creator," Copernicus, *Revolutions*, Book 1, chap. 10. Copernicus demonstrates, in one breath as it were, both his affinity with Neoplatonic concepts of perfection, symmetry, and harmony and his acknowledgment of the Christian God. Also see *Revolutions*, Book 1, introduction, paragraphs 2, 3, Dobrzycki, *De Revolutionibus Orbium Coelestium*, 7.

<sup>66</sup>Kuhn, *Copernican Revolution*, 130-31. As evidence he quotes *Revolutions*, Book 1, chap. 10 (see above and n. 1). Also E. Rybka, "The Influence of the Cracow Intellectual Climate at the End of the Fifteenth Century upon the Origin of the Heliocentric Theory," i *Vistas in Astronomy*, vol. 9, ed. A. Beer (Oxford: Pergamon, 1967), 165-69. Rybka, 166, demonstrate the contribution which the Neoplatonic cult of the Sun made toward Copernicus' formulation of his theory. It is implicit in his heliocentric view.

<sup>67</sup>Koestler, *Sleepwalkers*, 194-95. Koestler describes *Revolutions* as "the book that nobody read." Reading the book was not necessary in order to understand the basics of the theory.

<sup>68</sup>Legend has it that Copernicus received the first copy on his death bed. Koyré, *Astronomical Revolution*, 34.

<sup>69</sup>Copernicus' preface addressed to the pope is not to be confused with the spurious preface added later by Osiander the printer and almost certainly without Copernicus' knowledge. Osiander here discussed the heliocentric theory as "hypothesis" rather than "truth." See Dobrzycki, *De Revolutionibus Orbium Coelestium*, xvi; Koestler, *Sleepwalkers*, 170-71.

<sup>70</sup>Copernicus mentions Hiketas of Syracuse, Philolaus the Pythagorean, Herakleides of Pontus, Ekphanus the Pythagorean, and Aristarchus of Samos. See Koestler, *Sleepwalkers*, 207-8; Dobrzycki, *De Revolutionibus Orbium Coelestium*, 4-5, 129. It is interesting that a major source of information about Aristarchus of Samos and his theories was Vitruvius in his *Ten Books of Architecture* (Book 9, chap. 2), which was undoubtedly known to Michelangelo.

of his research had circulated in unpublished form since about 1515.<sup>73</sup> The actual publication of his work had been eagerly awaited for some time. Copernicus was, after all, included in the general invitation of the Fifth Lateran Council (1514) to leading astronomers to advise the Vatican on the reform of the Calendar<sup>74</sup> and it is important to remember that Copernicus studied in Italy and was strongly influenced by a total of seven years at humanist universities.<sup>75</sup> Virtually contemporary with Michelangelo (Copernicus was born in 1473; Michelangelo in 1475), Copernicus moved in very similar circles of learning in Italy in the late fifteenth and early sixteenth centuries. Neoplatonism gleaned from centers like Bologna is evident in Copernicus' attitude to the ideas of mathematical harmony, as well as in his approach to the Sun itself: "He adores the sun and almost deifies it."<sup>76</sup> Yet he remained a Catholic and was also influenced by the purely Christian concepts of God as architect, creator, and center of the universe.<sup>77</sup>

Koyré, Bienkowska, and Rybka tend to agree that Copernicus probably formulated the core idea while still a student at Cracow or at least during his Italian years of study.<sup>78</sup> In any case it was certainly devised by the time he wrote *Nicolai Copernici de Hypothesibus Motuum Coelestium a se Constitutis*

<sup>73</sup>For Copernicus' preface, which was included in the printed edition of *Revolutions*, see Dobrzycki *De Revolutionibus Orbium Coelestium*, 3-6. Copernicus' reference in his preface (1542) to his leaving his work unpublished "not merely until the ninth year but by now the fourth period of nine years" suggests a date of origin at the very beginning of the sixteenth century. The reference to "nine years" would of course take us back to the significant year of 1533.

<sup>74</sup>Kuhn, *Copernican Revolution*, 185, and L. Thormdike, *A History of Magic and Experimental Science* (New York: Columbia University Press, 1923-41), 5:408 and n. 16 ("The scientific world of that time, if not public opinion generally had been gradually prepared for the final publication and full text").

<sup>75</sup>Kuhn, *Copernican Revolution*, 125-26. The Bishop of Fossombrone (otherwise known as the astronomer Paul of Middelburg, 1445-1533) was in charge of this and encouraged Copernicus in his studies. Copernicus referred to this in the preface and dedication to Paul III (Dobrzycki, *De Revolutionibus Orbium Coelestium*, 3-6). Correspondence exists between Paul of Middelburg and Ficino (referred to by P. and L. Murray, *The Art of the Renaissance* [London: Thames & Hudson, 1971], 7).

<sup>76</sup>Bienkowska, *Scientific World of Copernicus*, 36-37, and O. Gingerich, "Crisis versus Aesthetic in the Copernican Revolution" in Beer and Strand, *Copernicus*, 85-93. Copernicus studied law at Bologna from 1496. He was in Rome and gave lectures there 1500-1. He was at Padua, 1501-3 and Ferrara in 1503 where he received a doctorate in canon law. These were all well-known centers of Neoplatonic and humanist thought which influenced men like Michelangelo. Michelangelo himself was in Bologna 1493 to late 1496. He visited it intermittently thereafter. he was in Rome 1496-1501.

<sup>77</sup>J. R. Ravetz in Beer and Strand, *Copernicus*, 147; Koyré, *Astronomical Revolution*, 42, 65; Copernicus, *Revolutions*, 10, 22.

<sup>78</sup>Copernicus concludes his exposition of the Sun-centered universe with an exclamation of the magnificence of God's handiwork, Dobrzycki, *De Revolutionibus Orbium Coelestium*, 22. Copernicus was a canon of the cathedral of Frauenburg and the fact that in 1537 he was nominated as candidate for the episcopal seat of Ermland makes it highly probable that he did actually enter the priesthood. Copernicus draws attention in his preface to the fact that he was encouraged by the Church in his work for he received support from Tiedemann Giese, Bishop of Chelmino and Cardinal Schomburg; see Dobrzycki, *De Revolutionibus Orbium Coelestium*, 3.

*Commentariolus* which was circulating in duplicated manuscript form by 1514. Contemporary comment on Copernicus' theory becomes evident over the following twenty years, even though the theory was as yet not available in printed form.<sup>79</sup>

The Church's attitude to all this is significant, especially if the inclusion of a Copernican theme in Michelangelo's fresco is proposed and especially if such an inclusion is to be suggested as heretical. In fact, the Protestants condemned Copernicus' theory of heliocentricity far more speedily than did the Catholics.<sup>80</sup> *De Revolutionibus* was accepted without demur by Pope Paul III to whom it was dedicated. Neither the pope nor anyone else at Rome was apparently shocked by the proposed new cosmological system and it made quite spectacular progress very quickly amongst learned circles.<sup>81</sup> The very difficult religious implications of the work were not fully realized until a much later date when the real storm broke in the wake of the experimental work of Galileo and Kepler. *De Revolutionibus* was not placed on any version of the *Index of Prohibited Books* in the second half of the sixteenth century; it was not banned by the Catholics until 1616, seventy-three years after publication.

What is more, and what shows that it was neither impossible nor heretical for Copernicus' ideas to have influenced Michelangelo's design for the Last Judgment, is the fact that Clement VII, who inaugurated that commission,

<sup>79</sup>Here he was in touch with Neoplatonic scholars like Domenico Novara (pupil of Regiomontanus who researched into heliocentricity in the fifteenth century) and Celio Calcagnini (author of a treatise "On the Immutability of Heaven and the Mobility of the Earth"). For details of these see Bienkowska, *World of Copernicus*, 55, 86; Dobrzycki, *De Revolutionibus Orbium Coelestium*, 129; Koestler, *Sleepwalkers*, 210-13; Kuhn, *Copernican Revolution*, 12; Cassirer, *Individual and the Cosmos*, 35, 58. Copernicus gave public talks in Bologna and Rome.

<sup>80</sup>Chastel records Doni's account of the discussion of Copernicus' theories in Florence "by the common people gathered in the evening on the Piazza del Duomo" (n.d. but before 1543 when Doni's letters were published); see A. Chastel, *The Age of Renaissance Humanism, Europe 1480-1530*, (New York: McGraw Hill, 1963), 92. Michelangelo also corresponded with Doni; see Murray, *Michelangelo: Life, Work and Times*, 164. A public satire on Copernicus took place at Elblag in 1531; see Rosen, *Three Copernican Treatises*, 375-78; Koestler, *Sleepwalkers*, 156. Rosen cites another tract circulated by Copernicus, the "Letter against Werner" (1522) which was written in reply to Werner's outmoded hypothesis, as an example of contemporary discussion of ideas; Rosen, *Three Copernican Treatises*, 7-9. In art, Giorgione's *Three Philosophers* (1509-10) has been argued as depicting Copernicus and his ideas; T. Pignatti, *Giorgione*, (Venice: Alfieri, 1969), 104-5; Bienkowska, *World of Copernicus*, 97; so also Aldorfer's *Nativity of Christ* (ca. 1520) and his *Battle of Alexander the Great* (1529); see O. Benesch, *The Art of the Renaissance in Northern Europe. Its Relation to Contemporary and Intellectual Movements* (London: Phaidon, 1965), chap. 8. "Related trends in Art and Science of the Late Renaissance." Early in the century, Leonardo da Vinci (d. 1519) was apparently aware of the idea of the Earth's movement since he declared, "The Sun does not move"; see J. P. Richter, *The Notebooks of Leonardo da Vinci* (New York: Dover, 1970), 2:152, and V. Cronin, *The View from Planet Earth* (London: Collins, 1981), 89, 100.

<sup>81</sup>Cf. Luther's *Table Talks*, ed. G. Tappert (Philadelphia: Fortress Press, 1967), 54, 358-59. Discussed also in Kuhn, *Copernican Revolution*, 191, and Koestler, *Sleepwalkers*, 156. Luther's approach to cosmology remains biblical and traditional. The idea that any acceptance of Copernicus' ideas might be linked with Protestant heresies at this time is unwarranted.



had shown a high degree of personal interest in the heliocentric theory, long before its publication. Significantly for our argument, in 1533 Clement VII actually requested that Copernicus' theory, of which he had evidently heard, be explained to him and a number of other important members of the Curia in the Vatican itself.<sup>82</sup> The event was documented by Albert Widmanstadt, who gave the lecture, on the cover of a precious manuscript presented to him to mark the event (see fig. 8). The inscription reads in translation:

Clement VII Supreme Pontiff presented this codex to me as a gift A.D. 1533, in Rome, after I had, in the presence of Fra Ursino, Cardinal Joh. Salviati, Joh. Petrus, Bishop of Viterbo, and Matthias Curtius medical physician, explained to him in the garden of the Vatican, Copernicus' teaching concerning the motion of the earth. Joh Albertus Widmanstadius, Cognominatus Lucretius, personal familiar and secretary to our Most Serene Lord.<sup>83</sup>

The precise timing of the meeting can be set between June 1533 (when Johannes Petrus was appointed Bishop of Viterbo) and September 1533 when Clement VII left Rome to travel to attend negotiations in France. The "6.33" at the foot of the manuscript (fig. 8) suggests June and Michelangelo was in Rome in 1533 until the end of June when he left for his last visit to Florence.<sup>84</sup>

Apart from Michelangelo's close relationship and contact with Clement VII who had grown up with him in the Neoplatonic atmosphere of the court of Lorenzo the Magnificent (as had also his successor, Paul III, Farnese), there also existed close links between Michelangelo and others who attended the lecture. Johannes Petrus succeeded Egidio at Viterbo which was the center

<sup>82</sup>Z. Kopal in Bienkowska, *World of Copernicus*, xi; Koyré, *Astronomical Revolution*, 28; Kuhn, *Copernican Revolution*, 185-88; G. Sarton, *The Appreciation of Ancient and Medieval Science during the Renaissance* (Philadelphia: University of Philadelphia Press, 1955), 162. See also Galileo Galilei, *Letter to the Grand Duchess Christina*, 1616, ed. Stillman Drake (New York: Doubleday, 1957), 175-216. This letter was written in defense of Copernicus in the face of the imminent banning of his work by the Catholic Church.

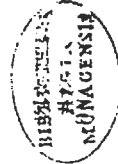
<sup>83</sup>This fact is well known in scientific publications but its implications have yet to be examined in an art historical context. See L. Prowe, *Nicholas Copernicus* (Berlin, 1883), I:274; Thorndike, *Magic and Experimental Science*, 5:410; Rosen, *Three Copernican Treatises*, 387; L. von Pastor, *History of the Popes*, English ed. (London: Routledge & Kegan Paul, 1901-28), 10:336-37, 12:549-50; Koestler, *Sleepwalkers*, 155.

<sup>84</sup>The manuscript is now in the Bayerische Staatsbibliothek, Munich (Codex Graecus Monacensis 151). It is curious that no record of this seems to have survived in the Vatican. Widmanstadt was papal secretary and received his information from the representative of Copernicus' chapter in Rome; see Rosen, *Three Copernican Treatises*, 387. For the original Latin text of Widmanstadt's inscription, see reproduction of sheet in fig. 8. The manuscript itself is a copy of Alexander of Aphrodisias' *Εἰς τὴν περὶ ἀστροθεωρίας καὶ ἀισθητικῶν (De Sensu et Sensibile)*. For the importance of Alexander, see Cassirer, et al., *The Renaissance Philosophy of Man, passim*. Bound in with this manuscript in the Munich Codex, and apparently part of the same "gift," is the *Elements of Physics*, by the fifth-century Neoplatonist Proclus, which is interestingly concerned with Neoplatonic concepts of infinity, circularity, and circular motion.

Clemens VII. Pont. Max. June Codicem  
 missi D. DD. Anno II. D. M. CCC. XXXIII  
 Roma, postquam ei presentibus Fr. Ursino,  
 Joh. Salvatori Card. Joh. Petrus Ep. Viter.  
 biter. et Mathias Curtio Medico phy.  
 sico in hortis Vaticanis Coperniciana  
 de motu terrae sententiam explicauit.  
 Joh. Albertus Widmanstadius  
 cogn. Lucretius, 3. m. D.  
 N. Secretarius domesticus  
 et familiaris.

Vidit Pius VI. Pont. Max. 30. Aprilis 1782.  
 cum Lindobona ecclia Monacha in fuit

Speyerburger Biblioth.



6. 33

Fig. 8. Codex Graecus Monacensis 151, Bayerische Staatsbibliothek, Munich, dated 6.33 (cover page of Greek manuscript presented to Albert Widmanstadt), detail showing inscription. Photo: Bayerische Staatsbibliothek, Munich. Reproduced by permission.

for the *Spirituali* with whom Michelangelo was associated in the 1530s and 1540s. Cardinal Giovanni Salviati, son of Michelangelo's close friend Jacopo Salviati, was associated with Michelangelo through the distinguished circle of Florentine emigrés (*Fuorusciti*) in Rome.<sup>85</sup> Michelangelo's knowledge was thus not dependent solely on his association with Clement VII but may also be attributed to his knowledge, in general, of ideas currently under discussion in the Papal court of the time.

In spite of some confusion over the dating of the original commission for the fresco on the end wall of the Sistine Chapel, and references to a scheme involving a Resurrection and a Fall of the Rebel Angels,<sup>86</sup> Vasari and Condivi both attest to the fact that Clement VII was the initiator of the project for the altar wall: after Clement's death in 1534, Pope Paul III took over the project but without significantly altering it. It is also largely accepted that the commission was decided upon and discussed at the meeting between Pope Clement and Michelangelo at S. Miniato al Tedesco on September 22, 1533.<sup>87</sup> The discussion between pope and artist about the commission thus took place a matter of weeks after Clement VII had had Copernicus' theory explained to him by a professional lecturer. Since Widmanstadt had obtained his information from Theodoric of Radzyn, the representative of Copernicus' chapter of Varmia in Rome, direct contact through a chain of no more than five persons is thus traceable between Michelangelo and Copernicus at exactly the time of the commission of the Last Judgment (namely Copernicus, Radzyn, Widmanstadt, Clement/Salviati, Michelangelo). Even though Clement's knowledge of the theory does not necessarily confirm his approval, the circumstances surrounding the lecture do strongly suggest this probability.

After Clement VII died, the Vatican continued to show an interest in Copernican ideas during the papacy of Paul III, while the Last Judgment was being executed. Cardinal Schönberg wrote a direct letter to Copernicus in 1536, urging him to publish his theory. This letter makes it absolutely clear that for several years Copernicus' hypothesis had been regarded as common knowledge, that his talent was recognized by the Catholic Church, and that

the Vatican itself was urging him to "publish and communicate this discover of yours to scholars" as soon as possible. This strongly suggests "approval" rather than mere "knowledge" in Vatican circles in the 1530s. The *Narratio Prima*, a summary of Copernicus' theories, was published by his follower Rheticus in 1540, followed by a second edition in 1541, and did not provoke adverse reaction from the Church. When Copernicus' *Revolutions* finally appeared in print, it was, as has been mentioned, with the dedication and preface addressed to Pope Paul III. Considering the implication of a dedication and the strict application of the principle of the imprimatur in publication at this time, tacit approval of the ideas is indicated.<sup>88</sup>

At the time of Michelangelo's Last Judgment (1533-41), the heliocentric theory of the universe was quite simply not regarded as being in conflict with Catholic Church doctrine and it is erroneous to suggest that it would have been either impossible or heretical for Michelangelo to have incorporated this theme into his fresco. Set against the demonstrable theological and philosophical interests of the time in concepts of cosmological Sun-symbolism, the revelation of Copernicus' scientific theory may well have acted as a precipitating factor to cause these concepts to fall into place. The idea of placing God personified as the Sun in the center of the universe solved the inconsistency in the Christian tradition of equating the Deity with the Sun—which in the flat-Earth or geocentric view was merely a minor, erratic and fluctuating cosmological feature. It also fitted in well with current Neoplatonic and Christian concepts. Humanity, it is true, had been taken away from its central place in the universe; but God was far more logically placed there instead. With the new scientific theory, the traditional analogy between Sun and Deity was vindicated at last.

\* \* \*

Michelangelo was nurtured on Ficino and Dante, the exposed to Valdesian and Evangelical thought and commissioned to paint what was a traditionally cosmological subject at a time when Copernican heliocentricity was receiving a great deal of attention in Vatican circles. It seems highly probable that his interpretation of the Last Judgment could have developed out of the common ground shared by the different sources of knowledge suggested above. It is not necessary to force the fresco into the precise pattern of any single system, for it is Michelangelo's supreme synthesis of the whole—his combination of tradition and innovation—into his own personal artistic expression which predominates. The complexity of his thought and combinations of ideas even at this late stage of his career shows that the simplistic approach which is

<sup>84</sup>Rosen, *Three Copernican Treatises*, 372-74, 387; E. H. Ramsden, *The Letters of Michelangelo, translated from the original Tuscan* (London, 1963), 1:ixv, 183-85; Murray, *Michelangelo, Life, Work, Times*, 155; H. Thode, *Michelangelo und das Ende der Renaissance* (Leipzig: Fischer & Wittig, 1962), 1:425.

<sup>85</sup>See Murray, *Michelangelo, Life, Work, Times* 98; De campos, *Michelangelo, Last Judgment*, 67, 71 n. 40; De Tolnay, *Michelangelo*, 5:182, and Salmi, *Complete Michelangelo*, 578. Thus even though Michelangelo was not present at the lecture, he had such close contacts within the Papal court, apart from the pope himself, that it is extremely unlikely that he was ignorant of the theory.

<sup>86</sup>See especially Hall, "Michelangelo's Last Judgment," 85-86; De Tolnay, *Michelangelo*, 5:197; Pastor, *History of the Popes*, 9:567; Murray, *Michelangelo, Life, Work, Times*, 157; Condivi, *Life of Michelangelo*, 75; and De Campos, *Michelangelo, Last Judgment*, 85-86. It is possible that the understanding of the new cosmology led to the abandonment of this scheme with its rather simplistic cosmological implications and its obvious "up for Heaven/down for Hell" connotations.

<sup>87</sup>Vasari, *Lives*, 378; Condivi, *Life of Michelangelo*, 75-76. See also Murray, *Michelangelo, Life, Work, Times*, 157, and De Tolnay, *Michelangelo*, 5:19-20. This is also confirmed by a breve of Pope Paul III; see De Campos, *Michelangelo, Last Judgment*, appendix 1, 25, 97. Paul III, then Cardinal Farnese, was also present at S. Miniato; Pastor, *History of Popes*, 10:231.

often argued, namely, of Neoplatonism in his early works and Catholic influences in his later works, seems to be arguable. Such themes were integrated throughout his career. Neoplatonic ideas continued to feature in the late works and were combined with Christian ideals. The two trains of thought are not to be regarded as mutually exclusive.

It is important for the specifically cosmological interpretation of the fresco to be properly investigated and not dismissed, as it has been thus far in the literature because of misconstrued dating or unwarranted implications of heresy. The Copernican theory of heliocentricity, combined with Neoplatonic Sun-symbolism, Dante's writings and the Catholic reformers' emphasis on Christian concepts which analogized Christ with the Sun, would appear to present more plausible sources for the overall iconography and circular composition of the fresco around a central Sun-Christ—and to provide a valid framework within which to reconsider Michelangelo's fresco.

\* \* \*

This assessment forms a prime example of the way in which art-historical formal analysis may be used as a point of departure for an iconological interpretation. The concept of the circular universe centered on a single point was stressed in the source material provided by the writings of Augustine, Dante, Ficino, Valdés, and Copernicus. Thus far, the central, pivotal point of the universe, in accordance with contemporary cosmology and world view, has been read as the figure of Christ in Michelangelo's fresco, but is it perhaps possible to pin it down to an even more specified location and to trace the "single, indivisible and stationary point" (Ficino) on which "depend the heavens and the whole of nature" (Dante)?

To continue the formal analysis outlined in note 23 above and to pursue it to its logical conclusion, it is necessary to discover whether it is possible to establish the precise center point of the circular format of the fresco. The focal point of the design, both of the circular (fig. 5) and diagonal "ray-like" (fig. 6) lines of the composition appears to be centered, not on Christ's head or heart as could perhaps be expected, but on the drapery across the exact center of his right thigh.<sup>89</sup> Christ's thigh may thus be regarded as the specific

pivotal point for both the circularity of the design and for the diagonal "rays" that extend outward from the central Sun-Christ. Knowledge of sixteenth-century techniques which might have been used in a fresco of this magnitude suggests the use of some device to assist in the construction and design of the circular composition and diagonal "rays" extending over such a large area. A clear mark or possibly a hole where a constructional device such as a rotating or hinged plumbline could have been affixed is visible in any detailed photograph (see fig. 9). Close examination of the mark to confirm this will not be possible until the restoration work reaches this area in the 1990s.<sup>90</sup>

The underlying reason for the selection of this particular point, on Christ's thigh, as the pivotal center of the entire cosmological fresco is to be found in the Rev. 19:16 which, describing the Christ of the Judgment, reads, "And he hath on his vesture and on his thigh a name written, KING OF KINGS AND LORD OF LORDS." It does not seem to be mere coincidence that this is followed immediately by a reference to the Sun-symbol: "And I saw an angel standing in the sun. . . . (v. 17). In the Sistine Last Judgment, Christ is depicted (theologically, Neoplatonically, and scientifically) as Michelangelo viewed him: as King of Kings and Lord of Lords, the Sun, the center of the universe.<sup>91</sup>

<sup>89</sup>The drapery is original and not part of Volterra's later additions; see De Campos, *Michelangelo, Last Judgment*, pl. 62. Steinberg also recognized that certain diagonals in the composition appear to meet in the vicinity of the thigh but failed to see that it might have any deeper meaning; Steinberg, "Corner of the Last Judgment." He comments briefly on the thigh as a focal point but dismisses any deeper meaning out of hand: "Whoever," he says, "heard of thighs and tibias as conveyors of Grace?" (240). Shapiro, *Late Antique, Early Christian and Medieval Art*, 125-30, comments on the symbolic significance of the thigh in Early Christian iconography.

<sup>90</sup>Viewed from the scaffolding at the altar end of the Sistine Chapel during a visit in March 1989, the mark on the thigh appears quite distinct. I am grateful to Professor C. Pietrangeli, Director of the Vatican museum for providing this information concerning the future restoration of this area (personal communication).

<sup>91</sup>Rosen, *Three Copernican Treatises*, 9-10, 387; Dobrzycki, *De Revolutionibus Orbium Coelestium* (xvii), 3-6. The pope seems not to have objected, since he took no action. Indices of Prohibited Books were being prepared from the 1540s but even under Carafa's sweeping controls (especially after he became Pope Paul IV, 1555-59) Copernicus' book was left unmolested. Cf. P. F. Grendler, *The Roman Inquisition and the Venetian Press*, (Princeton: Princeton University Press, 1973). See Kuhn, *Copernican Revolution*, 196-97 for Catholic attitudes toward Copernicus in the latter half of the sixteenth century. It becomes increasingly likely that the concept of heliocentricity, combined with the Neoplatonic interpretation of the Christian analogy between Sun and Deity, was perpetuated, in Michelangelo's fresco, with the due knowledge, approval and consent of the popes concerned. From the scientific point of view, it would, conversely, be possible to regard Michelangelo's fresco as further evidence of the favorable reception at first accorded to Copernicus' theory within the Vatican.

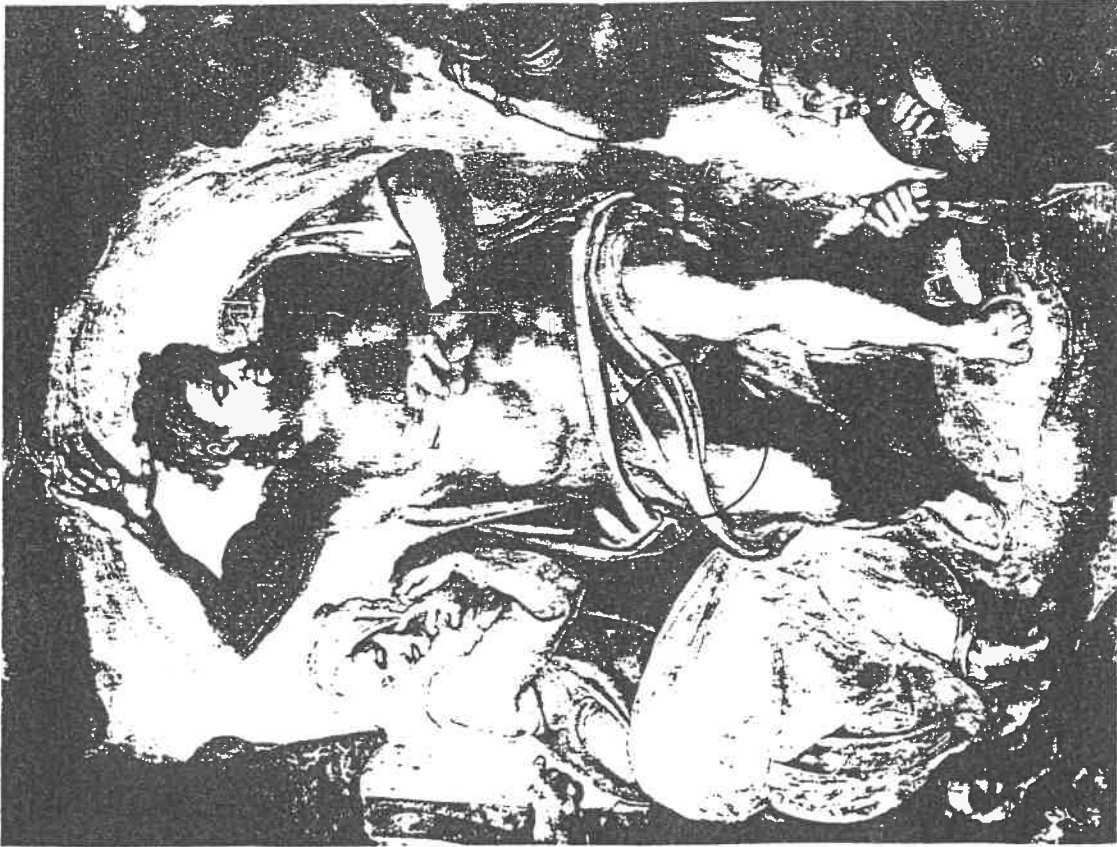


Fig. 9. Michelangelo, Last Judgment, detail of Christ's thigh. Photo: Monumenti e Gallerie Pontificie, Città del Vaticano. Reproduced by permission.