

KNOWING THROUGH SEEING:  
DIAGRAMS, SCHEMATA AND TABLEAUX  
IN EARLY PRINTED BOOKS, MEDIEVAL MANUSCRIPTS,  
AND PRINTS

Princeton University Library  
Gould Exhibition Gallery  
October 16, 1987 - January 10, 1988

Notes on the Exhibition compiled by

Stephen Ferguson

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## INTRODUCTION

Diagrams serve as windows through which readers can see into the writer's intricate construction of words. Even though such illustrations have their origins in ancient times, the printed book, in particular, facilitated the urge to make text more visually accessible. Walter Ong summed up this trend:

[There occurs a] drive toward thinking [from the Renaissance onwards] not only of the universe but also of thought itself in terms of spatial models apprehended by sight. In this context, the notion of knowledge as word, and the personalist orientation of cognition and the universe which this notion implies, is due to atrophy. Dialogue itself will drop more than ever out of dialectic. Persons, who alone speak (and in whom alone knowledge and science exist), will be eclipsed insofar as the world is thought of as an assemblage of the sort of things which vision apprehends -- objects and surfaces.<sup>1</sup>

With the printed book, the number of "visuals" attached to text became more commonplace, e.g. titlepages, indexes, running heads, abstracts at the head of chapters, tables of contents, in addition to diagrams and illustrations, both naturalistic and schematic.

The Library's collections of early printed books, manuscripts and prints provide ample evidence of the trend toward the visual, and this exhibition provides a sampling of diagrams, schemata and tableaux from nearly 80 items. While the exhibits are chiefly from the collections of the Princeton University Library, four generous loans are included: one book each from the University of Pennsylvania and Lehigh University; a manuscript and a printed book from the Scheide Library here in Princeton.

The exhibition is arranged by the following list of subjects, beginning with COSMOLOGY on the front entrance wall, then moving clockwise around the room to the final exhibits in the alcoves behind the introductory case. Because of the physical restraints of the gallery, only a few of the larger number of visually augmented books within each subject can be shown.

Cosmology	Chronology	Allegory
Geology	Genealogy	Poetry
Astronomy	Theology	Artificial Memory
Astrology	Philosophy	Systems of Knowledge
Alchemy	Logic	Diagrams in use

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<sup>1</sup> Walter J. Ong, Ramus, Method, and the Decay of Dialogue. (New York: Octagon Books, 1979), p. 9.

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Jaime Dominguez '91	Jason Wilson '90
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## COSMOLOGY

The Greeks selected their word 'kosmos,' meaning 'order' or 'ornament,' as a descriptor for the universe, in order to emphasize it as an ordered and harmonious system. Such an all-encompassing and intangible idea as the totality of the universe has always been a common theme for visual presentation. In this case are two such depictions.

1. Hartmann Schedel  
Nuremberg Chronicle  
Nuremberg, 1493  
ExI 1016.816f

The Nuremberg Chronicle was a popular and extensively illustrated world history first printed in the 1490's in both Latin and German. Here the universe is a system of concentric spheres, with earth at center; God and angels outermost; beyond them the Four Winds.

2. John Blagrave  
The Mathematical Jewel  
London, Walter Venge, [1585?]  
Ex 81075.184

"Heere follow the principles and rudiments of Astronomy and Cosmographie... Of the placing of the spheres and the division of the world." Diagram of the 11 spheres lying concentrically around the earth.

3. Bartholomaeus Anglicus  
De proprietatibus rerum  
Westminster, ca. 1485

Gift of Robert H. Taylor '30  
ExI 2949.1486.1495g

Important chronicle of world history and encyclopedia of human knowledge. Each book of the work opens with a large woodcut illustration. In Liber Octavus, at the head of the first page of this book is a diagram of the schema of the Universe -- earth at center, divided into its 3 parts, then moon, sun, stars in concentric spheres and the angels outermost

4. Agostino Caesaro (?)

Arte del navegare

Italian, ca. 1580. Preface dated 1567.

Kane MS 54 Manuscripts Division

Italian manuscript on the art of navigation, ca. 1580. This opening page shows the geocentric universe.

5. Astronomical tracts. France, 13th century. Garrett 99, fol. 136 verso. Manuscript Division.

Shown is a diagram of a lunar eclipse in one treatise forming part of a collection of 21 astronomical and astrological works dating from the 13th century. Note that the earth is at the center of the diagram and that the sun revolves around it.

## GEOLOGY AND ASTRONOMY

6. Thomas Burnet

Telluris Theoria Sacra (the Sacred Theory of the Earth)

Amsterdam, 1699

Ex 6252.226.22

"The frontispiece to Thomas Burnet's *Telluris theoria sacra* (The Sacred Theory of the Earth) may be the most comprehensive and accurate epitome ever presented in pictorial form -- for it presents both the content of Burnet's narrative and his own internal debate about the nature of time and history. Below the requisite border of cherubim (for Burnet's baroque century), we see Jesus, standing atop a circle of globes, his left foot on the beginning, his right on the culmination of our planet's history. Above his head stands the famous statement from the Book of Revelation: I am alpha and omega (the beginning and the end, the first and the last.) Following conventions of the watchmakers' guild, and of eschatology (with bad old days before salvation to the left, or sinister, side of divinity), history moves clockwise from midnight to high noon. We see first (under Christ's left foot) the original chaotic earth "without form and void," a jumble of particles and darkness upon the face of the deep. Next, following the resolution of chaos into a series of smooth concentric layers, we note the perfect earth of Eden's original paradise, a smooth featureless globe. But the deluge arrives just in time to punish our sins, and the earth is next consumed by a great flood (yes, the

little figure just above center is Noah's ark upon the waves). The waters retreat, leaving the cracked crust of our current earth, "a broken and confused heap of bodies." In times to come, as the prophets foretold, the earth shall be consumed by fire, then made smooth again as descending soot and ashes reestablish concentric perfection. Christ shall reign for a thousand years with his resurrected saints on this new globe. Finally, after a last triumphant battle against evil forces, the final judgment shall allocate all bodies to their proper places, the just shall ascend to heaven, and the earth (under Christ's right foot), no longer needed as a human abode, shall become a start.<sup>2</sup>

7. Allessandro Piccolomini

De la sfera de mondo...dele stelle fisse

Venice, 1540

Ex 6409.717

First known star atlas with many diagrams. Piccolomini (1508-1578) was a member of a noble Sieneese, some of whom became important political figures, writers, and scientists. In addition to the charts in this book, Piccolomini introduced a system for the classification of stars according to their magnitude. The system was keyed to the Roman alphabet, but was eventually abandoned for another system. Here opened to the first two full page woodcut diagrams in the book -- two famous constellations of the Northern Hemisphere: the Big Dipper (right page) and the Little Dipper (left page).

8. Philipp Cluver

Introductio in Universam Geographiam...ac Notis  
olim ornata a Johanne Buno

London, 1711

Ex 1007.265

Frontispiece shows the celestial systems of Copernicus, Tycho Brahe, Ptolmey, and Descartes. This very copy may have been used at Princeton during the colonial period, for, although, early Library markings can not be seen in the book, this edition appears on page 10 of the catalogue of the Library of the College of New Jersey (now Princeton University) published in 1760.

9. René Descartes

Opera

Paris, 1685

Ex 6126.1685

Descartes discusses this elaborate diagram over the course of more than 30 pages in the third part of his Principles of Philosophy. The diagram summarizes various features of his views on the composition of the heavens, including such propositions that: [1] The heavens consist of various bodies, such as the planets and fixed stars. In the diagram, S, F, f are fixed stars.

<sup>2</sup> Stephen J. Gould, Time's Arrow and Time's Cycle Myth and Metaphor in the Discovery of Geological Time (Cambridge: Harvard University Press, 1967) p. 21.

[2] The fixed stars have their own "heavens" which are like a vortex. Points I, E, A, R, and Q mark the boundaries of the "heaven" of S (= the Sun) and [3] N and it's "tail" (numbers 1 to 7) is a evidently a comet.

## ASTROLOGY AND ALCHEMY

### 10. Padre Maestro Vincenzo Maria Coronelli

"Idea dell' Universo"

Venice, ca. 1700.

Print acquired by the Library in January, 1987. *Graphic Arts.*

Compendium, in chart form, of astrological information. Labeled in banner at top: Idea dell' Universo (Plan or Likeness of the Universe); it is an assemblage of a central panel of five wheels surrounded by a border of 28 other wheels and spheres. The central five are labeled A to F; the main series in the border are numbered 1 to 22. The dominant, center-most wheel is that of the zodiac, the chief "informational operator" for astrology. (Astrology is a kind of "processing machine"; data comes in at one end, results [i.e. what the data means for everyday life and actions] comes out the other.) Within the zodiacal wheel is a sort of horoscope chart. The smaller wheels in the border epitomize various topics of astrological data: the star signs that govern parts of the body (number 20); the "seven climates" of the earth (number 4); and so on. At bottom are wheels useful for reckoning dates, such as Easter.

### 11. George Ripley. Scroll of alchemical emblems on preparing the philosopher's stone with also some verses from Richard Carpenter.

England, 16th Century.

Princeton MS 93. Manuscript Division

Panels: Portrait of an Alchemist (next to title case)

Bird of Hermes (side wall, front)

Serpent of Araby and the Philosopher's Stone  
(side wall, front)

Waters of Life surrounded by Seven Alchemists  
(side wall, front)

Portrait of a Man (not shown)

The gift of Robert H. Taylor '30, the several sections of what was once a long parchment roll contain a series of colored pictures and English verses which describe in mystical terms the making of the philosophers' stone. This extraordinary document is one of a number of similar objects ascribed to the most famous of English alchemists, George Ripley, Canon of Bridlington, an Augustinian who died about 1490 and whose works continued to be studied as late as the eighteenth century. To judge from its similarity to the Ripley scroll in the British Museum, which bears the date 1566 (Add. Ms. 5025), the Princeton exemplar is the work of some late sixteenth-century copyist, perhaps the same Thomas Mundy whose name occurred on a scroll mentioned by Elias Ash-

mole (Catalogue of the Manuscripts Bequeathed unto the University of Oxford by Elias Ashmole, Oxford, 1645, No. 1530).<sup>3</sup>

In addition to the British Museum example, several others of this alchemical scroll by Ripley are known: one at Yale (Mellon MS 41); another in California (Manly P. Hall Collection MS 205); Fitzwilliam Museum (Cambridge); and in 1658 Sir Thomas Browne sent his friend Elias Ashmole "Ripley's Emblematical or Hieroglyphical Scrowle in parchment, about 7 yards long with many verses somewhat differing from those in your first part of Ripley's vision" which is presumably still at the Ashmolean at Oxford.

Alchemy -- in one sense, the effort to turn base metals into gold, but in another sense, the art of transmutation -- was alleged to have been founded by the god Hermes (Mercury). Thus, alchemy became known as the 'hermetic art' and alchemists' vessels were sealed with the seal of Hermes or 'hermetically sealed.'

Alchemy was based on a general theory that all substances were modifications of one primitive matter and that subtracting qualities from compounds would yield prime matter which in turn could be augmented to make other, desired compounds. *Prima materia* was the essence of mercury; in turn, it was treated with sulfur to make the desired substance, such as gold.

Within the scope of this theory, the desired compound is a balancing of opposite -- the red lion over against the green lion.

Bird of Hermes (side wall, front)

Serpent of Araby and the Philosopher's Stone (side wall, front)

The dragon with its wings fixed to the chaotic material orb gives its blood for the making of the red and white stones and the elixir, the triple goal of alchemy.<sup>4</sup>

Waters of Life surrounded by Seven Alchemists (side wall, front)

The eternal unity of opposites: the tree of life where the sun is inspired by the Spirit from above, the waters of life surrounded by the alchemists in which man and woman find the fruitful vine.<sup>5</sup>

## 12. Heinrich Khunrath.

Amphitheatrum sapientiae aeternae

Hanau, 1609

Edgar Fahs Smith Memorial Collection,  
Special Collections, Van Pelt Library,  
University of Pennsylvania.

<sup>3</sup> James Holly Hanford, "A Sixteenth-Century Scroll of Alchemical Emblems," in the Princeton University Library Chronicle, XIX, 3-4 (Spring-Summer, 1958), p.201-202.

<sup>4</sup> C.A. Burland, The Arts of the Alchemists, (New York: Macmillan Company, 1968) p. 61.

<sup>5</sup> C.A. Burland, The Arts of the Alchemists, (New York: Macmillan Company, 1968) p. 63.



(Call number SMITH 540.1 K527.2)

13. Society of the Mercurii.

The Astoloqer of the Nineteenth Century or the Master Key of Futurity being a complete System of Astrology, Geomancy & Occult Science.

London, 1825

Ex BF1691.x56

At the right is Heinrich Khunrath's Amphitheatrum sapientiae aeternae, published in 1609 and loaned to the Library for this exhibition by Special Collections, Van Pelt Library, University of Pennsylvania. The engraving shows Khunrath himself on his knees in his alchemical oratory -laboratory. Before him on the table is a book of diagrams, such as the pentagram, the five-pointed star credited with credited with magical powers.

Heinrich Khunrath (1560?-1605) received an M.D. from the University of Basel in 1588, then practiced medicine in Hamburg and Dresden. On February 1, 1625, the Sorbonne condemned his Amphitheatrum for its mixture of Christianity and magic. The book was reprinted as late as 1900. Remarkably in London in 1825 a portion of the Khunrath self-portrait was copied for the frontispiece of The Astroloqer of the Nineteenth Century shown at the left.

14. Leonhard Thurneisser.

Quintae essentiae

Leipzig, 1574

Ex 8013.905

This illustrated text covering the teachings of alchemy portrays a number of the activities and concerns of the alchemist. Here the "Tree of Life" is like the refraction apparatus and retort of the alchemist.

Alchemy -- in one sense, the effort to turn base metals into gold, but in another sense, the art of transmutation -- was alleged to have been founded by the god Hermes (Mercury). Thus, alchemy became known as the 'hermetic art' and alchemists' vessels were sealed with the seal of Hermes or 'hermetically sealed.'

Alchemy was based on a general theory that all substances were modifications of one primitive matter and that subtracting qualities from compounds would yield prime matter which in turn could be augmented to make other, desired compounds. Prima materia was the essence of mercury; in turn, it was treated with sulfur to make the desired substance, such as gold.

The woodcut here begins the first chapter of the Tenth Book which is on the subject of the quicksilver or mercury. Cut shows the "Tree of Life" in operation: the roots of the various elements (arsenic, zinobar, mercury, etc.); the trunk labeled with the various alchemical operations (distillation, sublimation, coagulation, reduction, etc.) yielding the fruits of the alchemist's efforts, which are "fixed".

15. Athanasias Kircher.

Oedipus Aegyptiacus

Rome, 1652-4

Volume III, p. 358

Ex 2161.523q

"Figure reflective of the microcosm with the macrocosm"

For astrologers, the duality of the universe was paramount; that is, "things above are as they are below," thus, various signs of the zodiac governed various parts of the human body.

16. Johannes de Indagine

Chiromancie  
Utrecht, 1536  
Ex 6483.49

A portrait of the book's author Johan van der Jaght who labels himself "Theologian and Astrologer." Opposite is an astrological chart. Beneath the portrait is a motto saying: "You who research the course of the stars and the sense of the gods; you carry all so well the name 'Indagator,' namely, researcher or hunter (vernacular: van der Jaght)."

The chart is "the figure of the revolutions of the zodiacal signs and of the planets in accordance with the Natural Astrology in whose horoscopes is Aries and his master Jupiter." Following the chart is a table which is a "continuation of the represented picture of the first year of Aries until the 64th year."

## GENEALOGY

17. Hartmann Schedel

Nuremberg Chronicle  
Nuremberg, 1493  
ExI 1016.316f

The Nuremberg Chronicle was a popular and extensively illustrated world history first printed in the 1490's in both Latin and German. Here the beginning of the human race portrayed in the chain of lineage starting with Adam.

18. Rudimentum Novitiorum.

Lübeck, 1475.

Loaned by the Scheide Library, Princeton.

Important book of chronicles said to have been compiled for the instruction of young ecclesiastics. It is also the first dated book printed in Lübeck. The text includes fullpage genealogical tables, in the form of chains, the round links sometimes filled with figure subjects, the smaller ones show, among other things, the building and storming of a city, battles, representations of emperors, pope and saints. Also included are important early maps. Shown is the immediate lineage of Jesus.

19. King James Bible

London, 1611  
Ex 3179.1611f (Kane Room)

The King James Bible was intended to bring the Scriptures into the intellectual reach of ordinary people, through translation into English from the original Hebrew and Greek. Another means of reaching them was by an elaborate series of 34 genealogical charts. The intent of these "Genealogies of the Holy Scriptures" was to help the reader fix his understanding of sacred history in terms of "Person", that is, as tangible substance. Such understanding is in contrast to "Time" and "Space," which are abstractions. (See explanation headed "The Genealogies of Holy Scriptures. To the Christian Reader.") Shown here are two tables showing: [1] The inter-relatedness of the peoples of the world as stemming from Noah (whose origins are given on the preceding table which shows Adam and Eve) and [2] Particulars about the offspring of two of Noah's sons.

20. Lignies des roys de France.  
Genealogical chart of the Kings of France.  
A vellum roll of six parts derived from the  
Grandes Chroniques de France. France, 15th century.  
Princeton MS 56. Purchased on the Robinson Fund in 1947.  
Manuscript Division.

The roll begins with Priam, the legendary founder of the French line. In separate chains of medallions at the sides, contemporary persons and events are noted. to the left are the popes; th the right the first three roundells are the death of Ovid, the conversion of St. Paul, and the bishopic of St. James.

## CHRONOLOGY

21. Jean Boulaese  
Tabula chronographica ex collatione temporum Hebraeorum,  
Italorum, Chaldaeorum, et Aegyptiorum  
Paris, 1573  
(Ex)D11.B68e.

Boulaese was born about 1540 in the parish of Arrou near Courtalain. In 1611 one writer described him as the "fiery Boulaese." His life seems to have been filled with striving. He entered the priest-hood in 1556 and took vows of poverty in 1568. A professor of Hebrew, he became principal of the College de Montaigu, but the position proved difficult to hold. Between 1568 and 1571 Boulaese seems to have been in Rome in order to present to Church officials details of the 1566 exorcism of a demon from a young girl in the Cathedral of Laon. Upon his return, Boulaese learned that his position as principal had been challenged by one Jean Margot; the dispute was not settled until 1578 in Boulaese's favor. Boulaese then proceeded to impose a change on the College, ordering that it be a school for the religious who had taken vows of poverty, and calling himself "father of the religious poor." This action did not please the wealthy regents of the College. In the end Boulaese lost, was condemned for obstinacy and was excommunicated in 1579.

Boulaese published a number of books which were highly esteemed in their day. His mainstay was an account of the exorcism performed at Laon. This account first appeared in 1573 and again in an expanded form in 1578 and in 1593; Princeton has both versions of the story issued during the 1570s. In addition to this, Boulaese published a commentary on Daniel, books on Hebrew, and another Biblical work. Unrecorded and published during Boulaese's turbulent years of the 1570s is his Tabula chronographica.

Boulaese's Tabula lays out in detail four time systems: the Biblical (based on the genealogy of Christ as given in Luke), the Roman, the Babylonian, and the Egyptian. He names his sources, including among them Philo, Berosus, Metasthenes, Manetho, Eusebius, and Jerome. According to Boulaese's chartings, all systems demonstrate clearly that 3960 years had passed from the creation of the earth to the birth of Christ. As Boulaese points out at the end of the dedication to René de Birague, his chart is intended to aid Christians engaged in acquiring the "sacred things." In the dedication he also expresses his interest in eschatological matters (anagogicus).

The eschatological import of the Tabula chronographica is of particular interest. It is known that Boulaese was concerned with the Second Coming of Christ. In his Ad mysticos sacrae scripturae sensus varia dictionum significatio in compendium collecta..., published in Paris in 1575, he mentions the star of 1572: "From the 11th or 12th of November 1572 up to this day on which I write, the 22nd of November 1574, two entire years and 11 days have occurred since the day the new star appeared. It is not certain what this signifies, but it is possible, as the Scriptures say, that it indicates the Second Coming."

In his Tabula chronographica, Boulaese is at pains to demonstrate that his estimate of the time that had passed from the creation of the world to the birth of Christ was correct. Why such anxiety over fixing the precise number of years? And, why 3960? As C. A. Patrides points out, during the Renaissance, there was a distinct received tradition that the world would last no longer than 6,000 years. But determining where one was in that sequence of 6,000 years was not a simple matter. The learned of the age knew that the Second Coming was near, but how close? Over 100 writers of Boulaese's period agonized over this question, presenting more than 40 separate solutions to the problem. Luther, for example, chose exactly 4,000 years. The learned Joseph Scaliger settled on 3948. The variations depended in part on the source of one's information. If one selected the Septuagint, then at the time of the Renaissance the world was at least 6,500 years old. This was some 500 years past the "due date" and the world had not yet ended. So, for some, the chronology of the Septuagint contained an error, and the answer to the eschatological question must lie elsewhere.

Boulaese, like others, chose Luke's recounting of the forebears of Christ as his primary authority; the 42 generations listed there worked out nicely to 3960 years. Moreover, given the authority of Luke, the chronologies of the Romans and others could all be shown to agree with the Bible. In Boulaese's Tabula chronographica, columns two, three, and four to the right of the listing of Luke's 42 generations show in detail the parallels as well as the sometimes arbitrary adjustments required to make the eschatological chronology work out.

The Tabula chronographica has its original imprint canceled by a pasted-over square of paper. Underneath it reads "Apud Thomam Belot, sub D. Barbarae

signo, in via Iacobaea." Belot held a 10-year royal privilege granting exclusive rights to the works of Boulaese. Apparently Belot wished to disassociate himself from Boulaese; he sold the publication to Denis Leval, whose name as printer/publisher appears in the lower left corner. Exactly why Belot ended the relationship (he never published a Boulaese work again) is not known. Certainly Boulaese's life was in turmoil in 1573, and he had his detractors. And in the 16th century, as Anthony Grafton points out, chronology could make tempers flare. It was a subject fiercely argued. Moreover, the authenticity of one of Boulaese's sources, Berosus, was debated by a number of scholars; perhaps Belot decided to distance himself from Boulaese because of such doubts regarding his sources<sup>6</sup>

22. Werner Rolewinck  
Fascuculus Temporum  
 Strasburg, 1467  
 ExI 3126.383.1469

In Werner Rolewinck's chonicle of the events of human history, time is depicted as a continuous line moving from right to left. The scene here is Noah and his ark. Other woodcuts show the Tower of Babel, the Temple of Solomon, views of important cities, Christ as Salvator Mundi. Rolewinck, a Carthusian monk of Cologne, used as a model Marianus Scotus, the 11th century chronicler.

23. Werner Rolewinck  
Fascuculus Temporum  
 Venice, 1479  
 Kane Collection

In this first Italian edition of Werner Rolewinck's chonicle is the first known view of the city of Venice. The year is 464 AD and the 5663rd year since the Creation of the Earth.

24. Henry Issacson  
Saturni ephemerides sive Tabula  
Historico-Chronologica, Containing a Chronological Series or  
Succession of the foure Monarchyes, with an Abridgement of the  
Annual Memorable Passages in them, as also, A Succession of the  
Kings and Rulers over most Kingdoms and Estates of the World,  
with a Briefe Chorographical Description of them.  
 London, 1633  
 Ex 1018.492f

Said to be the only edition of the first tabular chronology of its kind published in England. The Library's copy is opened to show the events of the turbulent 1550's in England, when Edward VI died and Elizabeth I eventually came to the throne.

<sup>6</sup> Stephen Ferguson, "System and Schema: Tabulae of the Fifteenth to Eighteenth Centuries" in the Princeton University Library Chronicle, xlix, 1 (Autumn, 1987), pp 21-29.

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## THEOLOGY

## 25. The Map of the Man of Sinn

G.W.

A Mapped of the Man of Sin: wherein is most lively delineated the Rising Raigning and Ruine of the Kingdom of AntiChrist....

[London, 1622-23]

Print purchased by the Library in Spring, 1987. (Ex)BT985.w5e

"The progress of a sinful man from 'A', the Antichrist as a bishop on a hill blinded by the sun, to 'T' and 'V', the Kingdom of Heaven or New Jerusalem, where "none unclean" are admitted. Way-stations include the Fountain of Silo with its stream muddied by churchmen, abbeys and cathedrals being juggled by simoniacs around the Pope, Rome, and tis cloisters, and Babel and its Tower collapsing. The 'route' is illustrated with scriptual analogues and at the foot are sixty lines of explanatory verse signed "W:G: scripsit et trans:" Perhaps this is William Gouge, the arch-puritan preacher at Blackfriars and chronicler of the 1623 'Fatal Vespers'."<sup>7</sup>

## 26. Richard Dey

The Tree of Mans Life

[London, engraved by John Goddard, not later than 1653]

Print purchased by the Library in Spring, 1987. (Ex)BT985.w5e

The "tree" image elaborated to show the progress of life from birth to death. On the left is the life of the poor; on the right is the life of the rich. The lesson of the comparison is that, in the end and at the beginning, humans share the same lot, regardless of wealth or social standing.

## 27. Biblia Sacra Latina

MSS. written in England in 13th century (about 1230)

Lent by the Scheide Library

At the back of this Latin Bible written in manuscript on vellum are several tables and diagrams, such as:

Beginning at:

Leaf 397b: Table of nine spheres and four elements as well  
as a table for finding the date of Easter

Leaf 398: Tree of virtues and vices showing 7 petitions  
(Lord's prayer)

Leaf 398b: Table connecting the 12 prophets,  
12 articles of faith and 12 apostles.

Another of the same [with differences]

<sup>7</sup> [Arthur Freeman] in Four Centuries of English Books with a Few Manuscripts Catalogue number 1043 issued by Bernard Quaritch, Ltd., London, ca. 1985. Item 77. This item is also described in STC (new ed.) as 11511.2

Leaf 400b: Tree of vices and 7 branches

Leaf 401: Tree of virtues

Ls. 402-3: Four hands treated a "memoria technica:"

the first of the Church - its duty in preaching;

the second, the Devil's wiles:

the third, of God calling to repentance;

the fourth is blank (i.e. outline of hand only)

Leaf 404: Table connecting 10 plagues of Egypt;

10 commandments; and 10 contrarieties

These tables and diagrams appear to have been added in the 14th century. Shown are the hands of leaves 402 verso and 403 recto.

28. Tabula Christianae religionis

[Italy, 15--]

Purchased on the Reed Fund in 1986.

(Ex)BX1754.T32.1495s

This early 16th-century book of only 18 pages is headed Tabula Christianae religionis. The closely printed text covers all the essential points of faith: the Apostles Creed (complete with an Apostle's name next to a point to serve as a mnemonic), the Ten Commandments, the Lord's Prayer, the Seven Sacraments, the Seven Cardinal Virtues, the Seven Deadly Sins, the Seven Ages of Man, the Six Eras of the World, important feast days, and the like. No images are included. At least nine editions of the Christianae religionis are known, all undated and with no indication of printer. Most of them are thought to have been printed in Italy between ca. 1485 and ca. 1520.

Given the simplicity of both content and language, this was just the sort of book appropriate for a wide and general audience. It could have been used by clergy for training new clergy or instructing the laity. Similarly, it could have been used by laity to help them learn the basics of the faith, or when teaching other laity, as a household master would have taught servants. Such a book was the companion to missal and breviary, both of which are essential for the outward demonstration of inward faith; it would also supplement Italian vernacular literature such as saints' lives, which played a major role in the religious life of ordinary clergy and laity alike. Because tabulae like this one were undoubtedly heavily-used, their casualty rate might have been high, much higher, perhaps, than the 10 to 25 percent estimated loss of all books produced during the 15th century.<sup>8</sup>

Protestant and Catholic alike used diagrams in order to present Church dogma. At the left, is:

29. William Perkins

An Exposition of the Symbole, or Creed of the Apostles:  
According to the tenour of the Scripture, and the consent  
of Orthodox Fathers of the Church.

<sup>8</sup> Stephen Ferguson, "System and Schema: Tabulae of the Fifteenth to Eighteenth Centuries" in the Princeton University Library Chronicle, xlix, 1 (Autumn, 1987), pp. 19-21.

London, 1635.

Ex 5709.707q

At the right, is:

30. Jacobus à Sancto Michaelē.

Sacrorvm Novi Testamenti librorvm omnivm analysis  
catholica, et oeconomia generalis.

Lyon, 1670.

Purchased in 1987 on the Sanxay Fund.

Ex BS2355.S23

Perkins, the staunch Calvinist, and Jacobus, the Catholic religious, both illustrate points of doctrine by means of tree diagrams which show subdivisions within divisions of categories. Some scholars point out that this dichotomizing methods seems to stem from the influence of the 16th century figure, Peter Ramus.

In his Sacrorvm Novi Testamenti librorvm omnivm analysis catholica, et oeconomia generalis of 1670, Jacobus à Sancto Michaelē used schematic trees turned on their sides to make systems of divisions and parallelisms. At the left, we read the single summarizing statement; as we progress from left to right, the divisions of the unity are explicated. In turn, each of these parts is subdivided yet again. In the entire book, two of the tabulae analyse the New Testament as a whole, and one sets out Roman Catholic doctrines in a hierarchy (shown here.) All the remaining sheets tabularly explicate the contents of one or more New Testament books beneath a short prose synopsis in large italic type.<sup>9</sup>

31. Epitome of Gospel Mystery emblematically illustrated.

[London, c. 1650].

Purchased on the Reed Fund during 1984-85.

(Ex)N7710.E64.1650f

In the Epitome of Gospel Mystery emblematically illustrated (London, ca. 1650), the major visual elements and their arrangement in space serve as an exposition of theological dogma. The central scene is flanked by two tall columns covered with text, and surmounted by open sky and clouds. A cherub floats over each capital and trumpets a banner on which a rhymed triplet is inscribed. Below the banner and filling the central space is a scene emblematic of the "Gospel Mystery." Flowing from a fiery sun, a river runs through two hearts (one "of love," the other "of stone") and thence through wounds to irrigate the Tree of Life, beneath which is a portal to a holy place. In front of the door is a porch, which only a few figures have reached. In front of the porch is "The Broad Way to Destruction" on which figures in wigs and waistcoats walk toward a burning pit. To the left of the porch stand Adam and Eve exiting Paradise. All of the figures and scenes are labeled, usually in rhymed couplets and triplets.<sup>10</sup>

<sup>9</sup> Stephen Ferguson, "System and Schema: Tabulae of the Fifteenth to Eighteenth Centuries" in the Princeton University Library Chronicle, xlix, 1 (Autumn, 1987), p. 19.

<sup>10</sup> Stephen Ferguson, "System and Schema: Tabulae of the Fifteenth to Eight-



The scene depicted and the visual elements used (double hearts, flowing river, and so on) suggest those used in the "Testamentum Christi" diagram of Jacob Boehme show in the table case below. Even though the plate in the case dates from ca. 1730, Boehme's work was known in early to mid-17th century England when this Epitome was published. (See in this catalogue number 34).

32. The New Jersualem

[London, 169?]

Print acquired by the Library in Spring, 1987. *Group 1-3*

Depiction (overhead view) of the Heavenly City based on the account of its physical features as given in chapters 21 and 22 of the Revelation of St. John.

"And [the New Jerusalem] had a wall great and high, and had had twelve gates, and at the gates twelve angels, and the names written on thereon which are the names of the twelve tribes of of the children of Israel:

"On the east three gates; on the north three gates; on the south three gates; and on the west three gates...

"And the city lieth foursquare, and the length is as large as the breath ...

"And I saw no temple therein; for the Lord God Almighty and the Lamb are the temple of it ...

"And he showed me a pure river of water ... proceeding from the throne and ... there [was] the tree of life, which bare twelve manner of fruit ...

Tree of sermons

in

33. Joannes von Keisersberg

Sermons.

Strasbourg, 1521

Ex 6167.37.1521

In this text of sermons on the Christian Life, the tree diagram sets out in order clock-wise around the tree the letters of the alphabet. The entire image is intended to aid the memory recall the 24 sermons which follow the cut. Each sermon begins with a word starting with the letter of the alphabet which is proper to it's place in the alphabetical order. The tree diagram evokes the "Tree of Life" symbolism, common in Christian art since early medieval times.

Jacob Boehme (1575-1624) German mystic whose influence spread throughout Europe and was studied by Sir Isaac Newton as well as other Englishmen such as William Law (mentor of John and Charles Wesley), William Blake. Samuel Coleridge, and William Butler Yeats.

"Boehme was a devout Lutheran whose mystical experiences led him to formulate a strikingly original account of God and Creation, which he expressed in a complex, private terminology drawn in part from alchemy. Although born of well-to-do farmers, he was apprenticed to a shoemaker at an early age and later moved to GLrlitz, then one of the most important cities in what is now East Germany, to practice his trade. There, at age twenty-five, he had his first mystical experience, in which he felt himself penetrated by the "Light of God." He later wrote that "in one quarter of an hour I saw and knew more than if I had been many years together in a University. . . . I saw and knew the Being of Beings, the Byss and Abyss, the eternal generation of the Trinity, the origin and descent of the world, and of all creatures through Divine Wisdom" (quoted in Rufus M. Jones, Spiritual Reformers in the Sixteenth and Seventeenth Centuries [1914; Boston: Beacon Press, 1959], 159). Another major mystical experience occurred ten years later, in 1610. He published an account of his experiences and beliefs in 1612. He immediately ran into hostility from Lutheran authorities and was forbidden to continue publishing. Nevertheless, as a result of further internal growth, he resumed writing in 1616, but published nothing until 1623. From then until his death the following year, he was under constant attack by ecclesiastical officials who doubted his orthodoxy.<sup>11</sup>

34. Jacob Boehme  
 [Collected works]  
 Germany, ca. 1730  
 Ex 6157.19.1730 vol 6

In this plate "the vessel of the heart is doubled and converted into a circulatory system that assures perpetual interchange and interaction between the upper arc of divine light and lower arc of corrosive fire. The left-right opposition of the divine bipolar eye in Boehme's original diagram has been rotated to the left ninety degrees into a bottom-top opposition. The trunk of the tree/cross sinks its roots/veins into prima materia, and the life blood of the system is conveyed through alchemical transmutations into the heart of the upper realm. At the point of intersection of the horizontal and vertical of the cross, the blood with its source in base matter is converted into the wine/blood of the Son, and the tree itself, rooted in the devouring flames, becomes the tree of eternal life. The circulatory system is constructed so that there need be no end to this process of alchemical transmutation."<sup>12</sup>

Jacob Boehme  
 The Philosophical Globe

<sup>11</sup> Robert Galbreath, "Boehme" in The Spiritual in Art: Abstract Painting 1890-1985, Organized by Maurice Tuchman with the assistance of Judi Freeman. (New York: Abbeville Press, 1986), p. 367.

<sup>12</sup> Harriett Watts, "Arp, Kandinsky, and the Legacy of Jakob Böhme" in The Spiritual in Art: Abstract Painting 1890-1985, Organized by Maurice Tuchman with the assistance of Judi Freeman. (New York: Abbeville Press, 1986), p. 246.

"The diagram that Boehme designed for Forty Questions of the Soul and his explication of this drawing achieved a visual structure that could accommodate all his propositions. He gave the illustration two titles: The Philosophical Sphere and Wondrous Divine Eye of Eternity. Boehme explained that the divine eye, a circle, must be split into two and the two resulting arcs placed back to back and rotated in opposite directions. One eye becomes two eyes, which propel one another through their mutual opposition to one another. One arc issues from the corrosive fire eye of the Father, the other, from the loving eye (of sustaining warmth and illumination) of the Holy Spirit. The heart at the center point of contact between the arcs is the Son. Although the circle that contains the system has a center focal point, this center is in fact engendered by the two foci of the opposing arcs, which project their respective arcs to the point of contact, which is also the spark of ignition. Only when ignited can this center point engender the outer circle that contains and unifies the entire system. The geometrical figure of a perfect circle with a single center point has been used for millennia as a metaphysical symbol of unity and equilibrium. Boehme strains the confines of this figure to the limits by insisting upon the initial split into two eyes, the two foci that between them generate a center to the circle. At the beginning of the nineteenth century, the two foci within a circle caught the attention of German Romantic poets and philosophers, such as Baader, Friedrich von Schelling, Ludwig Tieck, and Friedrich von Schlegel. The Romantics sought a symbolic representation of a unity that could embrace diversity, even polarities, two foci rather than one, and Boehme was the Western philosopher to whom they looked for suggestions."<sup>13</sup>

## 35. Jacob Boehme

[Collected works]

Germany, ca. 1730

Ex 6157.19.1730 vol 6.

## 36. Jacob Boehme

Forty Questions for the Soul

London, 1647

Ex 6157.19.335.9

Copy 1 and Copy 2.

## 37. Jacob Boehme,

The Works of Jacob Behmen, the Teutonic theosopher

London, 1764-81. 4 volumes.

Copy of the English translation on loan from Special Collections, Linderman Library, Lehigh University. (Lehigh call number: 248.B676w.T). The entire work is illustrated. At the front of the first volume is a life of the author by William Law, who influenced Methodism.

<sup>13</sup> Harriett Watts, "Arp, Kandinsky, and the Legacy of Jakob Böhme" in The Spiritual in Art: Abstract Painting 1890-1985, Organized by Maurice Tuchman with the assistance of Judi Freeman. (New York: Abbeville Press, 1986), p. 251. Also see her footnote to this section referring to the work of Marshall Brown.

Volume I. Colored chart "The True Principle of All Things"

Evidently a depiction of Boehme's look into the 'Byss and Abyss'

Volume II. Second Table

Explained in Volume III (p.27, last count):

"The Second Table shews the condition of Man in his old, lapsed, and corrupted State; ... first, ... his earthly visible Body; second, ... his more interior and invisible Astral Body, in conjunction with his Transitory and Astral Spirit;... third, his immortal Soul...; and his Eternal Spirit, which is the Inmost of all."

Volume III. The Origin of Things and the Process of Christ

Shown step by step, starting with the first event at the topmost panel and continuing onward down the right and across the bottom ("The Lowest Parts") then up the left to "Finis."

Volume IV. Plate VI. The Fall of Lucifer

Explained in Volume II (at end): "He [Lucifer] commits High Treason, revolts, lets his dark, proud Will- Spirit, in a false Magia, without any Occasion given him from without ... [Lucifer] falls through the Fire into Eternal Darkness ..."

38. Athanasias Kircher.

Oedipus Aegyptiacus

Rome, 1652-4

Volume II.

Ex 2181.523q

The Seventy-Two Names of God

"The Cabbala says that there are seventy-two names of God, which Kircher interprets by giving God's name in the seventy-two languages: each is spelt with four letters, to reflect the Hebrew Tetragrammaton IHVH (no. 1). Sometimes this leads to compromise, as in Italian IDIO (no. 15) and English GOOD (no. 22). The other circles contain God's various attributes: Creator, Perfection, Light, etc. In the centre is Jesus, whose name is comprised of the 'mother' letter Shin inserted in the Tetragrammaton: IHSVH. The two trees are those of the seven planets and angels (left) and the twelve signs of the Zodiac and tribes of Israel (right). The leaves at the top bear seventy-two names in Hebrew, distributed among the nine angelic orders -- with the caution that they are on no account to be used for magical invocations."<sup>14</sup>

39. Athanasias Kircher.

Ars Magna Sciendi.

Amsterdam, 1669.

Goertz 11012

"Ars Magna Sciendi is one of his most difficult, books being an elaboration of the Art of Ramon Lull, the thirteenth-century Majorcan philosopher, into a kind of symbolic logic. Its object is nothing less than the categorization of all qualities and relationships, and the application of the symbol-

<sup>14</sup> Joscelyn Godwin, Athanasias Kircher. A Renaissance Man and the Quest for Lost Knowledge (London: Thames and Hudson, 1979) p. 63.

ic formulae thus obtained to every department of learning. The frontispiece shows the eye of God presiding over this formidable list: Theology, Metaphysics, Physics, Logic, Medicine, Mathematics, Moral Ethics, Ascetics, Jurisprudence, Politics, Scriptural Interpretation, Controversy, Moral Theology, Rhetoric, and the Combinatorial (i.e. Lullian) Art. On the tablet in the hand of the Divine Sophia is the 'Alphabet of the Arts', the archetypes of all experience and knowledge. To construct such a system as this book unfolds would have been a reasonable life's work, yet for Kircher it was only one among many encyclopaedic undertakings, and its Greek inscription might well serve as his own motto: 'Nothing is more beautiful than to know the All.'<sup>15</sup>

"The Jesuits' Universal Horoscope" in

40. Athanasias Kircher.

Ars Magna Lucis

Amsterdam, 1671

Ex 8013.523q

"The tree of the Society of Jesus, with its roots in Rome, sends its leaves into every corner of the known world. The purpose of the chart is to show the time and length of the day in every land. Such tables, less fancifully drawn, are used by astologers today to align birth times throughout the world with Greenwich Mean Time. The corner panels show in thirty-four languages the words 'From sunrise to sunset, praised be the Name of the Lord.'<sup>16</sup>

41. Athanasias Kircher.

Musurgia Universalis

Rome, 1650

Graphic Arts

Frontispiece to Musurgia Universalis, Rome, 1650 by J. Paul Schor

"The symbol of the Trinity sheds its rays on the nine choirs of angels, who sing a 36-part canon (by Romano Micheli), and thence on the earth. The terrestrial sphere is shown encircled by the Zodiac and surmounted by Musica, who holds Apollo's lyre and the pan-pipes of Marsyas. In the landscape are seen dancing mermaids and satyrs, a shepherd demonstrating an echo, and Pegasus, the winged horse of the Muses. On the left is Pythagoras, the legendary father of musical theory. He points with one hand to his famous theorem, and with the other to the blacksmiths whose hammers, ringing on the anvil, first led him to discover the relation of tone to weight. On the right is a muse (Polymnia?) with a bird perched on her head -- possibly one of the nine daughters of Pierus, who for their presumption in attempting to rival the Muses were turned into birds. These figures are surrounded respectively by antique and modern instruments."<sup>17</sup>

<sup>15</sup> Joscelyn Godwin, Athanasias Kircher. A Renaissance Man and the Quest for Lost Knowledge (London: Thames and Hudson, 1979) p. 9.

<sup>16</sup> Joscelyn Godwin, Athanasias Kircher. A Renaissance Man and the Quest for Lost Knowledge (London: Thames and Hudson, 1979) p. 78.

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 PHILOSOPHY

42. Louis de Lesclache.  
La philosophie expliquée en tables.  
 Paris, 1652-63.  
 Purchased on the Zabriskie Fund in 1983.  
 (Ex)E1889.L4 P5 1651.

The tree diagrams are horizontal rather than vertical, and schematic rather than naturalistic, as in Louis de Lesclache's La philosophie expliquée en tables (Paris, 1652 - 1653). His three-volume set of bound engraved plates shows the points of philosophy in schematic, tree-like diagrams turned on their side so that we read them left to right, rather than bottom to top, as with standard tree diagrams. The utility of the tables, the author declares, is that many things can be compressed into a few words. Moreover, they show an orderliness that aids memory and reason, and they display the correspondence that one thing has with another. Here, "philosophie" is construed in a wide sense to include moral teaching, logic, and metaphysics.<sup>18</sup>

43. Gregor Reisch  
Margarita Philosophica  
 Basel, 1583  
 Gift to the Library from the Estate of Harold L Ruland  
 Ex 6179.7522.361.11

Reisch's text was a kind of desk-top encyclopedia of knowledge in its day. In this woodcut of the "Figure of Logic," we see logic shown as a huntsman chasing the hare ("Problem"). He is armed with the sword of "syllogism" and the bow and arrow of "inquiry." Off in the distance are the woods of insoluble problems. In the pages following the reader is taught the rules of logical deduction and other matters, all means toward solving intellectual problems.

44. Gregor Reisch  
Margarita Philosophica  
 Strasbourg, 1512  
 Ex 6179.7522.361

Reisch's text was a kind of desk-top encyclopedia of knowledge in its day. In this woodcut of the "Figure of Grammar," first of the Liberal Arts, we see a matron with leading a student to school. She holds out a hornbook

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<sup>17</sup> Joscelyn Godwin, Athanasias Kircher. A Renaissance Man and the Quest for Lost Knowledge (London: Thames and Hudson, 1979) p. 68.

<sup>18</sup> Stephen Ferguson, "System and Schema: Tabulae of the Fifteenth to Eighteenth Centuries" in the Princeton University Library Chronicle, xlix, 1 (Autumn, 1987), pp. 17-19.

with the alphabet on it in her right hand; in her left a key unlocks the school door, a "tower of learning" with classes in session in the lower floors and in the upper stories await the ancient masters: Cicero to teach rhetoric; Ptolmey for astronomy; Peter Lombard for Theology and Metaphysics; Aristotle for logic; Euclid for geometry and so on.

## LOGIC

### 45. Martin Meurisse

#### Artificiosa totius logices descriptio

("A technical and artfully-done depiction of logic in its entirety")

Paris, 1614.

This engraving is kept with other oversize prints of 17th century France in the Graphic Arts Collection of the Library.

At the bottom edge of this engraving a Franciscan monk monk gestures towards several novices. Behind him is a walled courtyard surmounted by a formal garden above which stands a grove of trees. Exactly what is the monk doing? Why such an exotic scene of trees, fountain, half-clad women, and numerous small objects?

The monk is Martin Meurisse (1584 - 1644), a Cordelier Franciscan who eventually became Bishop of Madaure. His duties included training novices, and toward that end he prepared three instructional charts. (List of the others in the series is below.) In 1983 Princeton University Library acquired the first in the series, "A technical and artfully-done depiction of logic in its entirety" (Artificiosa totius logices descriptio), published in 1614. In the Logices descriptio, Meurisse is shown teaching the novices how the three chief operations or processes of the intellect -- according to Duns Scotus and Aristotle, as interpreted by Meurisse -- can be apprehended by studying the details of the chart.

The chart is divided into two principal parts: the three-tiered central feature depicting the operationes mentis, and a surrounding border of emblems. The three tiers of operationes are the traditional Scholastic processes of the intellect arranged in a hierarchy, with the lowest, Categories, at the bottom, followed by Judgement, and Syllogism at the top.

Categories are represented by a walled-in courtyard entered by ascending five steps and going through a portal. The steps are the five predicables of Aristotelian logic as interpreted by Porphyry, among others: genus, species, difference, property, and accident. Within the courtyard are Aristotle's ten categories (substance, quantity, quality, relation, action, passion, place, time, position, and state) flowing from the central source, the fons of being. The fons is a pool adorned with a statue of a half-clad man standing with one foot on a sphere. A banner over his head reads: "The first process of intellect refers to differentiating thinking, which explains the nature of an object."

The second process of intellect, Judgment, is depicted as a formal, hedged-in garden at the gate of which sits a half-clad woman, perhaps Judgment

personified. Like the man below, she has a banner over her head. Hers reads: "This is the dividing process in which the whole is distributed into its parts, or the manifold is separated according to the multiplicity of the whole." In the garden behind the woman are inscriptions giving particulars concerning the process of judgment.

Syllogism is a grove of three trees that sit above the second realm. The central tree is the "Tree of Knowledge," flanked on the left by the "Tree of Sophisms," and on the right by the "Tree of Beliefs." Each tree is ripe with its corresponding fruit; the Sophists' tree bears the fruit "error" and "ambiguity." In front of the central tree sits a gowned woman with outstretched arms. An inscription above her arms reads: "This is argumentative process (syllogism) in which the one is concluded from the other."

Embedded in the border surrounding the three realms of operationes mentis are many emblems. Outside the first and lowest realm lie bits and pieces of reality (*ens incompletus*) separated from their completed form by the wall of *caentia*, or deprivation. Outside the second realm the Sophists pipe on their harmonicas, perhaps a reference to fools and their pipes. In the upper corners are miniature portraits of Aristotle (right) and Duns Scotus (left), whose doctrines Meurisse is explicating in his chart. In the uppermost compartment, the *Logices descriptio* is dedicated to Jacques Auguste de Thou, the great French bibliophile, a nobleman and member of the Third Order of St. Francis.

These are only a few of the most obvious readings of the chart. A full explanation would take many pages, just as Meurisse intended, and just as is entailed by the instructional form which he used, a *tabula*.<sup>19</sup> Other charts in the series:

Clara totius Physiologiae Synopsis

("A clear synopsis of physiology in its entirety")  
(1615)

Artificiosa totius Moralis Philosophiae tabella

("A technical and artfully-done tableau of moral philosophy in its entirety") [1630?].

Logic is the science of the processes of inference, that is the 'mental operation which proceeds so as to cause a consequent conclusion.' In short, the art of reasoning.

In western culture, Aristotelean logic has been studied since earliest times and his works on logic were commonly used as school texts. Over time, visual aids for understanding Aristotelean logic developed -- such as the square of contradiction or the tree of Porphyry. (Porphyry was an 3rd century commentator on Aristotle.)

Tree of Porphyry

<sup>19</sup> Stephen Ferguson, "System and Schema: *Tabulae* of the Fifteenth to Eighteenth Centuries" in the Princeton University Library Chronicle, xlix, 1 (Autumn, 1967), pp. 8-11.



46. Paulus Pergulensis  
Logica  
 Venice, 1495  
 ExI 6275.702  
 and
47. Peter Hispanus  
[Work on Logic]  
 Vienna, 1516  
 Ex 6275.501.2

The Tree of Porphyry "set out the relationship between genera and species and called for a multiplicity of choices. It originated as an illustration to commentaries on Porphyry's Isagoge (late 3rd cent) and proceeded from the ultimate genus, substance, to the ultimate species, individual men, by a series of dichotomous divisions. Each bifurcation of the tree contained a positive and negative side."<sup>20</sup>

Faulus Pergulensis, Doctor Insignis, Acutissimus and Perspicacissimus, born at Pergola near Urbino. He was canon of St. Mark's and lecturer in Science at Venice where he died ca. 1451. His Logica on leaf aii shows a Tree of Porphyry; also seen in this logic text of Peter of Spain, published in 1516.

Square of Contractions

48. Peter Hispanus  
[Work on Logic]  
 Venice, 1622  
 Ex 6275.501.2

Logic is the science of the processes of inference, that is the 'mental operation which proceeds so as to cause a consequent conclusion.' In short, the art of reasoning.

In western culture, Aristotlean logic has been studied since earliest times and his works on logic were commonly used as school texts. Over time, visual aids for understanding Aristotlean logic developed -- such as the square of contradiction. The square demonstrates the inter-relatedness of particular premises and illustrates the so-called "principle of contradiction," that contradictory statements can not both be true at the same time.

On leaf 43r, in the Tractatus Primus is a diagram of the square of contradictions.

<sup>20</sup> Michael Evans in "Geometry of the Mind" AAQ: Architectural Association Quarterly vol 12, no 4 (1980) p. 45.

## ALLEGORY

## 49. Robert Burton

Anatomy of Melancholy

London, 1621

Ex 3658.86.312.122 copy 1

Robert Burton (1577-1640), the Oxford scholar, is best remembered for his Anatomy of Melancholy, which went through nine editions between 1621 and 1676. Burton revised the book continually after its first appearance in 1621. The Anatomy was widely read in the 17th century, admired by Samuel Johnson and by Charles Lamb. The "Argument of the Frontispiece" explains the content of the book. Moreover, the book is divided into three 'Partitions' -- the First defining the disorder as well as covering causes and symptoms; the Second discusses cures; the Third is devoted to Love-Melancholy and Religious Melancholy. Shown across the gallery is his five page diagram of the divisions for the understanding of diseases.

## 50. Thomas Greenhill

Necrokedeia or the Art of Embalming

London, 1705

Ex RA623.G81

The "Explanation of the Frontispiece" faces the titlepage.

## 51. Michael Sparke

The Narrative History of King James

London, 1651

Ex 14431.669

Its "Emblematic titlepage explained" is opposite the titlepage.

## POETRY

## 52. William Blake

Visions of the Daughters of Albion

1793

Ex3631.3.393q

Opened to "The Argument" and the First page of the poem. The theme of this poem is contained in Oothoon's cry "Love! Love! Love!, happy, happy Love! free as the mountain wind!" It consists chiefly of the complaint of Oothoon, bound by prejudice to an unhappy marriage with the rational Bromion, whereas her true love is for the emotional Theoormon. The latter is withheld by jealousy and will not listen. Oppressed womanhood in the persons of the Daughters of Albion "hear her woes, and echo back her sighs."<sup>21</sup>

<sup>21</sup> Note on a loose page laid into the the Princeton copy.

53. William Blake  
Songs of Innocence and of Experience  
 1794

Ex3631.3.388.1794

"Song of the Rose"

Blake was influenced by among others Jacob Boehme whose works in English translation published in the 18th century are displayed in a case across the gallery.

Shaped or pattern poetry in English Literature is chiefly a 17th century phenomenon. No pattern poetry is known to have been printed during the 18th century in England. Virtually all of the shapes used for these poems are those prescribed in Puttenham's The Art of English Poesie. In shaped poetry, the physical form of the printed poem and the emotional flow of the text re-enforce each other. Herbert's "Easter Wings" is an excellent example of such re-enforcement.

54. George Herbert  
The Temple  
 London, 1634  
 Ex 3780.5.388.19 (3rd Edition)  
 On page 34-5 is his pattern poem "Easter Wings" (wings)

55. Philip Ayres  
Lyric Poems, Made in the Imitation of the Italians  
 London, 1687  
 Ex 3612.827.1687  
 On page 162 is his "The Trophy" (monument)

56. Edward Benlowes  
Theophila, or Love's Sacrifice  
 London, 1652  
 Ex 3625.6193.389  
 On page 14 is an altar poem. Also shown is an allegorical engraving of "Theophila" or the soul, shown here in meditation on the Trinity, symbolized by the triangle.

57. Facetiae. Musarum Deliciae: or the Muses-Recreation.  
 (London, 1656)  
 and  
Wits Recreations. Selected from the Finest Fancies of Modern Muses.  
 (London, 1656)  
 Ex 3598.333  
 Facsimile edition printed in London in 1817.  
 A love-knot, one of several in the book.

## ARTIFICIAL MEMORY

"Artificial memory" is a technique of memorization in which memory is developed purposefully by an individual. The technique is actually quite ancient and was once considered to have been developed by Cicero. It rests on the common judgment that sight is the most powerful of the six senses and thus should be used for remembering. Just as the distinction between object and background is necessary for seeing to occur, so is this distinction central to the classical theory of memory.

In essence, the theory tells us that, to establish background, we must first memorize places. Go to a building, view the doorway, fix it in mind, move along, view a window, fix it and so forth. At this first stage, we build a storage system, an aggregation of niches into which something can be put. Secondly, we proceed to fill these places (topoi or loci) with images. The images (imagines agentes) represent specifics that are intended to be remembered. The images are to be striking (e.g. a bloodied face) so that their power to provoke emotion helps the mind to remember. To recall the memorized data, we then visualize a gallery of images in place, and by scrutinizing them carefully we decode the abstractions represented by the images.

## 58. Johannes Buno

Memoriale juris civilis Romani, quo tituli omnes et praecipuae leges, quae in quinquaginta Digestorum seu Pandectarum libris sunt, emblematis imaginibus ita efficta exhibentur, ut una cum titulorum materiis eorum etiam numeri memoriae imprimi, contineri ac reddi quin etiam leges illae praecipuae ad suos referri titulos facili negotio queant ... edidit Johannes Buno.

Hamburg, 1673-74.

Ex KDB.B86 1673.

Recently, the Philadelphia rare-book dealer, Bruce McKittrick, gave the Library a bold example of a memory aid. It is from a Latin text discussing the Justinian Code, and was published in Hamburg in 1673 - 1674. Distinguishing this text from many other schoolbooks on the Code are a series of 22 engravings designed to assist students with memorizing important points. The text and plates are the ingenious work of Johannes Buno, a schoolmaster who also prepared a Bible similarly adorned with exotic aids to memory.

Buno's engravings were to be used in accord with a specific program. First, the student had to discover the underlying image. In this engraving for the Digests of Justinian, there are ten such principal images, starting in the upper left with a stone and moving left to right and then down to the leftmost image in the second row, to the last image, a sheath. To learn the subdivisions of each Digest, the student next examined and memorized the series of small images fixed on the principal image. These images are arranged according to the numerical order in which the subdivisions of the Digest appear. Each small, tagged scene depicts the gist of a sub-division. These many sub-divisions are explained in the accompanying diagram, giving English translations of the Latin.<sup>22</sup>

<sup>22</sup> Stephen Ferguson, "System and Schema: Tabulae of the Fifteenth to Eight-

## 59. Johannes Buno

Memoriale juris civilis Romani, quo tituli omnes et praecipuae leges, quae in quinquaginta Digestorum seu Pandectarum libris sunt, emblematis imaginibus ita efficta exhibentur, ut una cum titulorum materiis eorum etiam numeri memoriae imprimi, contineri ac reddi quin etiam leges illae praecipuae ad suos referri titulos facili negotio queant ... edidit Johannes Buno.

Hamburg, 1673-74.

Ex KDB.B66 1673a.

In this engraving for the Institutes of Justinian, there are four such principal images, starting in the upper left and moving clockwise: a young man, a rucksack, a money-purse, and a barrel. To learn the sub-divisions of each major section, the student next examined and memorized the series of small images fixed on the principal image. These images are arranged according to the numerical order in which the major subdivisions appear. Each small, tagged scene depicts the gist of a sub-division. These many sub-divisions are explained in the accompanying diagram, giving English translations of the Latin.

## 60. Cosmas Rosellius

Thesaurus Artificiose Memoriae  
Venice, 1579

Copy bought in Feb. 1987 for the Rare Books Collection

Cosmas Rosellius, the author of this "Treasury of Artificial Memory" was a Florentine and member of the Dominican Order. In the book, Rosellius offers a number of memory place systems for the storage of information, as directed by the techniques of artificial memory. Suggested place systems included: abbeys, cathedrals, the constellations, human figures, Hell, and Heaven. "The place of Paradise is to be imagined as surrounded with a wall sparkling with gems. In the centre is the throne of Christ; ranged in order below are the places of the celestial hierarchies, of Apostles, Patriarchs, Prophets, Martyrs, Confessors, Virgins, Holy Hebrews and the innumerable concourse of saints. There is nothing at all unusual about Rosellius's Paradise, except that it is classed as 'artificial memory.' With art and exercise and vehement imagination we are to imagine these places."<sup>23</sup>

Shown here are repeating cuts of the design of Heaven. The two cuts straddle at either end the section of the book on Paradise.

## 61. Johannes Romberch

Congestorium Artificiose Memoriae  
Venice, 1533

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eenth Centuries" in the Princeton University Library Chronicle, xlix, 1 (Autumn, 1987), pp. 13-17.

<sup>23</sup> Frances Yates, The Art of Memory, Chicago: University of Chicago Press, 1966, p. 122.

Ex 6443.782

"The visual alphabets illustrated in the memory treatises, were ... intended to be used for making inscriptions in the memory. In fact, this can be proved from the example (shown here) in the third part of Romberch's book of a memory image covered with inscriptions in visual alphabets (Xerox adjacent). This is one of the very rare cases in which a memory image is illustrated; and the image turns out to be the familiar figure of old Grammatica, the first of the liberal arts, with some of her familiar attributes, the scalpel and the ladder. She is here, not only the well-known personification of the liberal art of Grammar, but a memory image being used to remember material about grammar through inscriptions on her. The inscription across her chest and the images near of on her are derived from Romberch's visual alphabets, both the 'objects' one and the 'birds' one which he is using in combination. He explains that he is memorising in this way to answer the question whether Grammar is a common or a particular science; the reply involves the use of the terms 'predicatio', 'applicatio', 'continentia'. 'Predicatio' is memorized by the bird beginning with a P (a Pica or pie) which she holds, and its associated objects form the object alphabet. 'Applicatio' is remembered by the 'Aquila' and associated objects on her arm. 'Continentia' is remembered by the inscription on her chest in the 'objects' alphabet (see the objects representing C, O, N, T, in the 'objects' alphabet)."<sup>24</sup>

62. Robert Fludd

Title page of 'Ars Memoria'  
in Tomus II (concerned with the lesser world or the microcosm  
of the world of man) of his  
Ultriusque Cosmi, Maioris scilicet et Minoris, metaphysica,  
physica, atque technica Historia  
("Metaphysics, physics and  
technical history of two cosmoses, namely the greater  
world and the lesser world")  
Oppenheim, 1621  
Ex 6252.352q

Robert Fludd lived in England when he wrote this fascinating 'History of the Two Worlds' in which he expounds his own learned theories of what is nowadays called 'occult' thinking. In the arts of the microcosmos section of his book, he covers 'artificial memory.' "The chapter on 'the science of spiritual memorising which is vulgarly called Ars Memoriae' is introduced by a picture illustrating this science. We see a man with a large 'eye of the imagination' in the fore part of his head; and beside him five memory loci containing memory images. Five is Fludd's favorite number for a group of memory images, ... and the diagram also illustrates his principle of having one main image in a memory room. The main image is an obelisk; the others are the Tower of Babel, Tobias and the Angel, a ship and the Last Judgment and the damned entering the mouth of Hell -- an interesting relic in this very late Renaissance system of the mediaeval virtue of remembering hell by artificial memory. These five

<sup>24</sup> Frances Yates, The Art of Memory, Chicago: University of Chicago Press, 1966, p. 119-120.

images are nowhere explained ... in the text."<sup>25</sup>

63. Petrus de Rosenheim  
Memorabiles evangelistarum figurae  
 Pforzheim, 1502  
 Ex NE1235.A7P4

Striking examples of the technique of artificial memory is to be found in this series of woodcuts summarizing the contents of the four Gospels. The example above is typical of the device used. The dominant figure is the standard symbol of the Gospel writer -- Luke is represented by the bull. Fixed on the body of the bull, starting at the head are six 'sub-images', each depicting a section in the Gospel. In this cut, the six are the beginning of the Gospel -- to be read starting at the head of the bull, and reading down his torso, then over to the left and across to the right:

- |  |  |
|--|--|
| 5. Selection of Peter<br>(his fishing net and<br>his bed roll) | 6. Teaching the Sermon<br>on the Mount<br>(the Eight Beatitudes) |
|--|--|
1. the Angel announcing the birth of Christ
  2. the Nativity narrative
  3. Baptism of Jesus
  4. Temptation in the Desert

64. Petrus de Rosenheim  
Memorabiles evangelistarum figurae  
 Pforzheim, 1502  
 Ex NE1235.A7P4 copy 2

Another copy of the same book described above. In this woodcut the beginning sections of the Gospel of Mark are depicted. By learning all the images in proper series, one could recall the entire contents of a particular gospel.

## SYSTEMS OF KNOWLEDGE

Denis Diderot, editor.

Encyclopédie ou Dictionnaire Raisoné des Sciences, des Arts et  
 des Meiters  
 Paris, 1751

Ex 0984.325q and shelved in the Dulles Reading Room

One of the great intellectual achievements of the 18th century, Diderot's Encyclopedia stated that one of its expressed purposes was "to set forth, as far as possible, the order and and the interrelationship of human knowledge"

<sup>25</sup> Frances Yates, The Art of Memory, Chicago: University of Chicago Press, 1966, p. 326.

The organization of knowledge into a general scheme is explained in the "Preliminary Discourse" at the beginning of the first volume and then set forth graphically in three other ways:

65. I. Allegorical frontispiece showing Truth surrounded by Reason and Philosophy with Theology kneeling at her feet [Frontispiece in smaller format in Atlas encyclopédie volume 1 of the Encyclopédie méthodique. (Ex AE25.E5q)]
66. II. A schematic "tree" diagram showing that Human Understanding perceived the world through the faculties of Memory, Reason, and Imagination.<sup>26</sup> [Système Figuré des Connoissances Humaines. Entendement: Memoire, Raison, Imagination]  
 History and related sciences derive from Memory  
 Moral and natural philosophy derive from Reason  
 Poetry and related arts derive from Imagination
67. III. A naturalistic "tree" diagram showing the "genealogical distribution of the principal arts and sciences" was drawn up by Christian Frederic Wilhelm Roth of Weimar and in 1769 published as the frontispiece for volume one of the Tables for the Encyclopedia. Roth developed his endeavors at presenting a system of knowledge by publishing separately the next book (Erfurt, 1785) [number 68].
68. IV. Christian Frederic Wilhelm Roth.  
Versuch einer Mappemonde litteraire.  
 Erfurt, 1785.  
 Purchased on the Sanxay Fund during 1986.  
 (Ex)Z2000.R67.1785f

Christian Frederic Wilhelm Roth's Versuch einer Mappemonde litteraire (Erfurt, 1785) offers an interesting contrast. Roth covers the whole range of knowledge. He charts a Mape-monde Litteraire -- "Map of the World of Letters." He does so using a columnar arrangement, with each column filled with text and disposed left to right across the page. There are no images on the tabula, only text. In Roth's thinking, "Letters" is the total intellectual culture of humankind, not just philosophy, theology, and the genealogies of Kings. Significantly, financial backing for the book did not come from a single patron, but from a group of subscribers. True, the list is headed by eight members of the German nobility, but they are far out-numbered by the more than 150 others on the list. These others are lesser men: merchants, booksellers, Cappelmeisters, and so forth. From both the list of subscribers and Roth's ambitious attempt to represent all the new knowledge of his time, we get a glimpse of the democratic age arriving, an age when knowledge would be transmitted by means more accessible to the common man, unversed in the systems and schema of "artificial memory" and the often esoteric meanings of emblems.<sup>27</sup>

<sup>26</sup> Howard C. Rice in Diderot's Encyclopedia 1751-1780 An Exhibit Commemorating the 200th Anniversary of Its Publication. Princeton University Library. Exhibition Catalogues Number 8. (Princeton, 1951), p. 7.

<sup>27</sup> Stephen Ferguson, "System and Schema: Tabulae of the Fifteenth to Eighteenth Centuries" in the Princeton University Library Chronicle, xlix, 1 (Autumn, 1987), pp. 29-30



## 69. Robert Burton

Anatomy of Melancholy

London, 1621

Ex 3658.86.312.122 copy 2, 3, and 4

Robert Burton (1577-1640), the Oxford scholar, is best remembered for his Anatomy of Melancholy, which went through nine editions between 1621 and 1676. Burton revised the book continually after its first appearance in 1621. The Anatomy was widely read in the 17th century, admired by Samuel Johnson and by Charles Lamb. The book is divided into three 'Partitions' -- the First defining the disorder as well as covering causes and symptoms; the Second discusses cures; the Third is devoted to Love-Melancholy and Religious Melancholy. This tabular synopsis of the First Partition of the book extends five pages. The beginning sections is at the far right and the table continues across to the far left.

## 70. John Dee

"Here have you (according to my promise)  
the Groundplat of my mathematicall Preface: annexed  
to Euclide (now first) published in our English tongue.  
An 1570. Febr. 3."

London, 1520 (Feb. 25)

Ex 2654.331.570g

Diagram of dichotomys showing that the Sciences and Artes Mathematicall are either Principall (2 such) or Derivative (19 such)

## 71. Robert Fludd

"Temple of Music" in Tomus I (covering the macrocosm)  
Ultriusque Cosmi, Maioris scilicet et Minoris, metaphysica,  
physica, atque technica Historia

("Metaphysics, physics and  
technical history of two cosmoses, namely the greater  
world and the lesser world")

Oppenheim, 1618

Ex 6252.352q

"This extraordinary structure, obviously influenced by Renaissance theatrical architecture, was probably conceived as a mnemonic device for the rules of music. Proceeding along the bottom we find first a lute, an instrument which Fludd honours with the following encomium:

'No other invention, ancient or modern, is more seemly for consorts nor more desirable for symphonies, nor more admirable to the ears of listeners. Time destroys not the sweetness of its sounds, neither do fickle inventions seduce men's affections from it, however rare, unusual, or more easily learnt these may be.' (p. 226)

Next is the famous scene of Pythagoras entering the forge in which he noticed the consonant pitches produced by four hammers. Examining the hammers, he found their weights in the proportion 12, 9, 8 and 6, giving the intervals of fourth, fifth and octave. The massive foundation obscuring the remainder of the arcade is in the form of a staff with a bass clef. The low-

est note is G, the bottom of the gamut, and as the notes proceed up the scale so their values get smaller, from maximus to semifusa (the latter equal to our quaver or eighth-note). This is the basis which the rest of the temple amplifies.

In the second storey we find first a column-monochord with the notes of the gamut marked off for two octaves, two higher octaves being indicated only by Gs. Skipping the chart, we come to another gamut between the first two Tuscan columns, running up from F to a<sup>2</sup>: the normal limits of most music in Fludd's day. The next three spaces explain the three species of hexachords, the six-note 'scales' of medieval music whose lowest note, 'ut', could fall on an F, C or G. These were called respectively the soft, natural and hard hexachords. In the engraving the soft hexachord is surmounted by a round tower and round organ pipes, the hard hexachord by square ones. These reflect the different versions of the note B as it falls in the respective hexachords: in the soft one it sounds B-flat, written with a round b that became the familiar flat sign; in the hard one it sounds B-natural, written with a square b which survives in our natural sign. These two accidentals may be seen in the top of the ground-floor arcading. The natural hexachord runs for six notes up from C, hence avoids B altogether. It being the highest of the three, Fludd likens it to the highest element, fire, and gives it the highest tower, pointed like a flame.

We consider next the clock above Apollo. Aptly surmounted by Father Time, the upper dial shows 12 hours, the lower one the different note-values. The two outer circles contain the notes 128 semifusae. (The last note should have two flags on its tail.) To each of these are added their appropriate rests. For some reason each is also accompanied by a note of the next value down, and their relationships: 1 maxima (Fludd calls it larga) equals 2 longs, 4 breves, 8 semibreves, 16 minims, 32 semiminims, 64 fusae, but this system fails when the fusa is reached.

The area above Pythagoras is divided diagonally. On the left is the Platonic lambda, described in the Timaeus. There are two errors, rectified in the text (p. 204): 16 should be 12, and 24 should be 27. The ramifications of this 'net' are vast, but here it serves simply to show the proportions of note-values to each other. In medieval and Renaissance notation a breve could contain either 4, 6, or 9 minims, depending on the time-signature. The possibilities for longer notes were correspondingly greater. ;P.The 'chess-board' is an aid to composition, constructed rather like the charts which show the mileage between cities: it shows the distances between the notes of the scale. But it only gives consonances. Suppose one has written a low A and wants to write a middle C against it. The chart shows that all is well: the interval is a tenth. Try a B, however, and one meets a blank: the interval is a discord.

The 'clerestory' on the level of the three towers is a similar device, enabling one to check at a glance the notes respectively an octave, sixth, third and fifth from any given note. The windows for the sixths and thirds are smaller, these being only imperfect consonances as opposed to the perfect octave and fifth.

Finally, in the alcove beneath the twin portals representing ears, a Muse stands pointing at a phrase in three parts, the triumphant result of these

compositional aids (right).<sup>28</sup>

### DIAGRAMS IN USE

In this case are displayed illustrations intended to show some of the circumstances in which diagrams were used.

72. John Booker, alleged translator.

The Dutch fortune-Teller: Discovering XXXVI several questions. Which Old and Young, Married Men and Women, Batchelors and Maids, Delight to be Resolved of.

London, [1690?]

Ex 3633.9225.331

Cut on the title page shows Astrologer at his desk with the wares of his business, including an open book of diagrams. To the side of his desk, a ordinary Englishman who has come to consult him. The text of this book is quite bizarre with a page of instructions and many pages of wheels and the "results" of using the wheels.

73. Christopher Marlowe

The Tragical History of the Life and Death of Doctor Faustus.

London, 1620.

Robert H. Taylor Collection.

The cut shows the famed actor of the period, Edward Alleyn, in role of Mephistopheles, who stands inside the zodiacal circle, with book of magical lore in hand.

74. George Fisher

The American Instructor

New York, 1760

Graphic Arts. Sinclair Hamilton Collection.

Frontispiece shows diagrams in the school room

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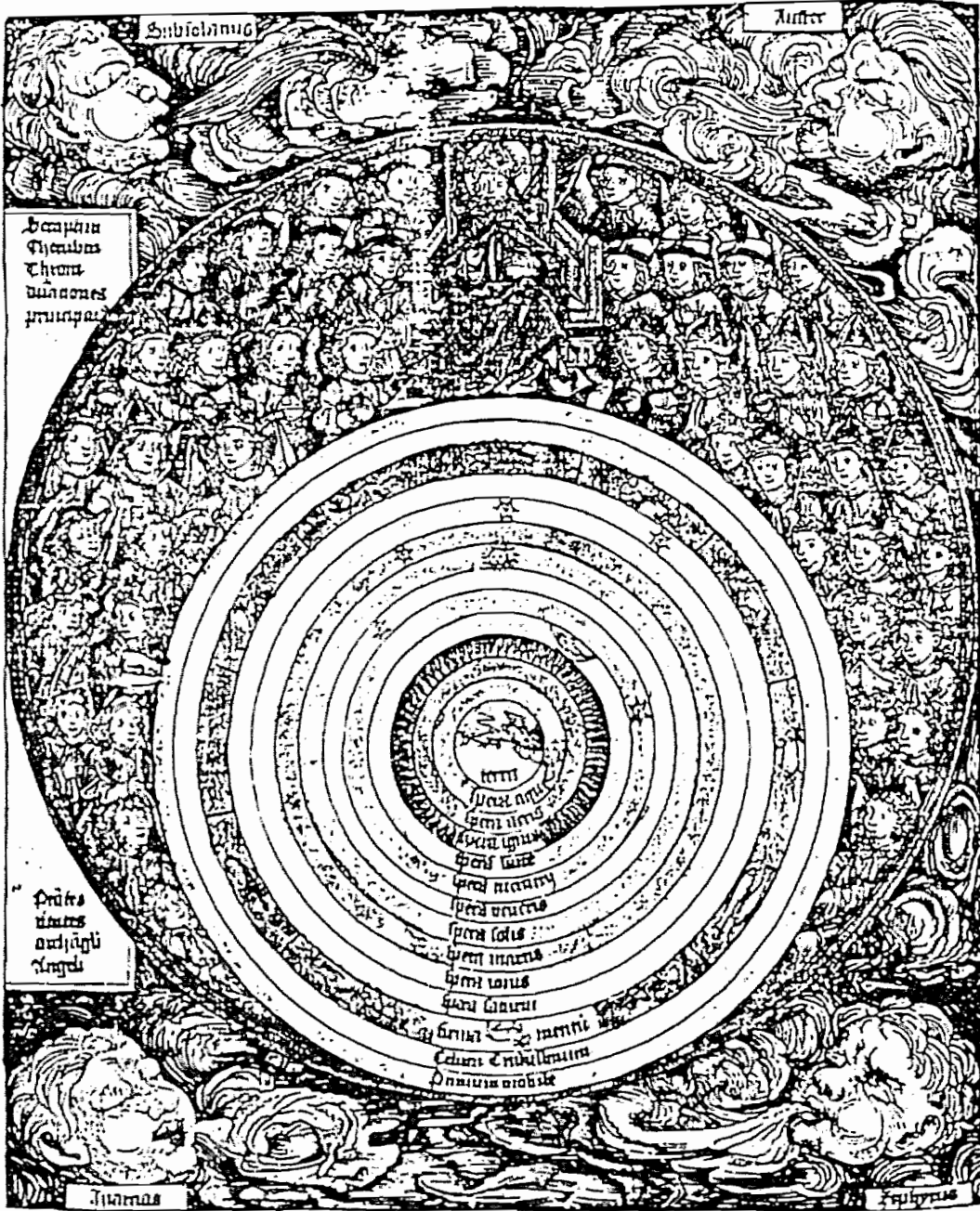
<sup>28</sup> Joscelyn Godwin, Robert Fludd. Hermetic Philosopher and Surveyor of Two Worlds (Boulder: Shambala Publications, 1979), p. 78

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XEROXES OF EXHIBITS



wherefore if you haue a large circle of two foote diametre alwayes reddie diuided into 360. equall parts, and another 365  $\frac{1}{4}$  equall parts, the same shall stand you in great stead to diuide any circle of the Iewel or any other astron omicall instrument, be they neuer so small.

# Heere follow the principles and rudiments of Astronomy and Cosmographic with the vnderstanding of euerie circle of the Sphere and their vocables.

## What Cosmographie Geographic and Topographie are.

### Chapter 1.



Cosmographie is as much to say, as the description of the world: as well his Aethereall part, as Elementall, and in this differeth from Geographic, because it distinguisheth the earth by the celestiall circles: and not by Hilles, Riuers and such like.

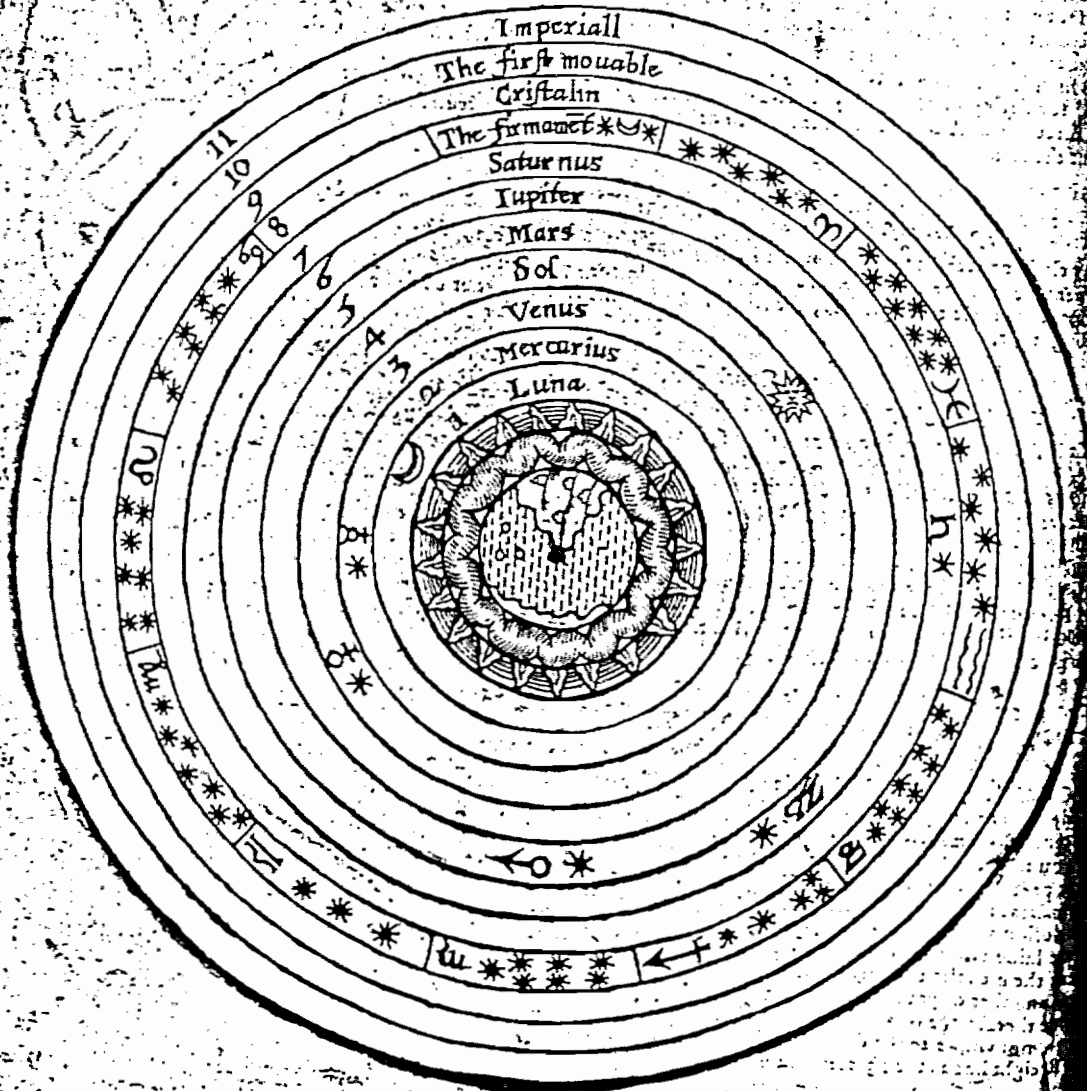
Geographic is a certeine forme and imitation of, the picture of the earth, and of his chiefest knownen parts, and differeth from Cosmography, because it distinguisheth the earth by hilles, seas, and other notable matters, not respecting the circles of the sphere.

Topographie called also Corographie, is the describing of any particular place without relation the whole, not leauing our the smallest contents thereof, as ports, townes, small ryuers, build houles, towers, walles, &c.

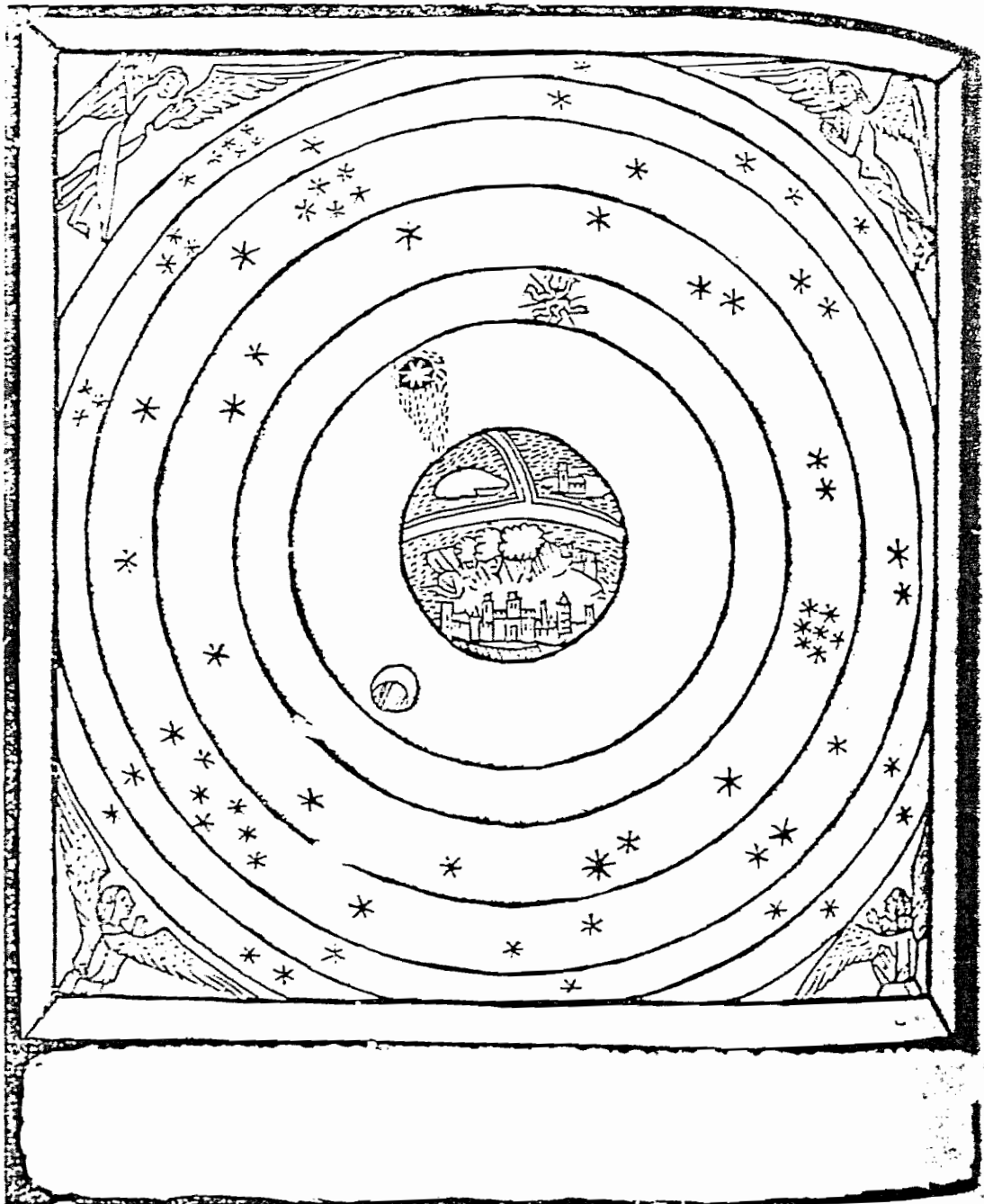
## Of the placing of the spheres and the diuision of the world.

### Chapter 2.

The world is diuided into two parts: vz. Elementall, and Aethereall. The Elementall is subject to dayly alteration: containeth the 4. elements, the earth, water, ayre, and fire. The Aethereall part, called of the Philosophers







After that we haue by helpe of god full ended þe temple of mannes body .of god & of proprieties of an gelles & of men & of accydentes & condicions of men

Now we shal speke of þe proprieties of worlde that we se & fele by the helpe of god whyche is sende to vs fro above. þe we maye drawe matere to the praise of god of the proprieties of worlde the maker and condyctour of thynge

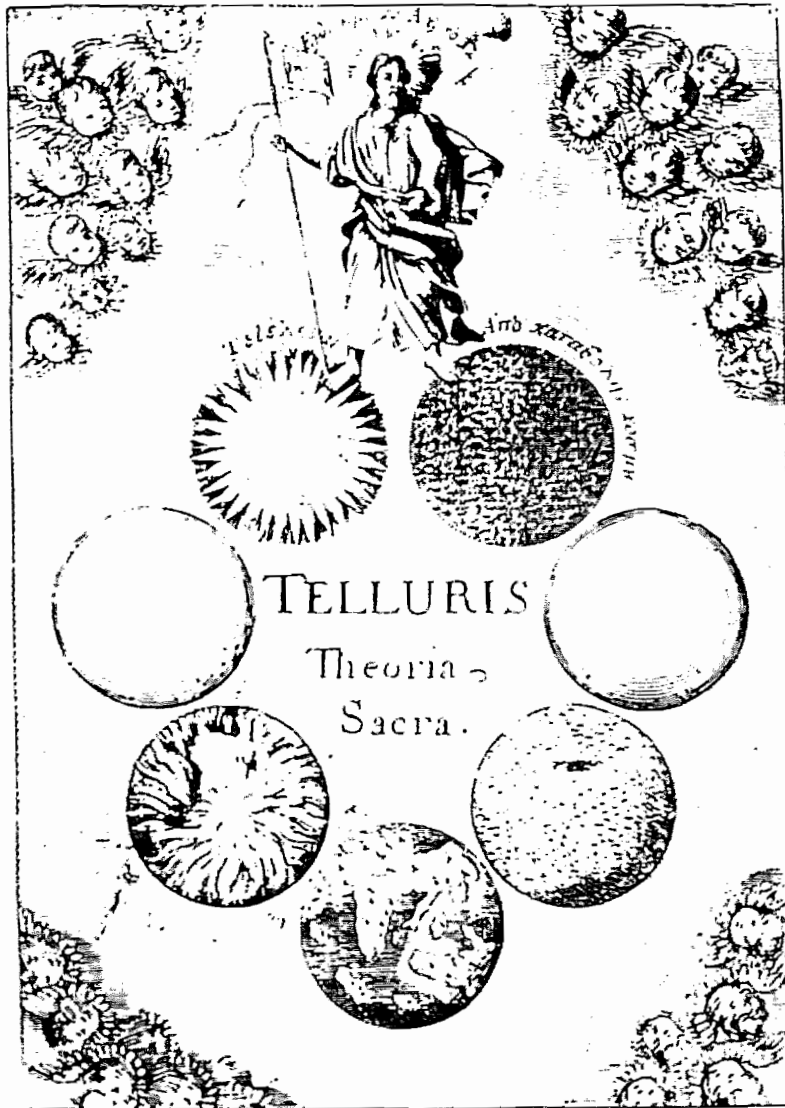
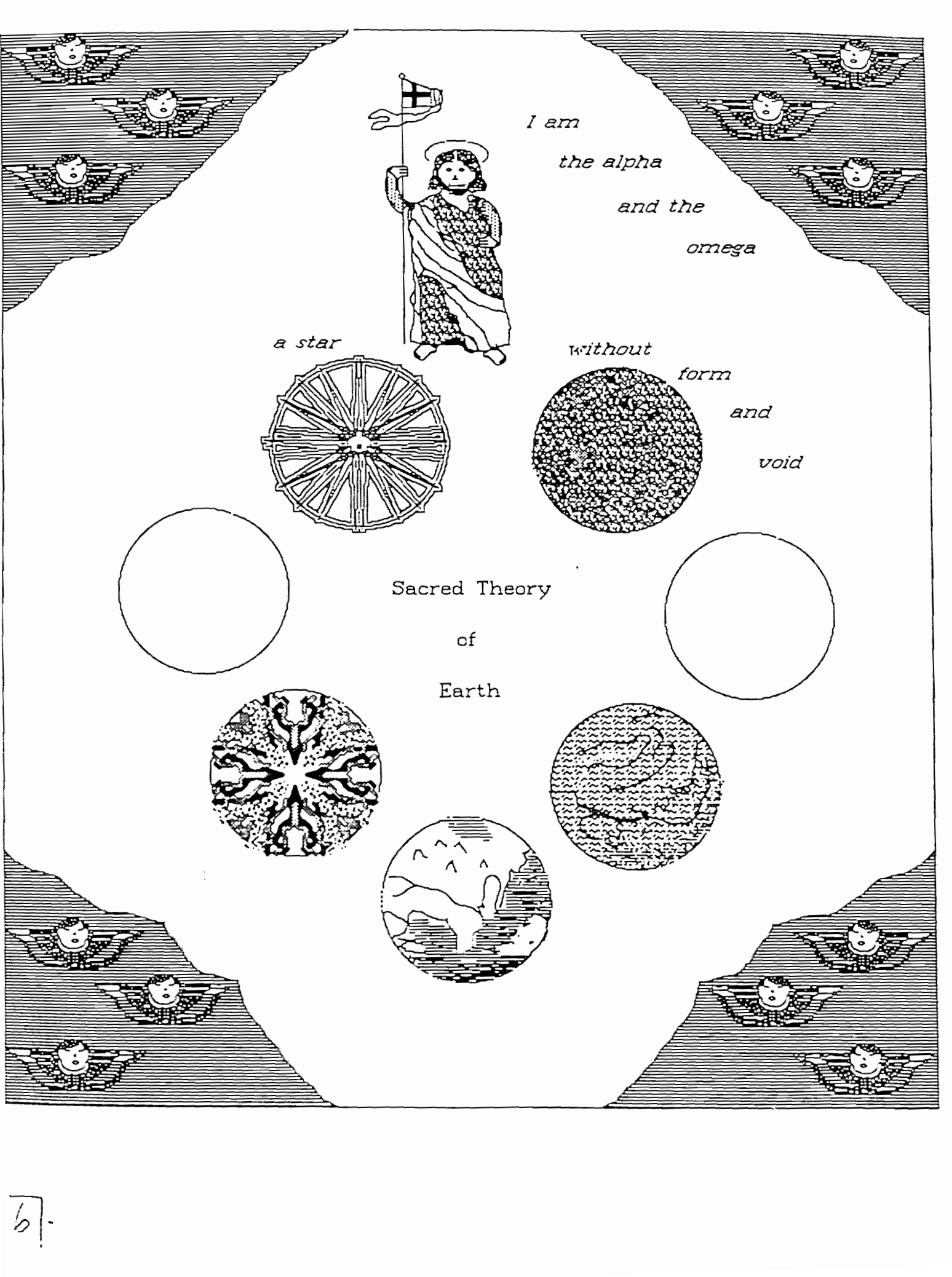


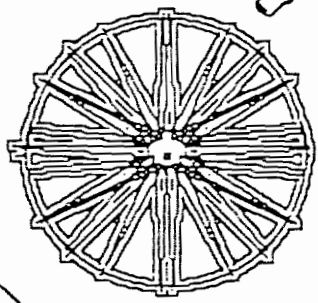
Figure 21

The frontispiece from the first edition of Thomas Burnet's *Telluris Theoria Sacra*, or *Sacred Theory of the Earth*.

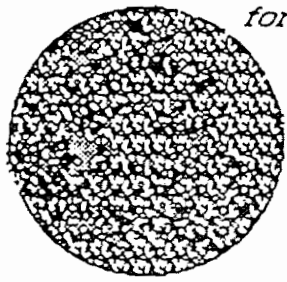


*I am  
the alpha  
and the  
omega*

*a star*



*without  
form*



*and  
void*

Sacred Theory  
of  
Earth

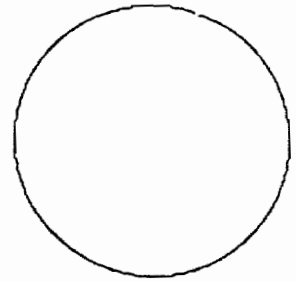
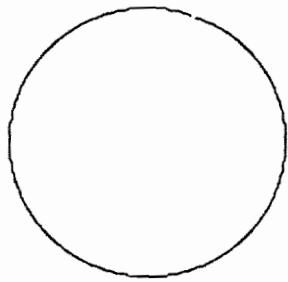


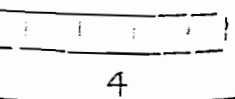
Figura I.

DONDE

OLO



VERSO DOVE



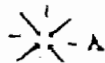
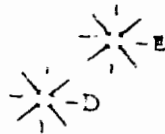
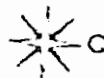
Dell'orsa maggiore.

Figura II.

VERSO DOVE

DONDE

PARTE VERSO  
IL POLO



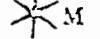
DONDE



I



M



H

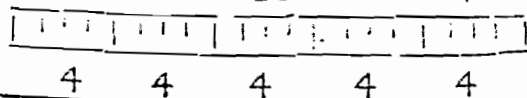


K



VERSO DOVE

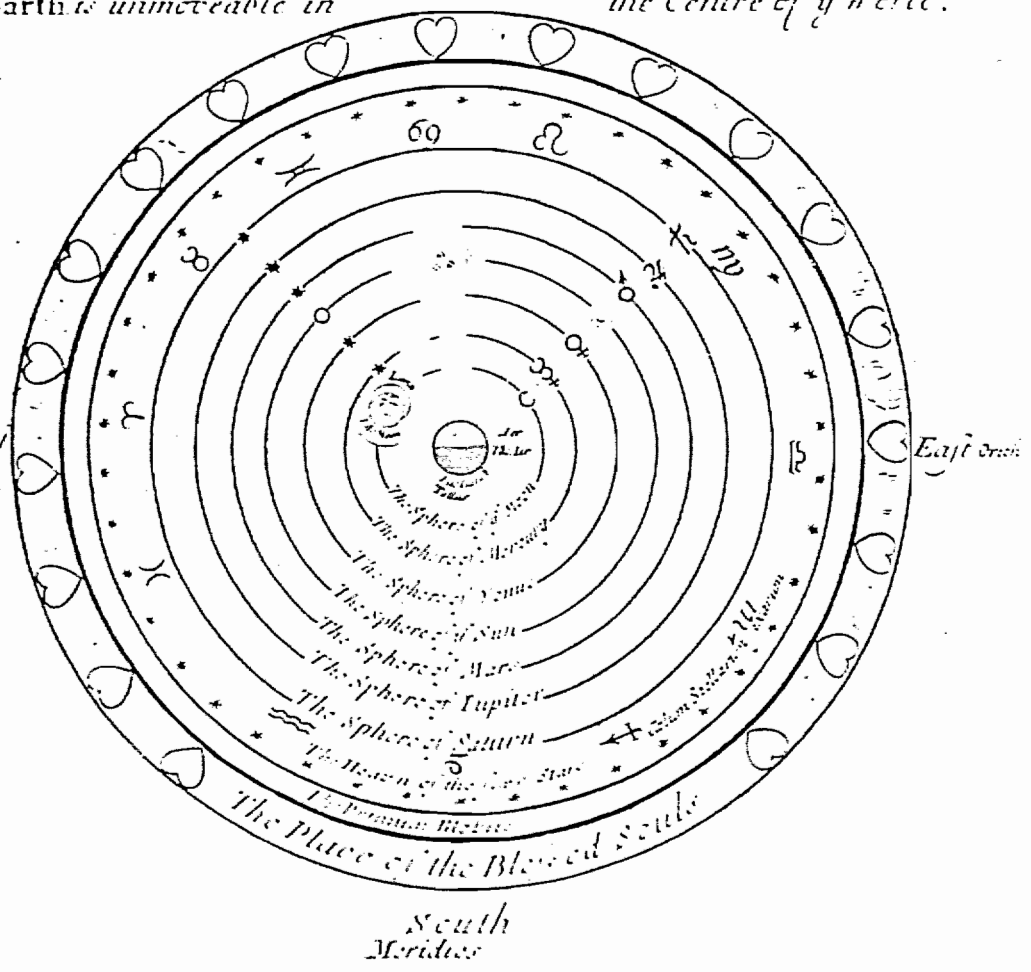
20



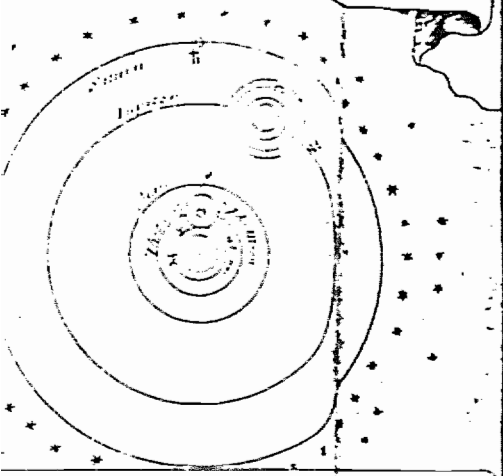
*Systema Ptolemaei.*

# The Figure of the World

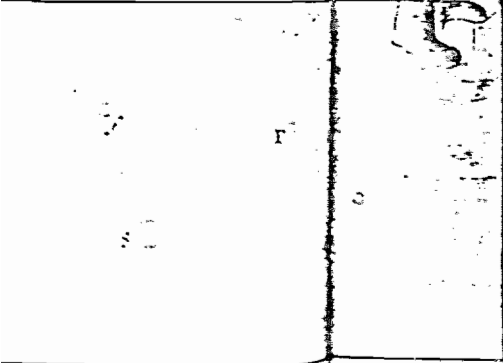
According to the System of Ptolemaeus who holds that the Earth is unmoveable in North the Centre of the World.



*Sicutum Cartesium.*  
 me of Des Cartes who holds that all the  
 of the World that all the Matter of the  
 is a fluid that is from a World of  
 Medium between Experiments and  
 Motion to a Earth as Copernicus does  
 the Century.



place of Sun among the fixed stars & the  
 of Sun's distance seem to be constant  
 distant bodies are necessarily located  
 to the Sun & will be fixed in the  
 number of stars above South and  
 of all the dimensions of space, &c.



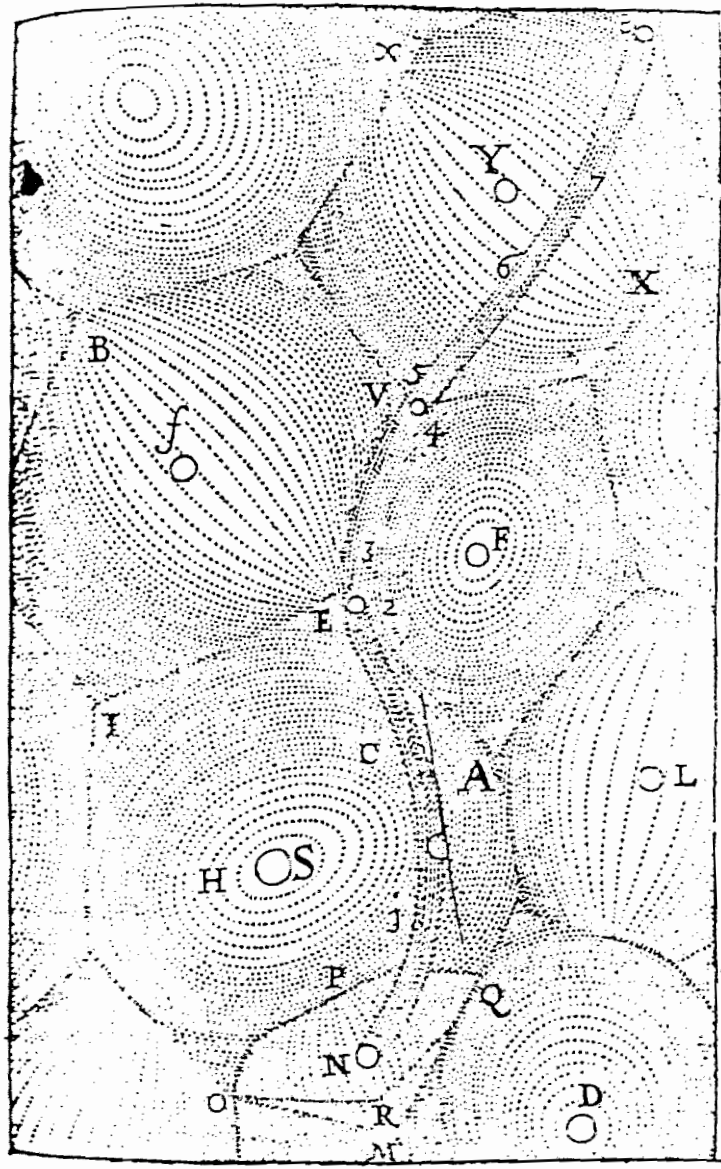


PHIÆ  
s, quam ille ligna

nole permagnam,  
minus tamen habet  
os retinendos, quæ  
mjacentes. Hi eni  
nium solidissimi quæ  
ateria solidiori rep  
tam, quæ omnia  
sub se contenz, n  
amvis sit permagn  
itudinem alicujus  
quod non vires ling  
sideris viribus opp  
centrum S rotant  
ut ab S recedant, i  
es simul junctas, quæ  
d spatium quod lide  
, efficietque, ut if  
, si illi plus habet

ultò plus habeat vi  
lineas rectas, quæ  
etiam si minus ma  
undi, in tot ex ista  
e occupandum. Qui  
nt motus; quamvis  
omnes suas vires in  
contra autem omni  
involventes, ærque  
iffam facit, quæ can  
et ad perseverandum  
ilemque ob causam,  
ligna quæ aquæ in  
ndum lineas rectas,  
in riparum sinus in  
ati in iis continetur.

Denique

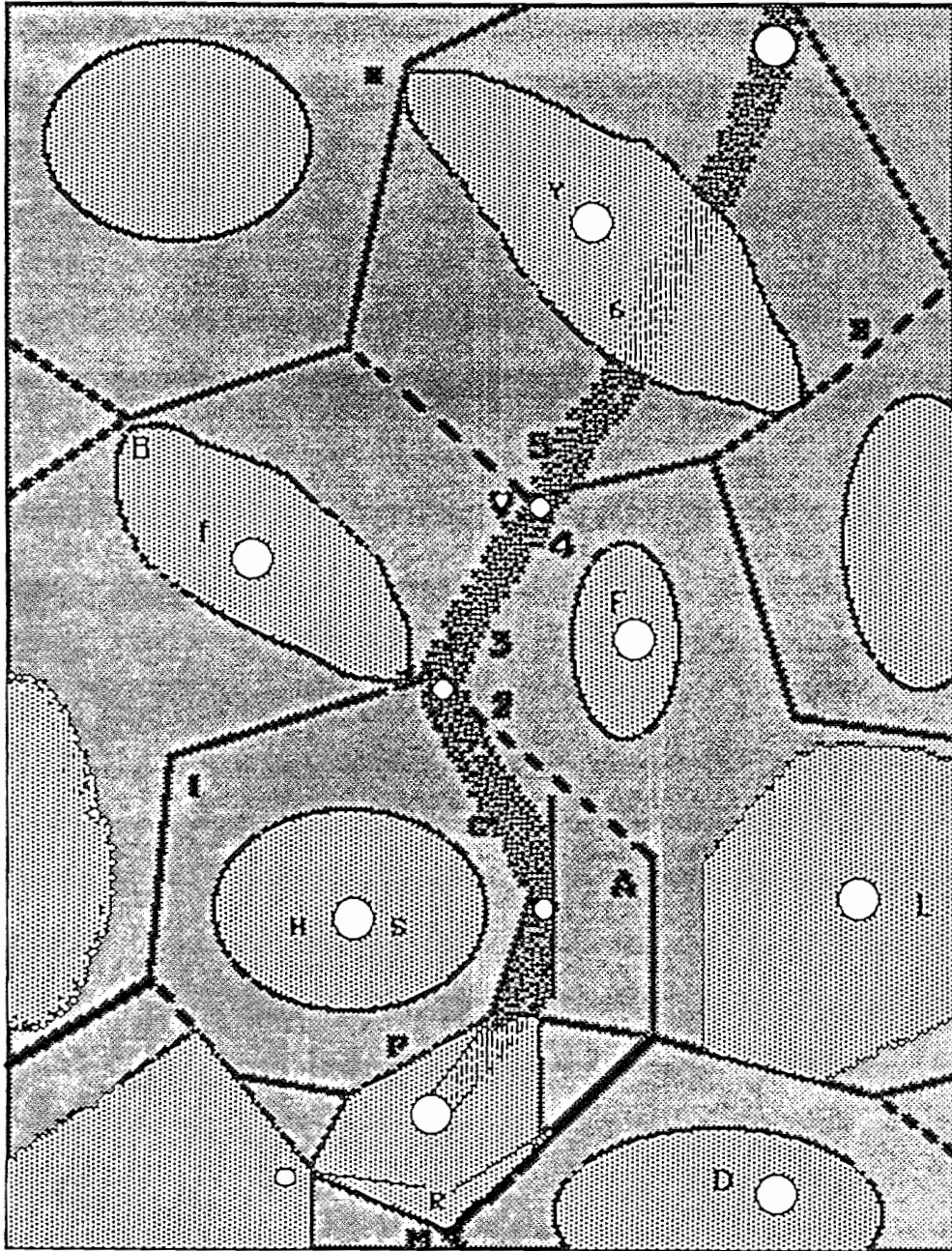


*Des cartes*

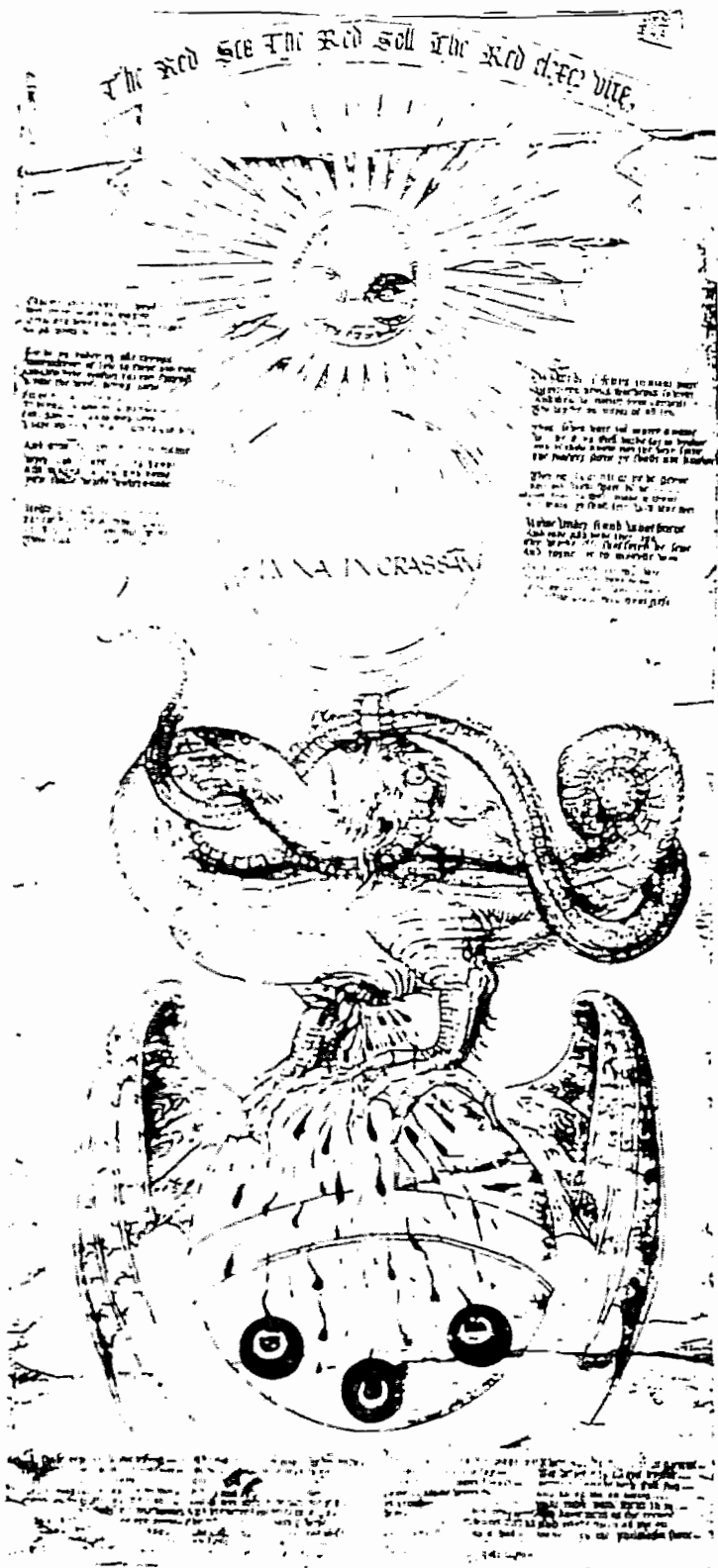
*Opera*

EX 6128. 1685 vol. 1

Pars Tertia







V. Ripley scroll of alchemical emblems  
 Det. II showing "Serpent of Araby" and philosophers' stone  
 Princeton University Library

117



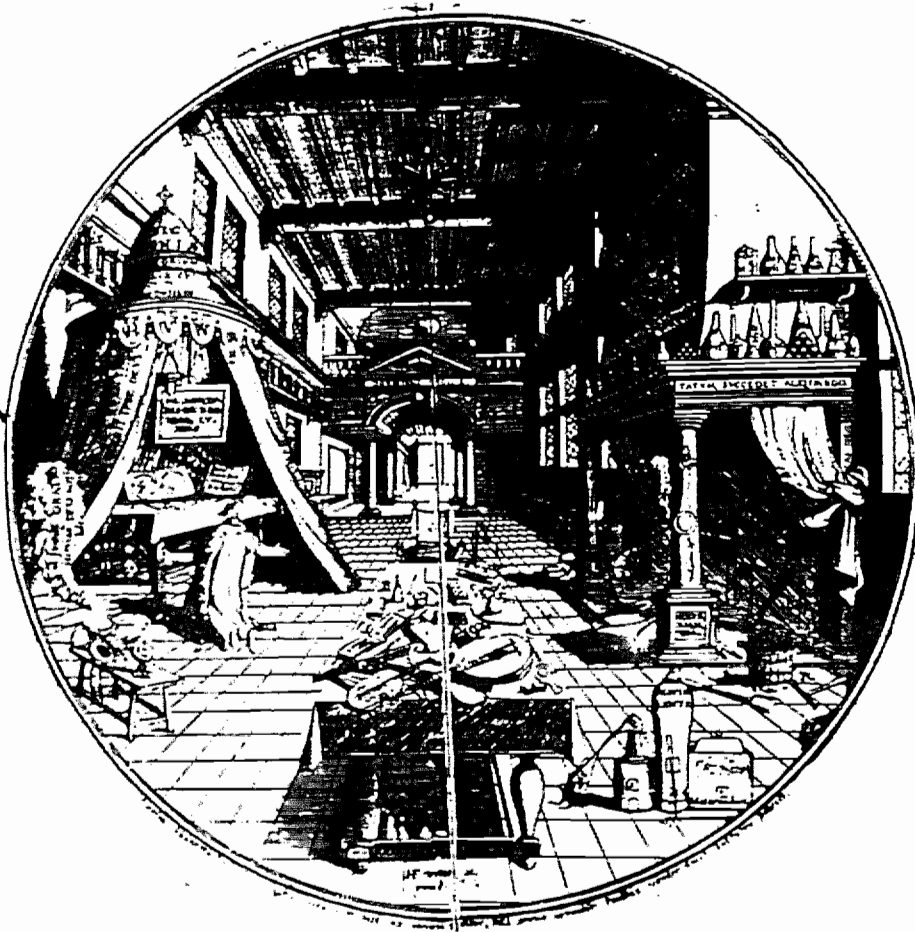
Her is y last of the red lion. & y beginning to put a waite y ded-lect



In the first part of the scroll  
 is the first part of the scroll  
 and the second part of the scroll  
 and the third part of the scroll  
 and the fourth part of the scroll  
 and the fifth part of the scroll  
 and the sixth part of the scroll  
 and the seventh part of the scroll  
 and the eighth part of the scroll  
 and the ninth part of the scroll  
 and the tenth part of the scroll

The bird of hermes is my name and y beginning to make the world

IV. Ripley scroll of alchemical emblems  
 Detail showing the "Bird of Hermes"  
 Princeton University Library



Heinrich Khunrath, *Amphitheatrum sapientiae aeternae*, 1609 [courtesy University of Pennsylvania, Van Pelt Library].

NJP°

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Magic Ceremonies.



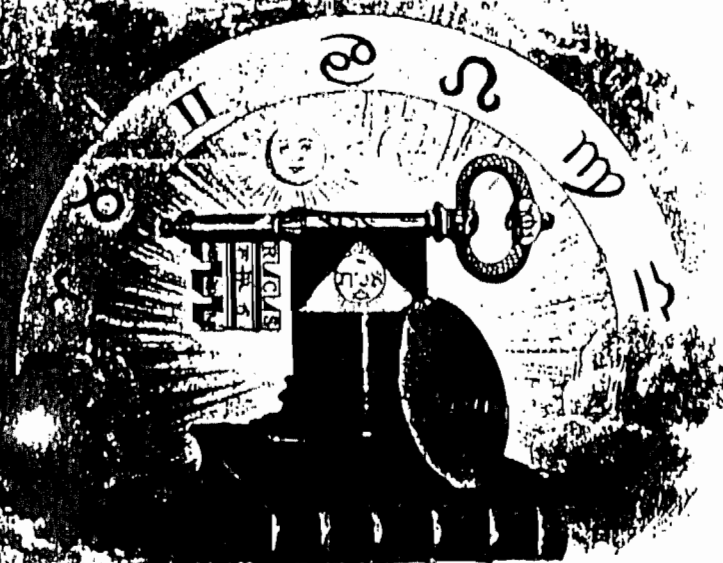
Such were the mystic rites, ceremonies and incantations, used by the ancient Theurgists to burst asunder the bonds of natural order, and to obtain an awful intercourse with the World of Spirits.

See page 28

LONDON.

Published by William Chazilton Wright, 65, Paternoster Row.

THE  
**ASTROLOGER,**  
 of the Nineteenth Century,  
 OR THE  
 Greater Key of Futurity,  
 being a Complete System of  
 ASTROLOGY, GEOMANCY & OCCULT SCIENCE.



...the Arcans the work of thy fingers the Moon and the  
 ...  
 ...from heaven; the Stars in their courses fought against  
 ... Judges 5: 20.  
 ... Salus adit unum Cetero

London,

KNIGHT AND JACKY,

Fater Noster Row.

WENTLEY & TURRELL, DUBLIN, & W.R. H' PHEON, GLASGOW.

in the table, book opened to diagram: on  
being paged!



Heinrich Khunrath, *Amphitheatrum sapientiae aeternae*, 1609 [courtesy University of Pennsylvania, Van Pelt Library].

NJP\*

12

Doct-  
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## Magic Ceremonies.



*Such were the magic rites ceremonies and incantations used by the  
ancient Magicians to bind down the spirits of natural order and  
to obtain in secret intercourse with the World of Spirits.*

LONDON

Published by William Charles Wright & Company Ltd.

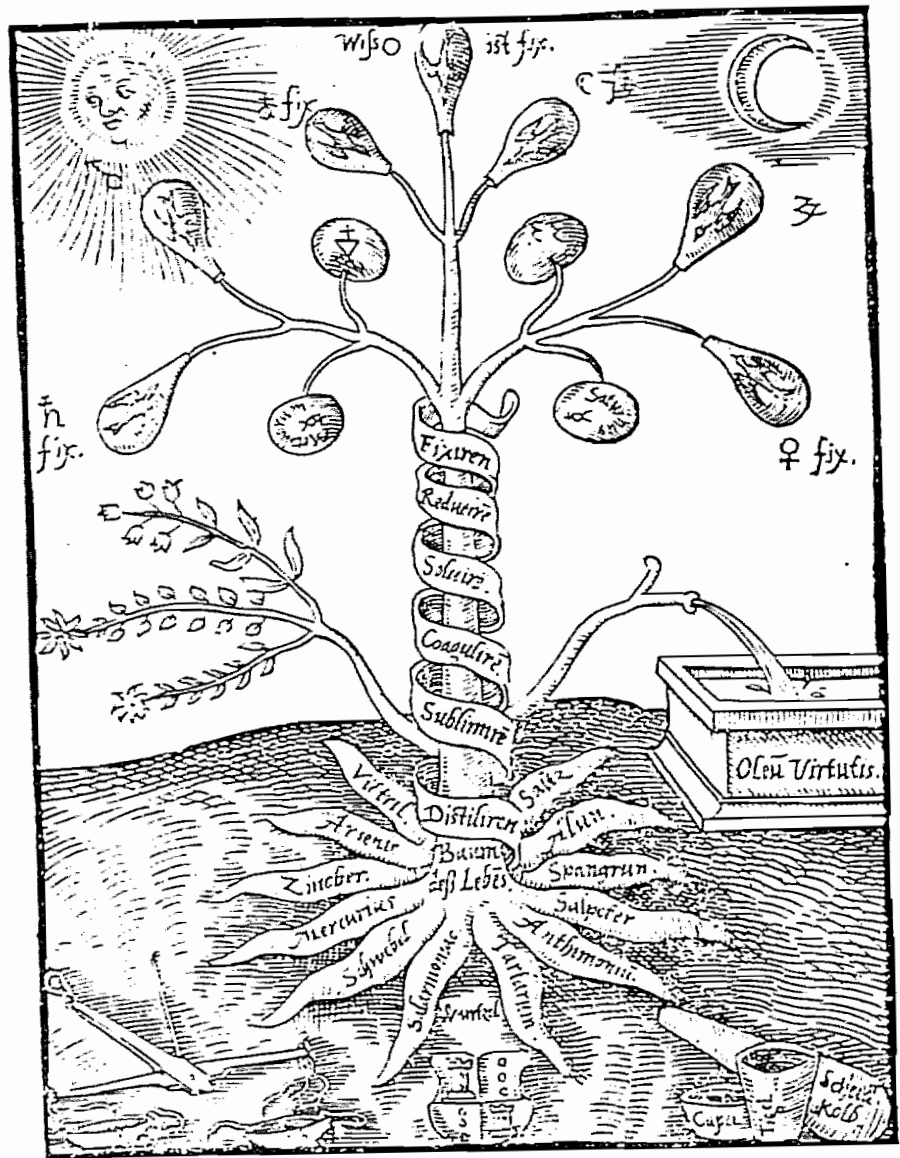
13

cl: vj

Das Lebende Buch /  
Das Erste Capitel.

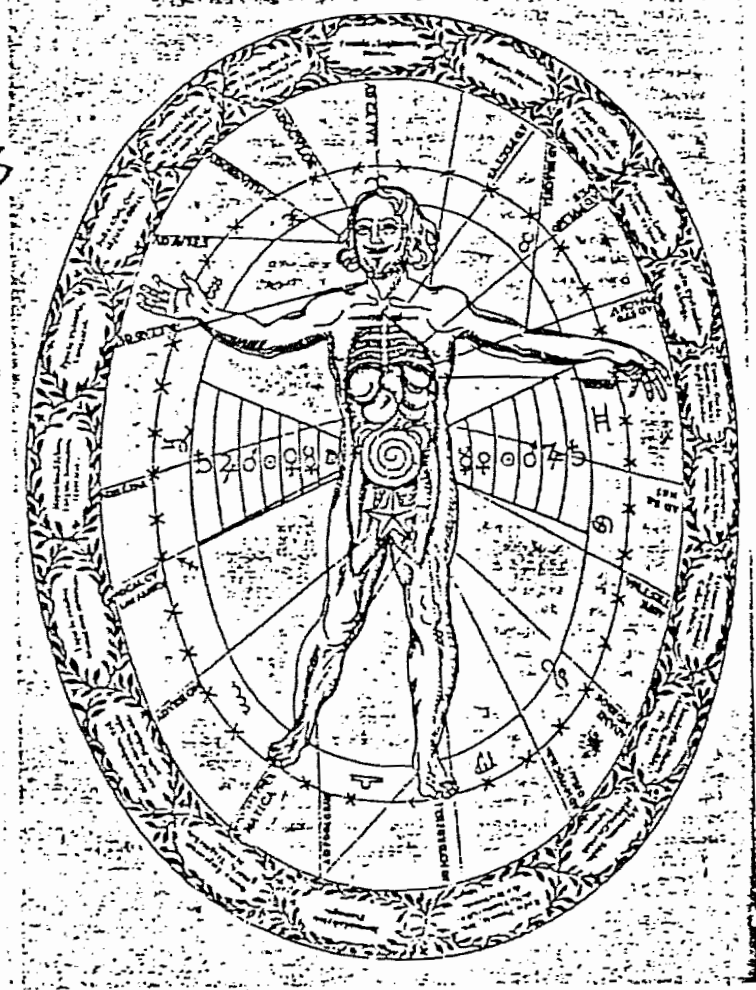
# Vom quecksilber.

So diese nun sind alle fix /  
Feyr; wasser; bstand / erst darff sie glücks /  
Das jedes hab sein farb vnd gewicht /  
Als denn der Kunst wirdt mangeln nicht.



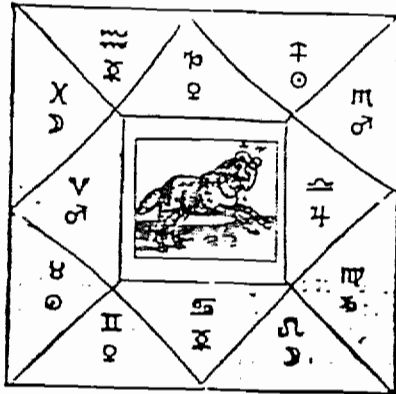
**I**ch bin ein vnderlig Metall /  
 Slacc schlüpffrig / in diesem fall  
 zu machen. Von niemandt ich mag behalten werden  
 Der mich möchte zwingen mit geberden:

358 OEDIPI ÆGYPTIACI GYMNAS HIEROGL  
Typus Sympathicus Microcosmi cum Megacosmo.



**Astrologia Natural**

Die figure des revolucijs der cephonen en planeren na die natuerlike Astrologi wiens horoscop is Aries en zijn heer Juppiter.



Continuatie des voor gheselde figuren vande horoscop des eersten iaers Aries tot dat Juppitij iaer toe.

1 V ♂	13 ♀	25 ☾	37 ☉	49 ♃	61 ♃	73 ♀
2 8 ☉	14 ♃	26 ☽	38 ♀	50 ☉	62 ♀	74 ♀
3 II ☉	15 ♂	27 ♀	39 ☾	51 ☉	63 ♃	75 ♀
4 5 ☾	16 ☉	28 ♃	40 ☽	52 ♀	64 ☉	76 ♀
5 9 ☽	17 ♀	29 ♂	41 ♀	53 ☾	65 ☉	77 ♃
6 11 ♀	18 ☾	30 ☉	42 ♃	54 ☽	66 ♀	78 ☉
7 12 ♃	19 ☉	31 ♀	43 ☉	55 ♀	67 ☾	79 ☉
8 13 ♂	20 ♀	32 ☾	44 ☉	56 ♃	68 ☽	80 ☉
9 14 ☉	21 ♃	33 ☽	45 ♀	57 ♂	69 ♀	81 ♀
10 15 ♀	22 ♂	34 ♀	46 ☾	58 ☉	70 ♃	82 ♀
11 16 ☾	23 ☉	35 ♃	47 ☽	59 ♀	71 ♂	83 ♀
12 17 ☽	24 ♀	36 ♂	48 ♀	60 ☾	72 ☉	84 ♀

Alsi leer op een hoort dese rekenen wilt ghy haer ontalich toe. Dat eynde des vyftien boecs.

**Kenninge der Complectien**



dan salmen en ghecreuen hebben wi ghear bept hebt









# THE GENEALOGIES OF HOLY SCRIPTURES.

To the Christian Reader.



1 Tim. 1.4.

The Spirit of God in the sacred History, hath laid downe such helps, as are the light and life of all Nations originals. In them the circumstances of Person, Time, and Place, are the chiefe; else doe wee wander as without a guide: and of these the Person is principall. Genealogies then drawne from them, from whom all are descended, and by Gods owne warrant recorded unto vs, must moue a speciall reuerence that they are holy, and sarre from those other against which S. Paul writeth. Amongst whose manifold vses, this is the chiefe, that by them is prooued how Christ was made very man. And therefore in severall Tables they are heere

exhibited euen from their first roote, and so continued through their spreading branches, so sarre as the Scripture giueth them sap. In the reading whereof, let these few directions be thy guides.



1. Such descents as hold on from the Parents to their Children, without interruption, are very plaine by their double lines, which runne from rundle to rundle.

2. Those whose Parents are not certainly knowne, but are named of their Country, Citie, or Tribe, are ioined each vnder other, with this figure here in the margent.

3. And likewise such as are set in ranke side by side, and distinguished by this marginall mark, are not to be reputed Brethren, but some other Persons of note, of that descent where they are so inserted.

4. The names of Nations and People, (as likewise sometimes of Cities and other places of note) wee haue not encompassed in rundles as the rest, but in Compartiments, and different letters betwixt direct lines, that so they might bee knowne from particular persons, and the Names next vnder them, are not inserted as certainly thence descended, but as eminent Persons among them.

5. And where of necessity we are to breake off the succession, to be continued in some other page, that doe we at some principall Persons: as at the flood with Noahs sonnes; at the Promise, with Terah and Abraham, &c. So that euer the Man at which we breake off, is againe set in the first place of some ensuing page, where his issue is continued, though many times whole leaues fall betwixt them; which are supplied with other collaterals: such is from Abraham pag. 3. vnto his viues and seed, pag. 6. and 7. &c.

6. The lineage of our blessed Sauour (which is our principall issue) is knowne by a Chaine like traile, continued from Adam to Sem, pag. 1. and thence to Terah and Abraham, pag. 3. &c. So likewise from Dauid, pag. 22. to his sonnes Solomon and Nathan, pag. 33. And lastly, to our Sauours parents, pag. 34. linked together (as other marriages here are) by the scrip- ture of an hand in hand. Both descended from Zorobabel, as the holy Euangelists haue recorded: from Dauid, Iudah, and Abraham, as Moses and the Prophets haue spoken; and Iewes themselves thus sarre grant, that the Meisiah should be the Sonne of a \* Virgine, her name Marie, and she of Beth-lehem, the daughter of Eli, of the house of Zorobabel, and Tribe of Iudah. In all which, our Christ is manifestly designed, and by these Iewes both acknowledged to haue been of the bloud-royal, and also recorded in the number of the Priests, in their publike Register at Ierusalem, by this title, IESVS THE SONNE OF THE LIVING GOD, AND OF THE VIRGIN MARIE. Thus is he Dauids Sonne, and Abra-

Matt. 1.  
Luke 3.  
\* Rab. Ha-  
cadesch in  
his third  
question  
vpon Iesai.  
9. 1.  
\* Rab. Ha-  
esnai.  
R. b. Tals.  
Talmud  
the tree  
of Saba-  
bodin,  
Chap Nig-  
marifadin.  
\* Theodof.  
the Iew in  
Suidas on  
the word  
Iesvs.  
Col. 1. 15.  
Heb. 1. 3.  
Apoc. 7. 14

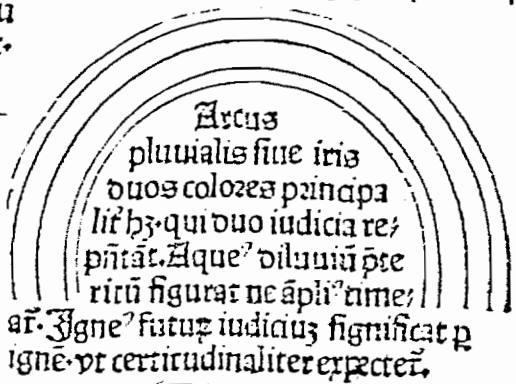
hamis Heire, in whom all the kindreds of the earth are blessed, being the very Image of the inuisible God, the brightnesse of the glory, and the ingrauen forme of his Per- son, in whom dwelleth the fulnesse of the God-head bodily, and vnto whom be ascribed all glory, praise, wisdom, thanks, power and might for euer- more, Amen.



# Folium. IIII.

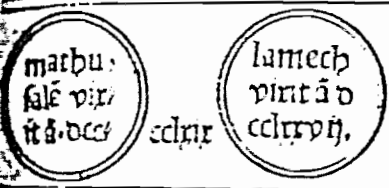
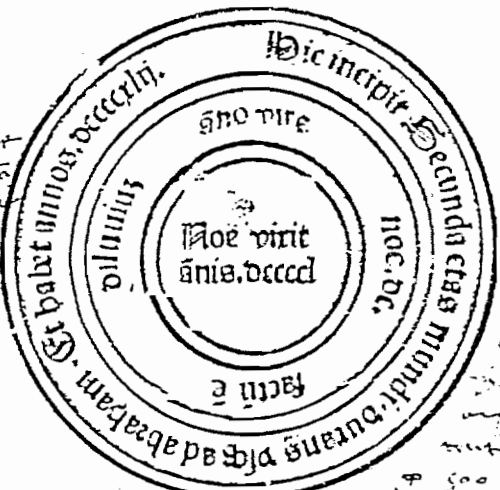
Nota fm doctores de bita pena h tpe mudo infuctam Qu  
 ru luxuria abundavit que corpora polluit. ideo p aqua ter  
 a bra r mudata fuit. In fine aut mudi qz cupiditas abu  
 abu. p igne exuret. Huc em r argenti igne purgari soler.

Hoc signu feder qd do inter me  
 r nos. r ad omes aias. gen. ix



ionic  
 bus filius noe

Arca noe hnt in lōgitudine. ccc. cubitos. in latitudine. l.  
 cubitos. r in altitudine. xx. r in sūmitate. i. cubitu gen. vi  
 CCCLXXXVII DCCCCLIII II<sup>o</sup> CCXLII



Tempus  
 diluuij.

IXCCCC. IIII anno. h  
 IIATCCCC. II

Hic matusalē senissim<sup>o</sup> quo ad  
 multitudinē annoz oim quos  
 scriptura memorat. Cū em. d.  
 Anos hret dicit ei dñs. Edifi  
 ca domū si vis. qm̄ adhuc. d. an  
 nis viues. rñdit. Propter tā  
 illū tpe nō edificato domū. r  
 sub artibus r circa vepes doz  
 auit vt prius ostieuerat.

Iste Lamech cū iā  
 senuissz r caligasset  
 oculi ei a puero du  
 cebat. qui putās q  
 fera vidissz. idicauit  
 ei vt sagittaret. r sic  
 ipm caym transiit  
 Cū ob b puez rbe  
 ribz adeo afflirit. vt  
 etiā moreret.

Noe vir iustus grām inuenit corā do  
 mino Cū em eēt ānoz. d. genuit sem  
 cham r iaphet. Arcā de mādato dñi e  
 dificare cepit eāq in. c. annis pfect.  
 Cētesimo ḡ āno iā archa ppleta itez  
 dñs apparuit ei. mādans vt cū vxore

filz r filz eozumqz vxoribus archam intraret. r cum animalibz rē. r statim diluuium inun  
 dauit. Stetitqz aqua sup altissimos mōtes cubitis. xv. gen. viij. Et nota q eodē die dñico in  
 mayo in quo ingressus fuit. āno reuoluto cū vniuersis que ibi erāt egressus est. Post diluui  
 um accidit ip̄i noe illa famosa ebrietas. cui<sup>9</sup> occasione ip̄le filz. s. sem r iaphet p honore pa  
 tris r honesta decundia bñdixit. filio vo suo chā p irrisioez r reuerētia maledixit. Et hic fm  
 p̄. sic prima mētio de fuitute. r p oppositum de nobilitate. Nec putādum est q om̄s de chā  
 cōcedētes fuerint ignobyles r impotētes. cū ip̄i ceperūt primo esse potētes sup terrā. vt p̄s  
 de nemroth r regibz chanaan r affroz rē. Nec oēs de sem r iaphet fuerūt rruosi sicut nobiles  
 aut potētes. cum pene omnes in idolatrie crimē ceciderunt. r ab alijs opprelli sepe fuerunt. s  
 hoc maledictio r benedictio vicia r virtutes respicit. ppter que vel quas homo veraciter di

Auq

# Prima etas. Adam.

Quidi etates filitudinarie accipiunt. fm etates hois. a diuersis diuimode assignant. rōda  
 mltis astruūt. quare sic vel sic uenētius inchoēt vel terminēt. de quibz nihil ad pñs. s3 qñqz  
 nūc sufficit est adutendū q3. vi. sunt etates mūdi. qz prima incipit a mūdi creatione 7 durat  
 vsqz ad diluuiū. 7 h3 fm hebraicā vitatē ānos. M. dcl. vi. Scōm. lxx. interpretes sicut isidos p  
 nit 7 alij q3 ples q3 hic sequimur h3 ānos. 17. ccl. xij. 7 sic differt in ānis. dcl. xvi. q3 hebrei mlt  
 habēt in hac etate. 7 iuxta hūc oputi marusale mortu' est añ diluuiū. eodē tñ āno quo dicit  
 uū iuit. Secūda etas incipit a diluuiō 7 durat vsqz a natiuitatē abrahe. 7 hūit fm hebreos  
 ānos. ccc. xij. fm lxx. dccc. lxx. 7 sic differūt in ānis. dcl. quos itez hebrei minus habet. Que rō  
 fit ratio cāte diuilitatis inuenire nō potui. Tercia etas incipit a natiuitate abrahe 7 durat  
 vsqz ad initū regni dō. hñs fm hebreos ānos. dccc. lxx. fm lxx. dccc. lxx. Quarta incipit a prin  
 pio regni dauid. 7 durat vsqz ad trāsmigrationē babilonis. 7 h3 ānos. ccc. lxx. fm hebreos  
 s3 fm septuaginta. ccc. lxx. Quinta etas incipit a trāsmigratione babilonis. s3 qñ ism 7  
 fructa fuit. 7 tēplū in ea incēsus. 7 durauit vsqz ad bñdictā natiuitatē xpi. hñs ānos fm he  
 modū ptractū quē hic sequimur. dcl. 7 sicut predictū est grādis est altricatio de supputand  
 ānoz hui' etatis. diuersi diuimode pparāt. s3 nō min' mltuz differūt inter se. Eligat quilibet  
 qd sibi placuerit. qd nobis visuz fuit posuim'. Sexta etas incipit a xpi natiuitate 7 durat  
 vsqz ad hñc mūdi. cuius terminū solus deus nouit. 7 hec dicit senectus siue hora vltima.

ccc. xvi. Adam moritur sepeliturqz in ebron

Anno mundi nccxcv

dcccclxx

dcxxii

malalei  
elvir. ā  
dccc. cv

Jareth  
vixit. añ  
dcccclxx

Enoch.  
annis  
cclxy.

methu  
sale vixit  
ā d. dccc.

iiiiiii.iiii

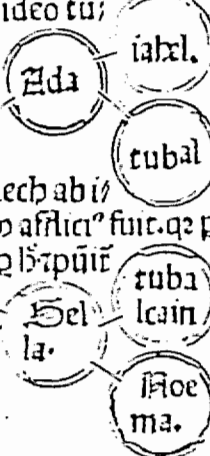
xixxx.iiii

lxxxv.iiii

lxxxv.iiii

## Curiositas

Nō qd oēs artes vl scie scēares libales siue me  
 chanicē vel phisice hūane curiositati desuētes  
 a filijs lamech legūt inuēte. 7 sic filij adulteri  
 ni pmū subtiliores alijs fuerūt. Et qz timebāt  
 futurū piculū diluuij 7 ignis. ideo tu  
 bal easdem artes in duabus  
 columpnis sculpsit. vna late  
 ria. 7 alia marmorea.



## Bigamia

Seth lamech ab i  
 his vxoribus afflic<sup>9</sup> fuit. qz p  
 qd pccat p h' pūit  
 Iste lamech primū s3  
 naturam 7 mores bigamiaz  
 insinuit adulterium cōmit  
 tēdo. Ipse etiam cayn osci  
 dit. non tamen voluntarie.

Iste enoch iustus placuit deo. 7 ppter mlti  
 scitatē suā trāstulit eū dñs in paradisu. vbi d  
 helia viuit in magna corpis 7 spūs trāsp  
 tate vsqz ad ātixpi aduētuz. Tūc em emb  
 ppter confortationem electoz. 7 mltos  
 coronabuntur. Enoch scripta reliquit.  
 Cōcupiscētia aurū.  
 Iste tubal pater canentium in citharis 7 cog  
 nis. 7 musice artis inuentoz. pporciones qz  
 qz sonozum ex malleozum sonitu perpendit.  
 Cōcupiscētia oculoꝝ.  
 Iste tubalcayn fuit pm' malleator 7 fabri  
 ta opa cris 7 ferri. 7 inuētoꝝ artis sculpturē.  
 Cōcupiscētia carnis.  
 Ista noema iuenit artē varie diuiseqz termi  
 lanā 7 linū i fila trant. 7 pānū texuit p p' h  
 tem. nā ātea pellibz bestiaz pro vestibz vtabat.

Vic marusale  
 multitudinē a  
 scripturā men  
 ānos hēt. dicit  
 domū si vis.  
 mo viues. rñd  
 illū tps nō el  
 sub arboribz 7  
 inuit vt prius  
 s3 7 filijs eoz  
 dicit. Stetit  
 mayo in quo i  
 am accidit ip  
 terno 7 honest  
 ius. sit prima  
 dōdētes fue  
 te nemroth 7  
 aut potētes. cu  
 dec maledicti

Acta fm docte  
 cu lexoria abu  
 si loca 7 mudat.  
 abut. p ignē ex



¶ Arcurus rex britanie motatissim⁹ in victorijs: quadragesaginta viros gladio suo interfecit. Ecclesie dei subuenit: et fides valde ampliavit: oēs terras francie: danie: norwegie et sibi seruire coegit. Perditur tandē: nec vlt̄ hodie scitur vbi manserit.

¶ Dubricius p̄mas anglie: vir sanctus: miraculis clarus: post heremita: conuauit arcuarum.

Imperatores

¶ Helisei p̄phete ossa transferuntur de samaria in alexandriam.

¶ Marci euāgeliste corp⁹ transferuntur ad venetias de alexandria.

¶ Petante minores instituuntur a namerto ep̄o vicieni.

¶ Remigi⁹ remen⁹ ep̄s: q̄ post clodoneū regē frācie ouertit.

¶ Perpetuus episcopus turonen⁹.

¶ Prosper ep̄s vir clarus scia sanctitate vite: de aqtanie terra.

¶ Theodosius ep̄s syrie scripsit cronica⁹: et plura alia.

¶ Tppian⁹ amsilien⁹ ep̄us: vir supra modū misericors: totū quod habuit fratib⁹ in necessitate dedit.

¶ Theod⁹ accephaloz fuit: que impugnavit ociliuz calcedonēse.

¶ Theod⁹ q̄dam peperit infantes et vno puo: et in piscinas projecit: et vnus factus est rex logobardoz.

gerunt: occiderūt. Est siquidem miserabilis victoria: quādo victor paucos aut nullos milites retinet. Unde audacia plurimū nocet: quādo p̄uidencia non gubernatur. sic arcturo cōtingit.

¶ Iste seno fuit arrian⁹: et totaliter crudelis ad catholicos. Sed in urbe lenis: alter similia dicitur. Ipse t̄bo dicitur puer: postea regem gothoz a patre suo in obside accepit.

Senonis 12.

¶ Theod⁹ senator i burgundia tpe famis 4 milia panū sustētauit: et celestis p̄missiois vocē audiuit.

¶ Fulgentius ep̄s ruspen. clarior: luculentissim⁹ doctor: scia et fide plenus. afer.

¶ Anglia i flore tpe arcturi: cui ter dena regna ser uicrūt: s̄ tpe puo. Et nō signū infallibile: quā videt; militaris celsitudo bellū delectabiliter appetit: et occasiones q̄rit: nūc seq̄ finis cōiter miserabilis: iux̄ illū p̄phē. Dissipa gētes q̄ bella volūt. ¶ si hoc tpe britones q̄ nūc dñr anglicū p̄uidētia x̄a gubernassent: tot⁹ europē dñi fuissent. S̄ duz uolunt fortiter contra fortēs agere: pariter cu⁹ fortibus i quos impetunt.

Anno mudi

1563

larius

tyburin⁹

Pape

Hilari⁹ p̄  
an. 6. mē. 3.  
di. 6.

Simplicius  
an. 15. mē.  
2. di. 7.

Anno xpi

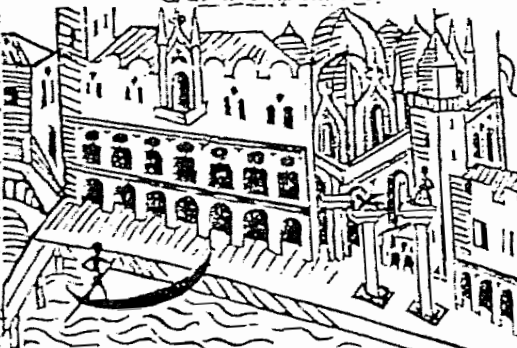
164

¶ Iste hilarius dedicauit ecclesiam beati stephani iuxta basilicam beati laurencij. hic constituit: vt nullus pontifex sibi successorē cōstituat: vt haberetur. viij. q̄. p̄terit⁹. Sepelitur in monasterio sancti laurencij: quod ipse cōstruxit.

¶ Iste simplicius diuisit vrbem in quinq; regiones: et plures ecclesias dedicauit. hic constituit vt clericus inuestiuras nō recipiat a laico: quod fuit post per alios magis roboratum: vt patet. xvi. q. vi. per totū. Sepelitur in vaticano.

Veneriarū ciuitas.

¶ Veneriarū ciuitas inclita conditur: aut potius ampliā circa hec tempa: āno 450. non a pastoribus sicut roma: sed a potentioribus et diuoribus puinciarū aduenis: illic p̄pter persecutionē Attile con fugientibus. Mirus est: et summo extolledum laudis p̄conio: potuisse a tot tāq; diuersis vrbibus et oppidoz populis conditam ciuitatem per annos mille cum tāli incremento: ac glorie splendore: vnanimitq; sagacitate conseruare.



Dispositio illa famosa sc̄a est apud thartagine 5  
arlanos iussu bonozici regis: cui? scripta habet: s;   
sc̄alētib; catholicis: rex impius arriana hēsi ple-   
nis eos vsq; q̄q; p̄sequit: s; nō ipunc. nam octauo   
anno regni sui p̄cussus a dño sc̄atēs vermibus mi-   
serabilē expirauit.

**A**chacius eps constantinopolitanus in heresim eca-   
rit et dānatus: et famosus hereticus fuit.

**E**ugenius eps carthaginē. Et felix eps abrita   
cen. cu alijs epis et clericis: et ecclesie mēdus nūcro   
4976 miserabilē tractant: et in exilium mittunt ab   
bonozico rege Dandaloz. Et totus clerus affrica-   
nus forat p̄ xpo agonizat vsq; adhuc.

**D**ionysia cū filio suo maiorico: et germana dati-   
na leoncia filia sc̄i germani epi. Emilius medicus.   
Anifacius martyres: et alij multi martyres et cō-   
fessores absq; nūcro: multi manibus et linguis ab-   
fisse recte loquūt.

**V**ictorianus p̄cōsul martyr mirabilē cruciatus   
est. Et victoriana honorabilis m̄ona: et alij zc.

**F**ames incredibil sc̄a ē q̄ totā affricā vastauit et   
alias regioel: occasiōe cui? p̄tes sc̄i et sc̄e sc̄i credūt   
p̄pter clemosynas suas.

**V**itūramundus rex Dandaloz q̄ post ho-   
nozicū rexit. eugenū ab exilio reuocauit: sed   
castrimūdu; q̄ post nouē ānos ei successit   
itez ecclesias claudit et ep̄os exiliando: er-   
ga q̄s symmachus papa demētissimus fuit.

**I**ste anasta-   
sius malū h; re-   
stimōiū: q; fact?   
fuit b̄ericus per



achaciū constantinopolitanū ep̄m et cū a papa mo-   
ueret p̄ solēnes legatos: vt ab arriana p̄fidia dis-   
cederet: m̄dit. Nos cū simus impator: iubē vo-   
lumus: nō aut nobis iuberi. Qd̄ arrogāte x̄bū   
eternē humiliationis: s; inutilis subsecuta est vltio: q; pap̄ post   
iusto dei iudicio fulmic p̄cussus interit: sensatis p̄ncipibus sue   
velātie horridū relinques exemplū. Ipse etiā miserabilis fuit   
nec vnq; meruit victoriā: deo p̄ter odibilis et hoibus.

**A**thodericus qui arrianus fuit rex gothoz totā italiā posse-   
dit longo tpe: et quasdā tyrānides 5 fideles fecit: ob qd̄ fuit p̄-   
iectus p̄ mortē in os vulcani p̄ ioh̄em papā et symmachū patri-   
ciū: quos iniuste necauit fm̄ Gregoriū in dialogo.

**I**nuētiō sc̄i michaelis in mōte gargano facta fuit hic.   
**S**olēnis eps carnotē. vir sc̄us insignis habet.

**P**ascasius vir sc̄us de quo facit mētiōē Gregori? i dialogo   
q; graue iustiniū purgatorū: q; in sc̄ismate p̄nacter adhesit   
laurentio vsq; ad finē vite: s; añ mortē penituit.

**S**ācta brigida in scotia claret.

5673

5683



roman? ex pa-   
tre felice ex re   
regiōe fasciole



ro-   
ma   
nus

474

484

**I**ste Felix sc̄us est: vt p̄ ex t̄mone b̄i Gregori: vbi   
narrat de trib? sorozib? matris sue. fuit enī artauus ei?   
hic dānauit achaciū: eo q; ad cōiōnē receperat petrus   
alexandrinū ep̄m. Hic statuit q; accusato dāde sunt idu-   
de: vt ad r̄ndendū se pare possit: et q; accusatores et iudi-   
ces tales esse debeāt: q; oī careāt inspicione et macula.   
de ipso fit mētiō. lvi. dis. orosius.

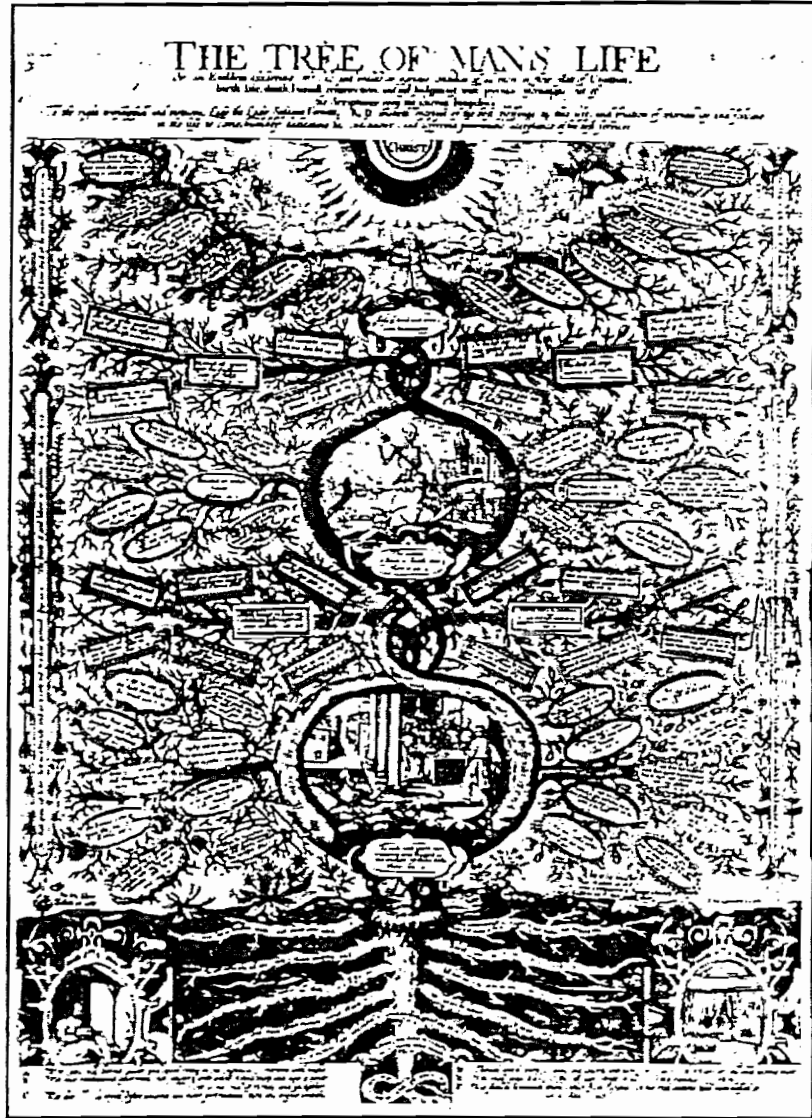
**I**oh̄es damascenus fm̄ q̄sdā sc̄r̄ hīs tēporib? fuis-   
se. Alij dicūt q; post gregoriū: manū iuste sibi ap̄putatā   
b̄i virgo sibi restituit. multa scripta subtilia reliquit.

**I**ste gelasius canonē   
misse ordinauit: p̄fatio-   
nē: hymnos: tract? ōfo-   
nes: sicut abrosius fecit   
et int̄ libros autēnticos et   
apocrisfos distinxit xv.   
dis. Sacrosc̄a. Ipse etiā   
impatorē excoicauit: et   
excoicari posse ostēdit   
xcvi. di. duo.

**I**ste anastasius p̄mo bon? fuit   
sed postea seductus ab achatio et   
coicauit ei: et ob h̄ cler? sepauit se   
ab eo: et q; voluit restituē ach-   
aciū occulte: s; nō potuit: dīno iu-   
dicio p̄cussus ē: itestina eyciēdo   
xix. di. anastasius. Et hic v̄ sc̄os   
infamis papa: de toto carbalogo   
pōtūci vsq; huc: q; p̄m? .s. libe-   
rius fauebat arrianis: iste nestori-   
anis: vtrobiz occurrente velānia   
impatorum.

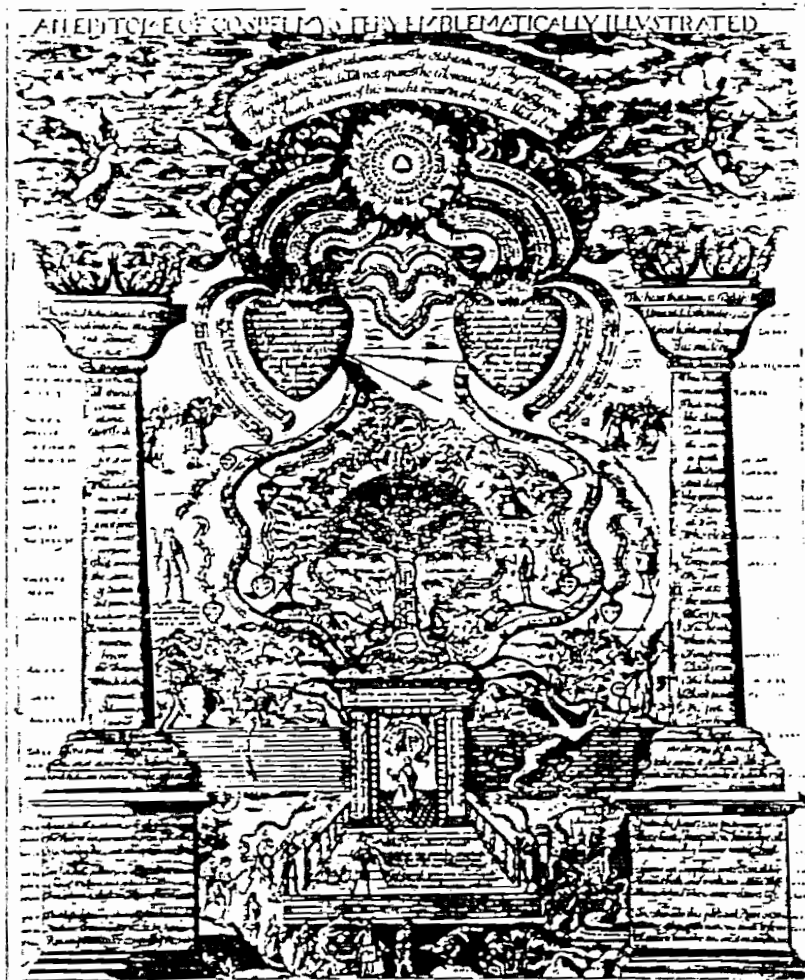






39: Richard Dey, *The tree of mans life*, engraved broadside by John Goddard not later than 1653

26



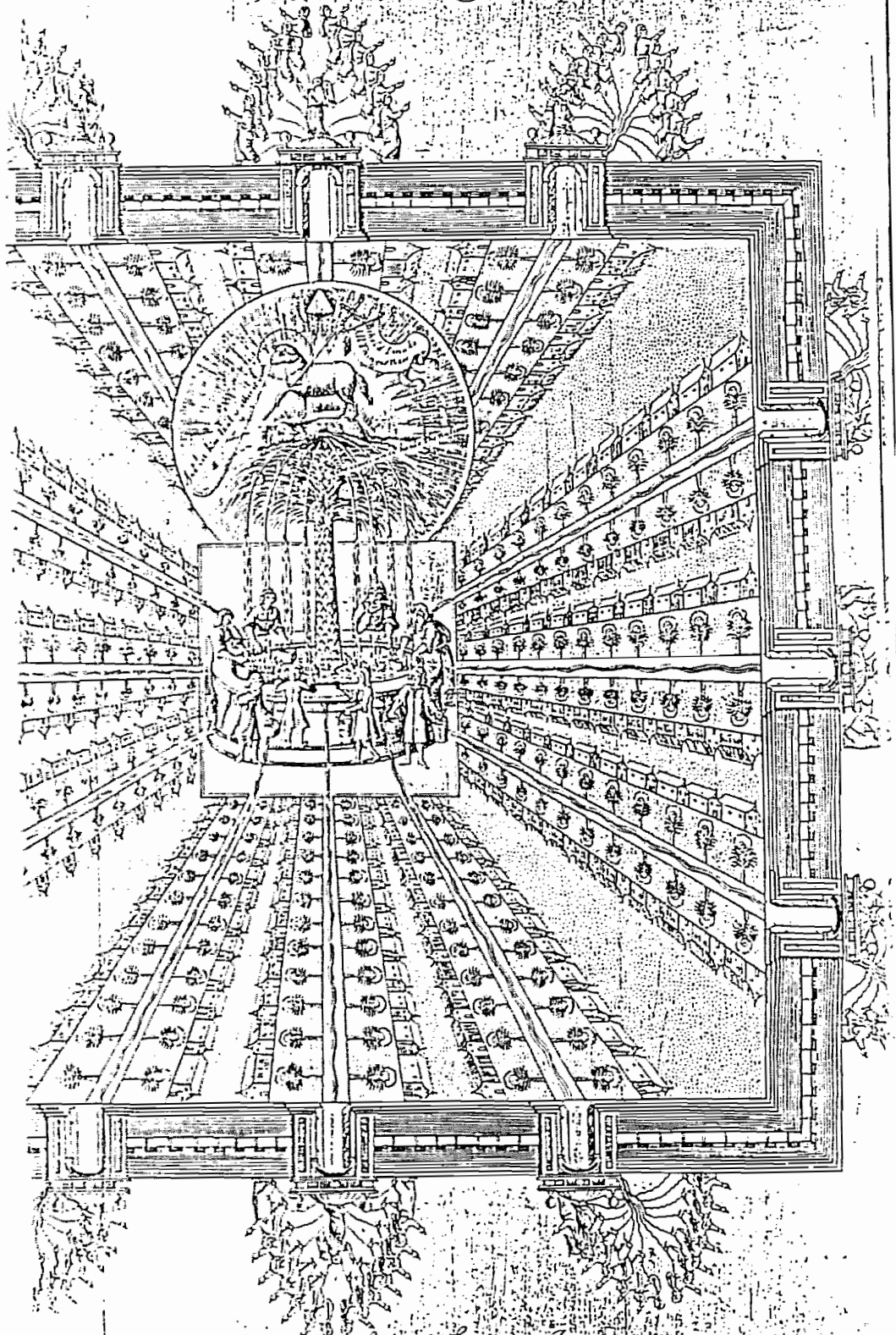
*Epitome of Gospel Mystery Emblematically Illustrated* [London, ca. 1650]. Rare Books Collection, Princeton University Library.

naturalistic, as in Louis de Lesclache's *La philosophie expliquée en tables* (Paris, 1652–1653).<sup>16</sup> His three-volume set of bound engraved plates shows the points of philosophy in schematic, tree-like diagrams turned on their side so that we read them left to right, rather than bottom to

<sup>16</sup> Purchased on the Zabriskie Fund in 1983, its Library call-number is (EX) B188g.L4 P51651.

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THE NEW IERUSALEM



The Marriage of the Lamb is come and the Wife hath made herself ready. Behold I stand at the door and knock. If any man hear my voice and open the door, I will come in and will supper with him and he shall walk with me, and he shall be with me, and I will be with him, and we will be one. Whosoever will, let him take the water of life freely. For the witness of the Word shall understand. But the Word shall understand. Amen.

R. P. P.

EX 6167.37  
1521

(B)

# Sermones.

## Sequuntur sermones viginti quatuor

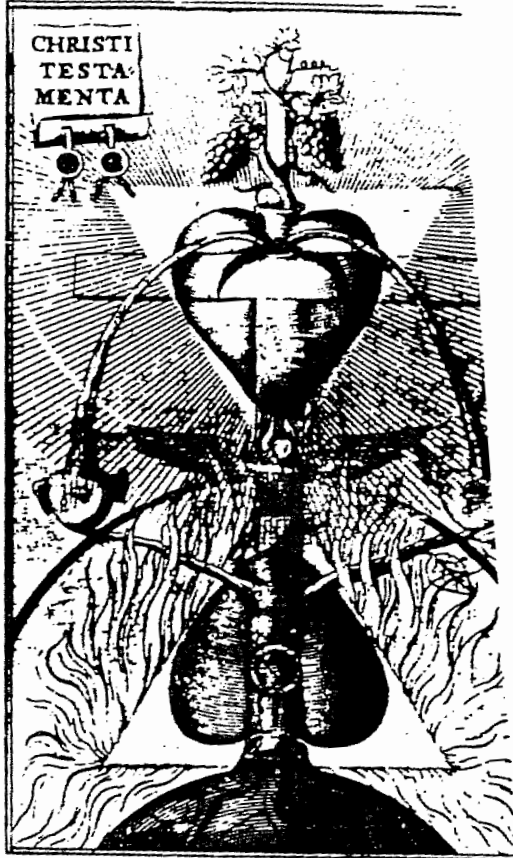
et fructuosissimi de Vita Christiana inscripti: iuxta ordinem  
merum litterarum Alphabeti: quas litteras in arborum rede-  
doctas et in ramos mutavit. In quibus homo fidelis vi-  
tam suam secundum earum litterarum doctrinam re-  
gens/ascendere potest in eternam gloriam.



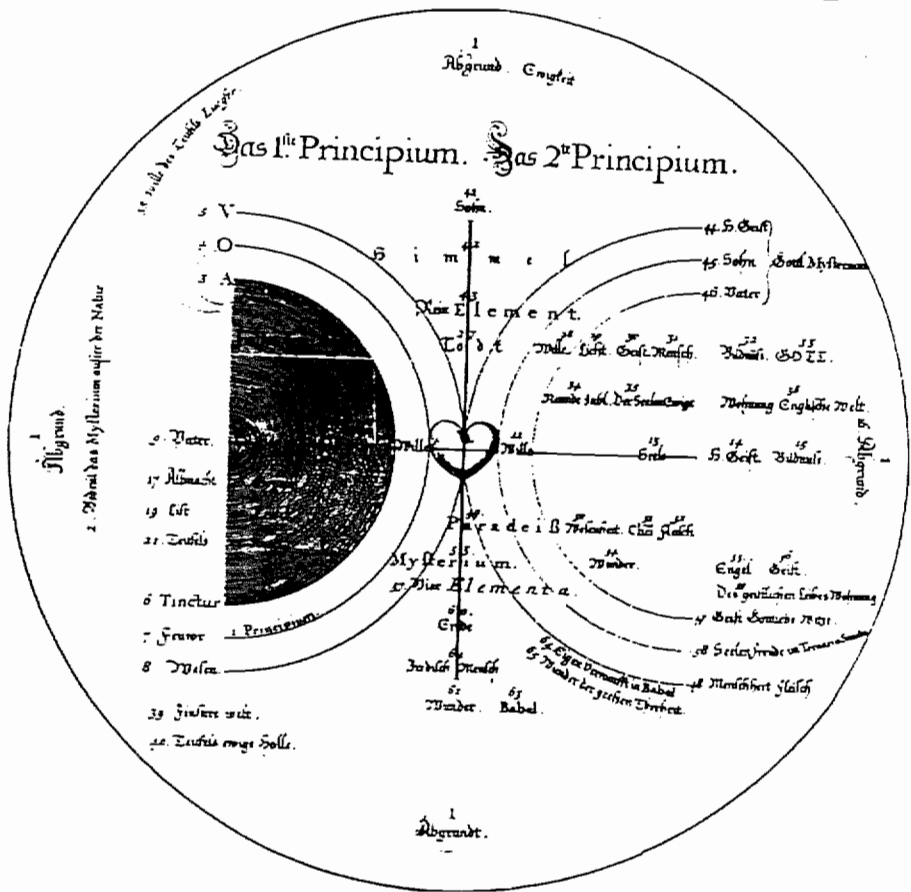
Sequuntur  
sermones  
viginti quatuor



...iudicio se  
...obi sum  
...e dicitur  
...habere  
...agis p  
...omne  
...medis p  
...eque  
...nostra  
...fund  
...Secund  
...in bon  
...Subicun  
...obtingit  
...nō quia  
...dina s  
...forando o  
...haber: p  
...Quia  
...ex vanti  
...ex vni  
...lato q. d.  
...non alioqui  
...fuit: et an  
...Et quid igi  
...vilo de  
...obserua  
...Et vis ad v  
...Eratios: et  
...in fentem he  
...no rationale  
...nem intellig

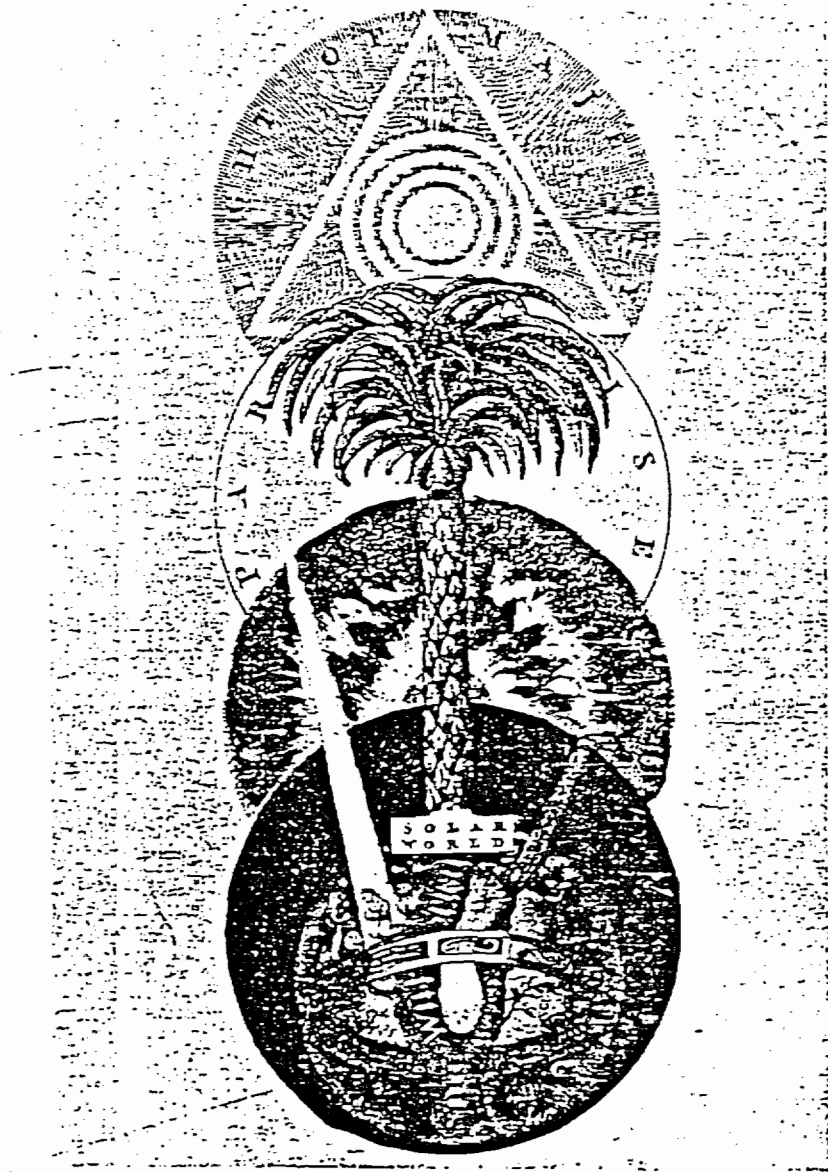


# Die Philosophische Kugel oder das Wunder-Auge der Ewigkeit.





*The TREE of the SOUL.*





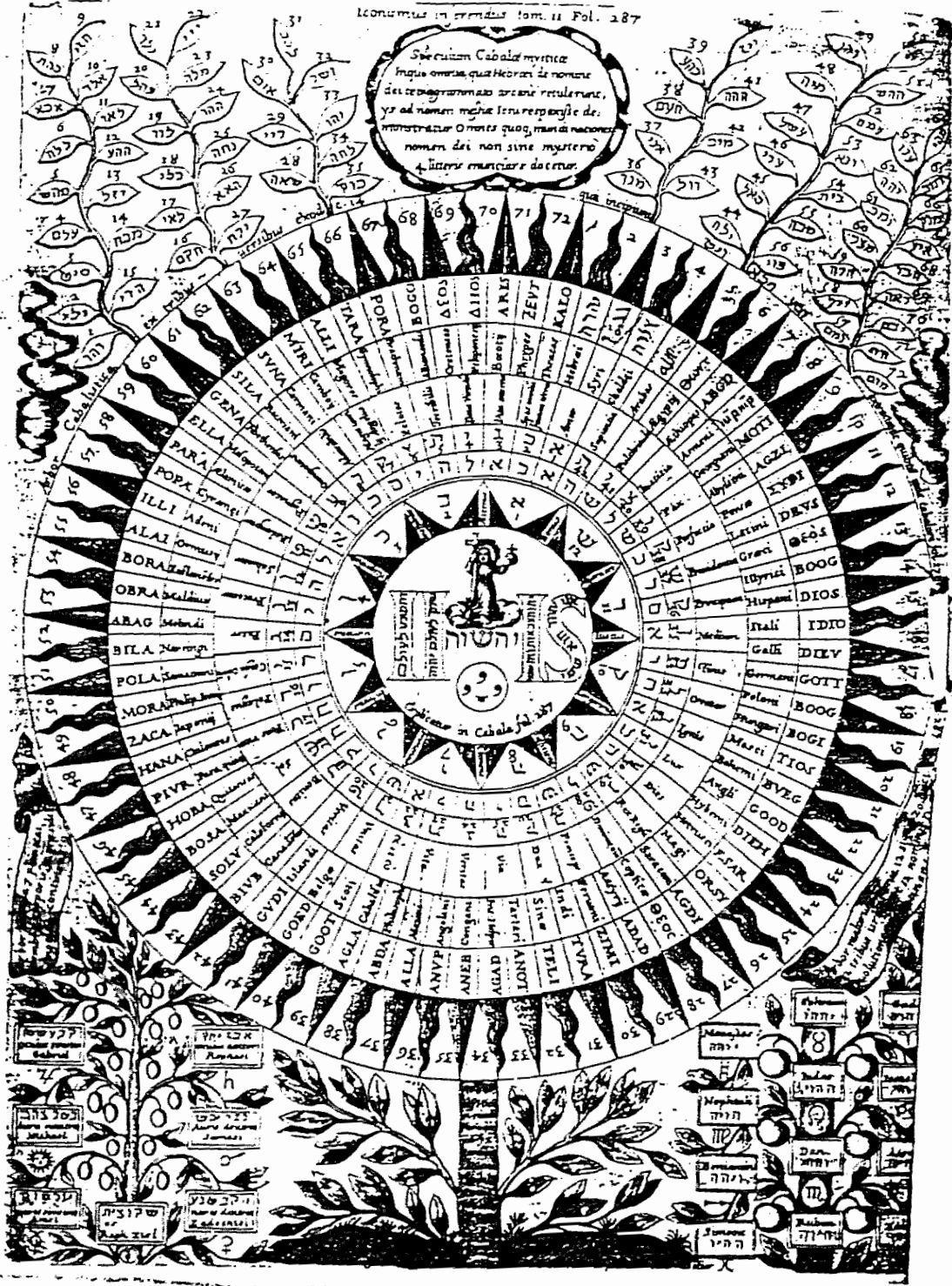


7-II





Speculum Cabalae mysticae  
In quo omnia quae Hieronymi de nomine  
dei tetragrammati arcanis retulerunt,  
ut ad nomen magis Iesu respicere de-  
monstratur. Omnes quoque numeri et rationes  
nomen dei non sine mysterio  
4 litteris enunciare datur.

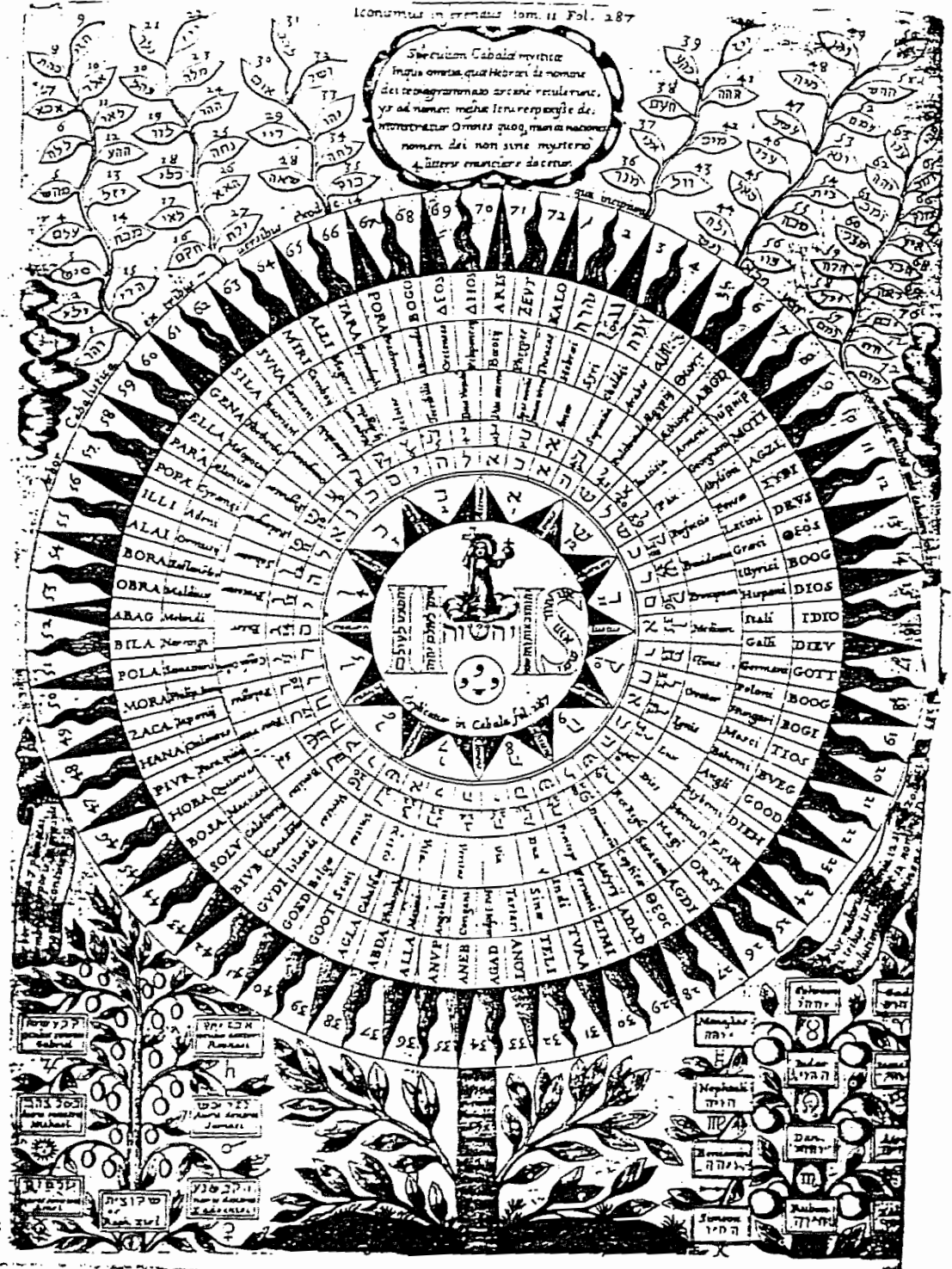


The Seventy-Two Names of God  
Cabbala says that there are  
seventy-two names of God, which  
she interprets by giving God's name  
in seventy-two languages: each is  
composed of four letters, to reflect the  
ancient Tetragrammaton IHVH (no. 1).  
Sometimes this leads to compromise, as

in Italian: DIO (no. 15) and English  
GOOD (no. 22). The other circles con-  
tain God's various attributes: Creator,  
Perfection, Light, etc. In the centre is  
Jesus, whose name is comprised of the  
'mother letter Shin inserted in the  
Tetragrammaton: IHSVH. The two trees  
are those of the seven planets and

angels (left) and the twelve signs of the  
Zodiac and tribes of Israel (right). The  
leaves at the top bear seventy-two  
names in Hebrew, distributed among  
the nine angelic orders - with the cau-  
tion that they are on no account to be  
used for magical invocations.  
(Oedipus. II. i. p. 287)

381



52 The Seventy-Two Names of God  
 The Cabbala says that there are seventy-two names of God, which Kircher interprets by giving God's name in the seventy-two languages: each is spelled with four letters, to reflect the Hebrew Tetragrammaton IHVH (no. 1). Sometimes this leads to compromise, as

in Italian IDIO (no. 15) and English GOOD (no. 22). The other circles contain God's various attributes: Creator, Perfection, Light, etc. In the centre is Jesus, whose name is comprised of the 'mother' letter Shin inserted in the Tetragrammaton IHSVH. The two trees are those of the seven planets and

angels (left) and the twelve signs of the Zodiac and tribes of Israel (right). The leaves at the top bear seventy-two names in Hebrew, distributed among the nine angelic orders - with the caution that they are on no account to be used for magical invocations. (Oedipus. II. i. p. 287)

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Le Amis Jcher delin.

Baronius F. Rome

41



Given the simplicity of both content and language, this was just the sort of book appropriate for a wide and general audience. It could have been used by clergy for training new clergy or instructing the laity. Similarly, it could have been used by laity to help them learn the basics of the faith, or when teaching other laity, as a household master would have taught servants. Such a book was the companion to missal and breviary, both of which are essential for the outward demonstration of inward faith; it would also supplement Italian vernacular literature such as saints' lives, which played a major role in the religious life of ordinary clergy and laity alike. Because *tabulae* like the *Tabula Christianae religionis* were undoubtedly heavily-used, their casualty rate

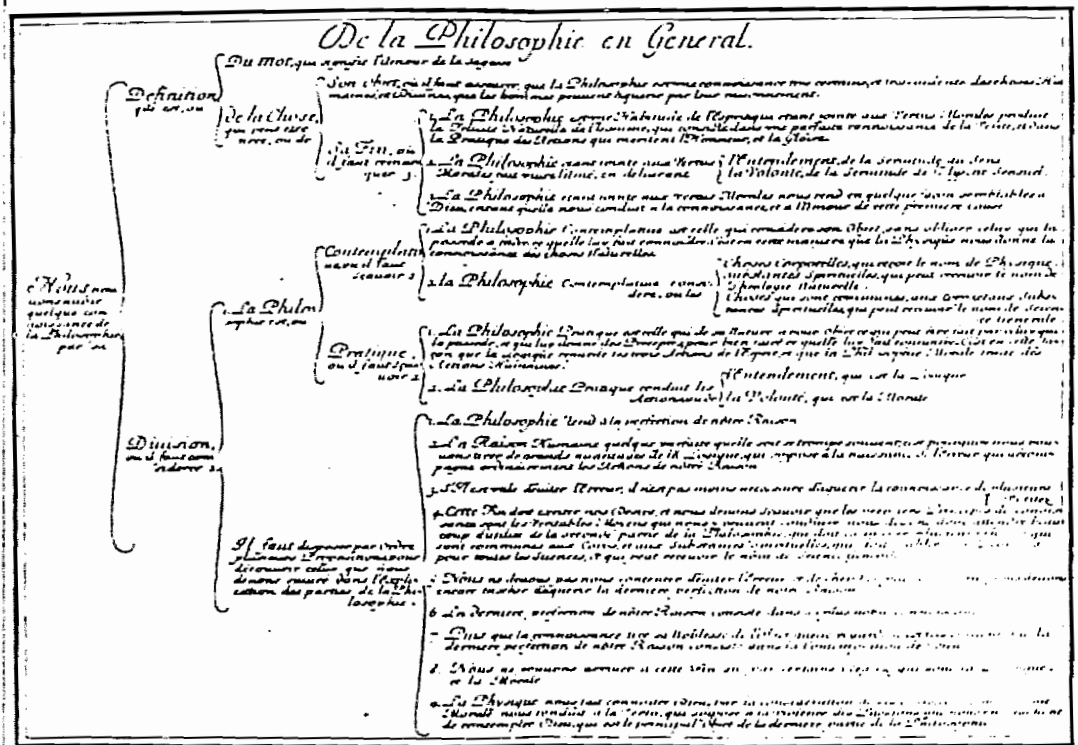


Plate from Louis de Lesclache, *La philosophie expliquée en tables* (Paris, 1652–1653). Rare Books Collection, Princeton University Library.

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179. 7522. 361. 11





Fig. 13  
 Anonymous, "Grammar", woodcut, from Gregor Reisch,  
*Margarita Philosophica*, Basel, 1517, Providence, John Hay  
 Library, Brown University

44

Malvasia's account of Francesco Brizio's early withdrawal from school out of financial necessity illustrates, in the context of his later success, the prestige a man of humble origins could achieve through the intelligent practice of art.<sup>34</sup>

The reporting of the elementary, and more importantly the secondary phase of artists' education, generally served to either distinguish them as impassioned individuals with irrepressible talents, or to insert them into a respectable movement in society. As will become apparent, the education of the artist at the Latin school was also often abbreviated to begin training in the workshop or academy.

The essence of "learning" for both the theorists of art and the definition of the gentleman was the knowledge of Latin. For centuries Latin had been spoken among the nobility, and was the language of international trade. At a

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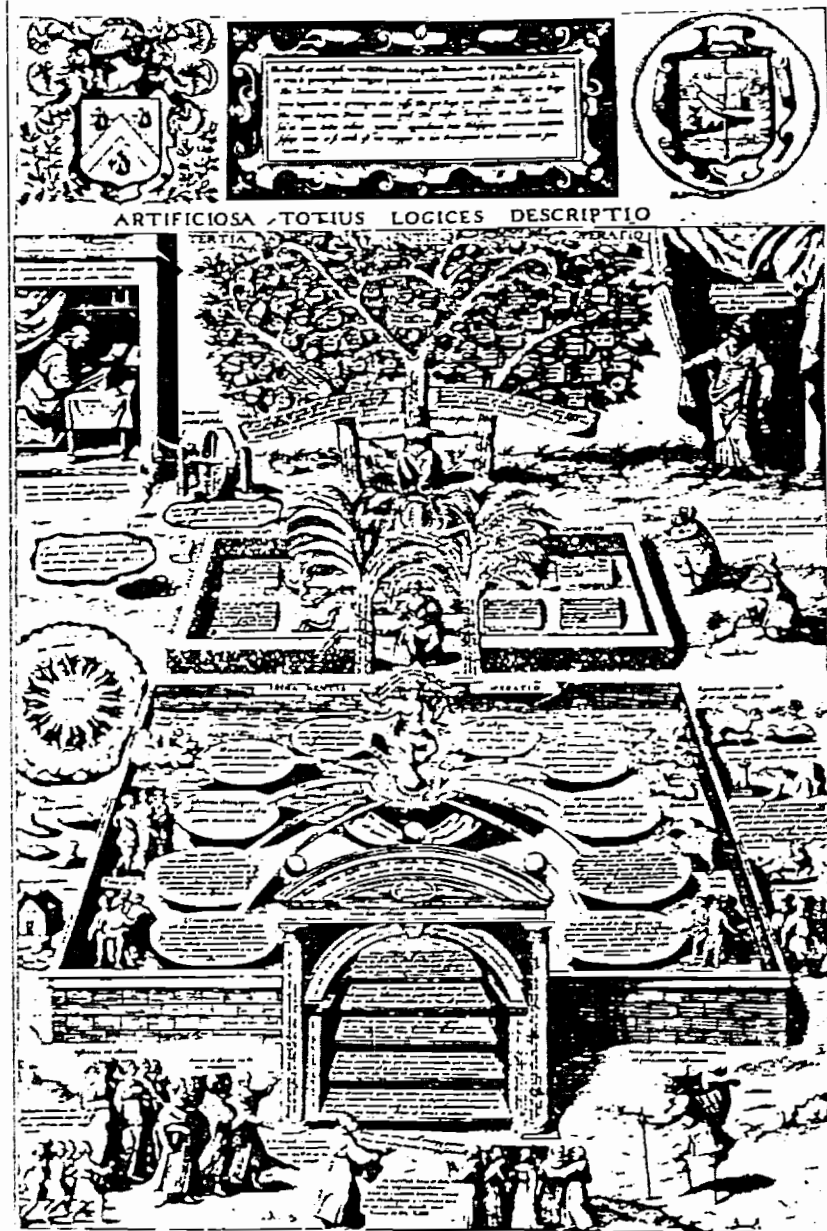
advanced  
 poems by

*Grammar*  
 prosody, *P*

*ares, Ad A*  
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*adoxia, C.*  
*Georgics.*

"Humanit  
 Ferrill



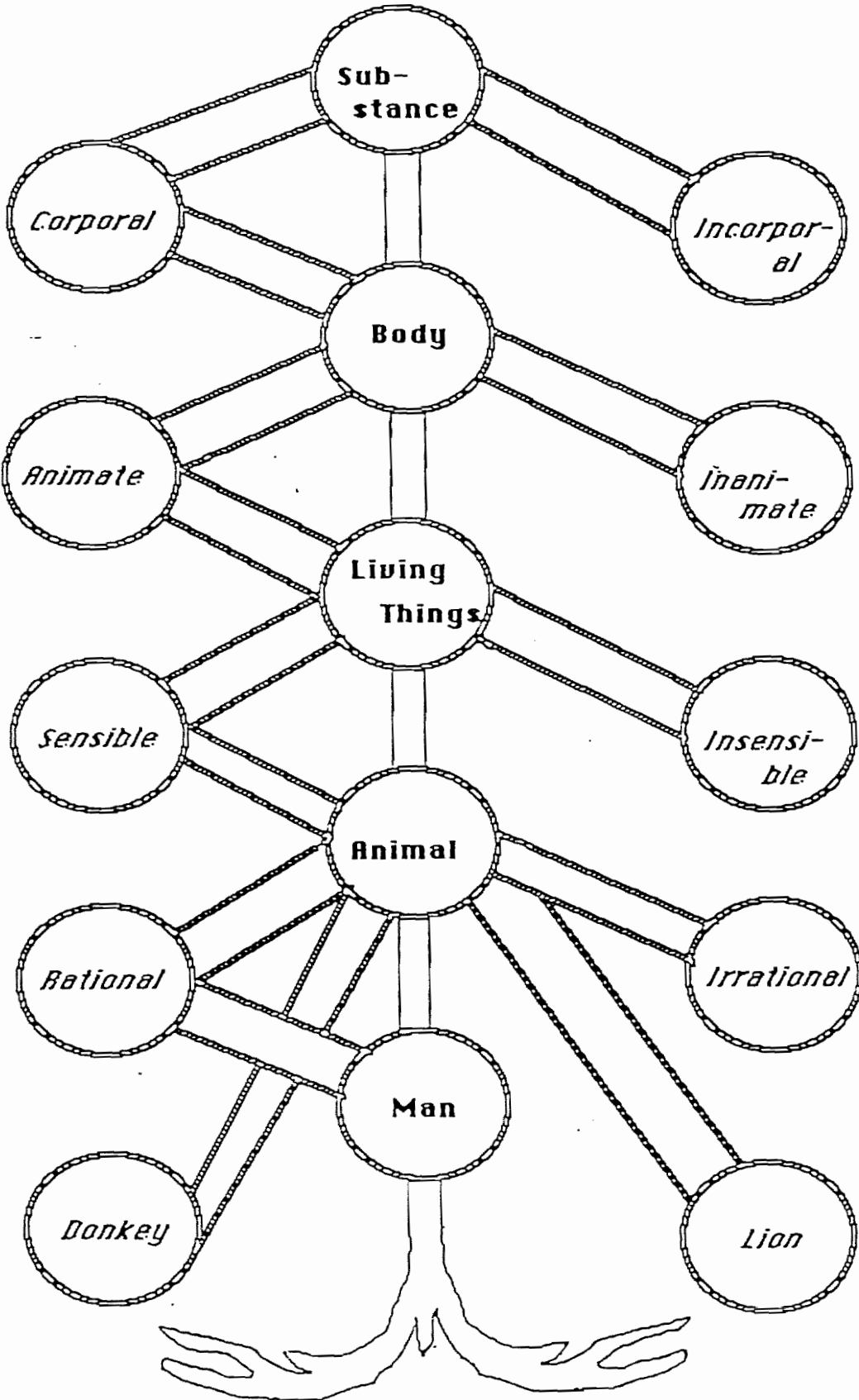
Martin Meurisse, *Artificiosa totius logices descriptio*. [Paris], 1614. Graphic Arts Collection, Princeton University Library.

4.5

18



# Concerning the Predicables



leaf 49<sup>v</sup>

# Tractatus secundus

Tree of Porphyry

Lat<sup>o</sup> dextrū

Linea recta

Lat<sup>o</sup> sinistrū

Quarta

**Ens.**

significat univo-  
ce implere ab-  
solute et ad equa-  
te omne ens siue  
sit substantia siue  
accidens.

**Entitariū.**

fecit substantiue  
de ens et notat  
oē tale p moduz  
q̄tatis essentia-  
lis et nec est diffe-  
rentia diuina  
nec constituta.

**Accidērale.**

significat substra-  
tiue omne acci-  
dens et connotat  
tale per modum  
qualitatis essen-  
tialis.

**Incorporeū.**

fecit substantiue  
substantiā nō opo-  
sita et materia et  
forma et connotat  
et. vt supra.

**Inanimatū.**

fecit substantiue  
substantiā opposita  
et materia et for-  
ma q̄ forma nō ē  
aia et connotat. et.

**Insensitiuū.**

fecit substantiue  
substantiā opposita  
et materia et  
forma q̄ forma ē  
aia vegetaria im  
et connotat. et.

**Irrationale.**

fecit substantiue  
oīe beati et con-  
notat animā bea-  
ti per modū q̄li-  
tatis essentialis.

**Homo.**

fecit absolute oē  
animal rationale.

Socrates, Plato.

**Substantiale**

fecit substantiue  
oēm substantiaz  
et connotat omne  
tale p modū es-  
sentialis habitū  
diuis.

**Corporeū.**

fecit substantiue  
rem composita  
et materia et for-  
ma et connotat oēs  
talē. et. vt sup.

**Animatum.**

fecit substantiue  
re composita et  
materia et forma  
q̄ forma est aia  
et connotat. et.

**Sensitiuū.**

fecit substantiue  
re composita et  
materia et forma  
q̄ forma est aia  
sensitiua et con-  
notat oēm talē. et.

**Rationale.**

fecit substantiue  
hoīem et connotat  
animā hoīs per  
modū qualitatis  
essentialis.

**Substantia**

significat absolu-  
te oēm rem per se  
subsistentem vel  
partes rei per se  
subsistentis: ita  
substantia capitur  
proprie.

**Corpus.**

significat absolu-  
te oēm rem com-  
positaz ex mate-  
ria et forma sub-  
stantiali nihil cō-  
notando.

**Corp<sup>o</sup> aiariū**

significat absolu-  
te oēs rem cōpo-  
sita ex materia et  
forma que for-  
ma est anima.

**Animal.**

significat absolu-  
te oēm rem com-  
positaz ex mate-  
ria et forma que  
forma est anima  
sensitiua.

Sto. dicitur de substantia et accidentibus

**Accidens**

hic capit  
fecit oēm  
nō est natura  
sistere nec  
rei per se  
vt albedo  
et.

**Substantia**

significat  
eminenti  
composita  
et materia  
et forma  
et connotat  
et. et.

**Corp<sup>o</sup>**

fecit ab-  
solutū  
et materia  
q̄ forma  
vt lapis  
et.

**Plant**

fecit ab-  
solutū  
et materia  
q̄ forma  
generatiue  
herbarū  
et.

**Beati**

fecit ab-  
solutū  
aia  
et.

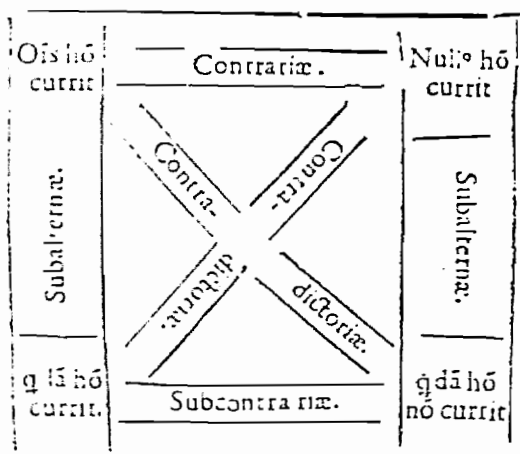
Peter of Spain (p. 1 m. e. = Joanne XXI, pope)

EX 6275.501

47

A

Præsentia contra propositionum oppositiones clare  
conspiciuntur.



E

B

De triplici propositionum materia naturali, seu necessaria, contingenti,  
ac remota.

Propositionum triplex est materia, scilicet: naturalis, contingens, & remota. Naturalis est illa, in qua predicatum est essentia, seu natura, vel proprium eius, ut homo est animal homo risibilis.

Postquam Auctor determinavit de oppositionibus oppositionum, conuenienter vult determinare de legibus oppositionum. & quia illarum leges, vel regulæ variantur secundum variationem materiae in teris propositionum, ideo antequam de ipsis determinet prius agit de materia propositionum, & licet propositio non habeat materiam proprie dictam, quia nullum accidens uel ens rationis habet materiam proprie dictam, propositio autem secundum suam materiam quod est uox, est conueniens & inueniuntur ad formale, quod est esse signi in conuenientibus, ut ens rationis, nisi in materia proprie dictam ad similitudinem materiae rationis.

Primo sciendum, quod propositio ha-

bet materiam ex qua similitudinariae & materiam in qua, et circa, quam unde materia ex qua sunt subiectum, & predicatum, & subiectum uocis est materia in qua vel ipsa uox si propositio consideretur quantum ad suum formale, sed enunciabile, de quo est ipsa propositio, est sua materia circa quam. hic autem capitur materia propositionis solū pro conditione materiae suae ex qua ideo est habitudo praedicti ad subiectum. ideo materia propositionis, ut hic sumitur, est habitudo praedicti ad subiectum, in qua sit compositio praedicti cum subiecto, & in qua subiectum, & praedictum conueniant.

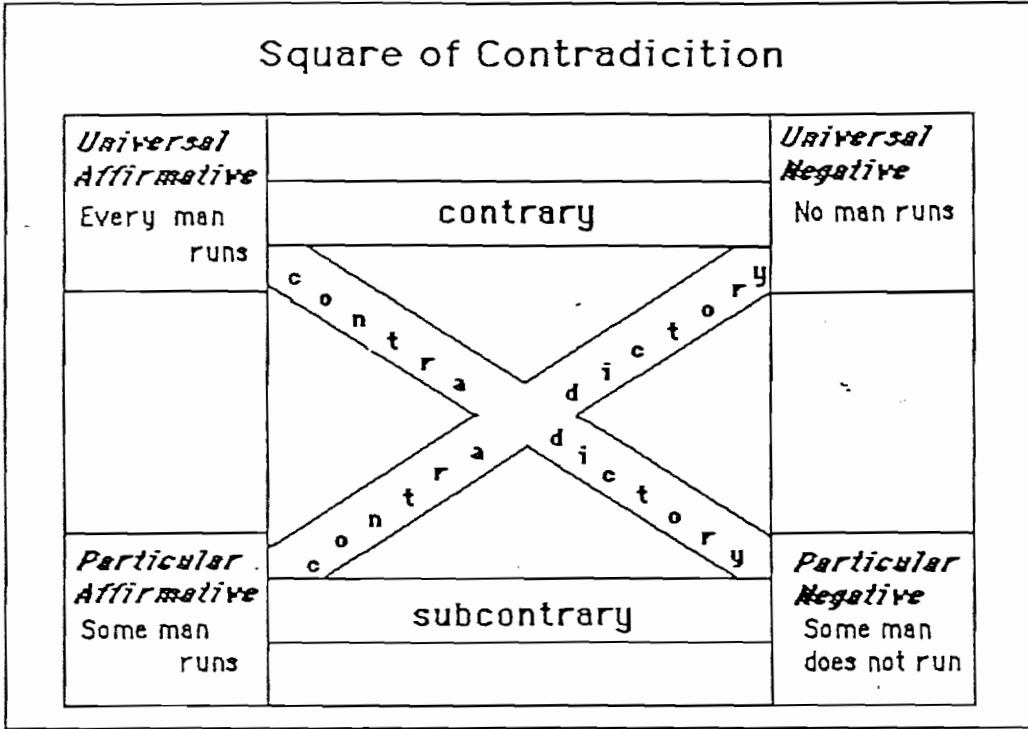
Secundo sciendum, quod triplex est materia propositionum, scilicet naturalis, contingens, & remota, quod probatur per istam rationem quia materia propositionis est habitudo praedicti ad subiectum, uel ergo illa habitudo dicitur remota materia praedicti cum subiecto, ergo si sit materia remota, uel dicitur conuenientiam, & hoc dupliciter, uel dicitur conuenientiam.

Ex 6275.501.2

Peter F Spain



## Square of Contradiction





The Argument of the Frontispiece.

Then distinct Squares here seen apart,  
Are joynd in one by Cutters art.

1 Old Democritus under a tree,  
Sits on a stone with book on knee;  
About him hang there many features,  
Of Cats, Dogs and such like creatures,  
Of which he makes Anatomy,  
The seat of black choler to see  
Over his head appears the skie,  
And Saturn Lord of melancholy.

2 To the left a landskip of Jealouſie,  
Presents it self unto thine eye.  
A Kingfisher, a Swan, an Heron,  
Two fighting Cocks you may discern,  
Two roaring Bulls each other hie,  
To assault concerning Vencry.  
Symboles are theſe ſay no more,  
Conceiue the reſt by that's afore.

3 The next of Solitarineſs,  
A portraiture doth well expreſs,  
By ſleeping dog, cat, Buck and Doe,  
Hares, Conies in the deſart go:  
But Owls the ſhady bowers ouer,  
In melancholy darkneſs hoer  
Moe will. If it be not as it ſhould be,  
Blame the bad Cutter, and not me.

4 To the right under Columne there doth ſtand  
Inamorato with folded hand,  
Down hangs his head, terſe and polite,  
Some dittie ſure he doth indite.  
His liſe and books about him lie,  
As ſymptomes of his vanity.  
If thou do not enquire diſcloſe,  
I pray thee take thy ſelf by th' noſe.

5 Hypochondriacus leans on his arm,  
Winde in his ſide doth him much harm,  
And troubles him full ſore God knows,  
Much pain he hath and many woes.  
About him pots and glaſſes lie,  
Newly brought from's Apothecary.  
Thy Saturn's affects ſignifie,  
You ſee them portraid in the ſkie.

6 Beneath them kneeling on his knee,  
A Superſtitious man you ſee:  
He faſts, prays, on his Idol fixt,  
Tormented hope and fear betwixt:  
For hell perhaps he takes more pain,  
Then thou doſt Heaven it ſelf to gain.  
Alas poor Soul, pittie thee,  
What fears incline thee ſo to be?

7 But ſee the Madman vage down right  
With furious look, a glaſſy fight,  
Naked in ſhew, but not ſo he lie,  
And thou maye ſee how not why?  
Obſerue him, for as in a glaſſ,  
Thine angry portraiture it was.  
His picture keep ſtill in thy preſence,  
Twixt him and thee, ther's no difference.

8 9 Borage and Hellebor fill two ſcenes,  
So verſen plants to purge the veins  
Of melancholy, and cheer the heart,  
Of thoſe black fumes which make it ſmart,  
To clear the Brain of miſty fogs,  
Which dull our ſenſes, and Soul clogs.  
The beſt medicine that ere God made  
For this malady, if well aſſaid.

10 Now laſt of all to fill a place,  
Presented is the Authours face,  
And in that habit which he wears,  
His Image to the world appears.  
His minde no art can well expreſs,  
That by his writings you may gueſs.  
It was not pride, nor yet vain glory  
(Though others do it commonly)

Made him do this, if you muſt know,  
The Printer would needs haue it ſo.  
Then do not frown or ſcoffe at it,  
Deride not, or detract a whit.  
For ſurely as thou doſt by him,  
He will do the ſame again.  
Then look upon't, behold and ſee,  
As thou lik'ſt it, ſo it likes thee.

And I for it will ſtand in view,  
Thine to command, Reader Adieu.

ΝΕΚΡΟΚΗΔΕΙΑ:  
OR, THE  
**Art of Embalming;**  
Wherein is shewn  
**The Right of Burial,**  
AND  
**FUNERAL CEREMONIES,**  
Especially that of  
**Preserving Bodies**  
**After the EGYPTIAN Method.**

TOGETHER WITH  
An Account of the *Egyptian* Mummies, Pyramids,  
Subterranean Vaults and Lamps, and their Opinion of the *Me-*  
*tempsychofs*, the Cause of their *Embalming*.

AS ALSO  
A Geographical Description of *Egypt*, the Rise and  
Course of the *Nile*, the Temper, Constitution and Physic of the  
Inhabitants, their Inventions, Arts, Sciences, Stupendous Works  
and Sepulchres, and other curious Observations any ways rela-  
ting to the Physiology and Knowledge of this *Art*.

In Three LETTERS.

*Illustrated with a Map and Fourteen Sculptures.*

By THOMAS GREENHILL, Surgeon.

LONDON: Printed in the Year, MDCCV.

---

## The Explanation of the Frontispiece.

**R** Eader thou in this *Frontispiece* may'st see  
How mortal *Man* seeks *Immortalitie* ;  
His beauteous *Frame* he sees with speed decline,  
And soon dissolv'd by *Death*, tho' form'd by *Hands Divins-*  
*Sadness* in Widows Robes deplores his *State*,  
While the *Young Brood* inspect the *Book of Fate* ;  
Pensive they view the *Rise and Fall of Man*,  
With Tears survey his *Transitory Span*.

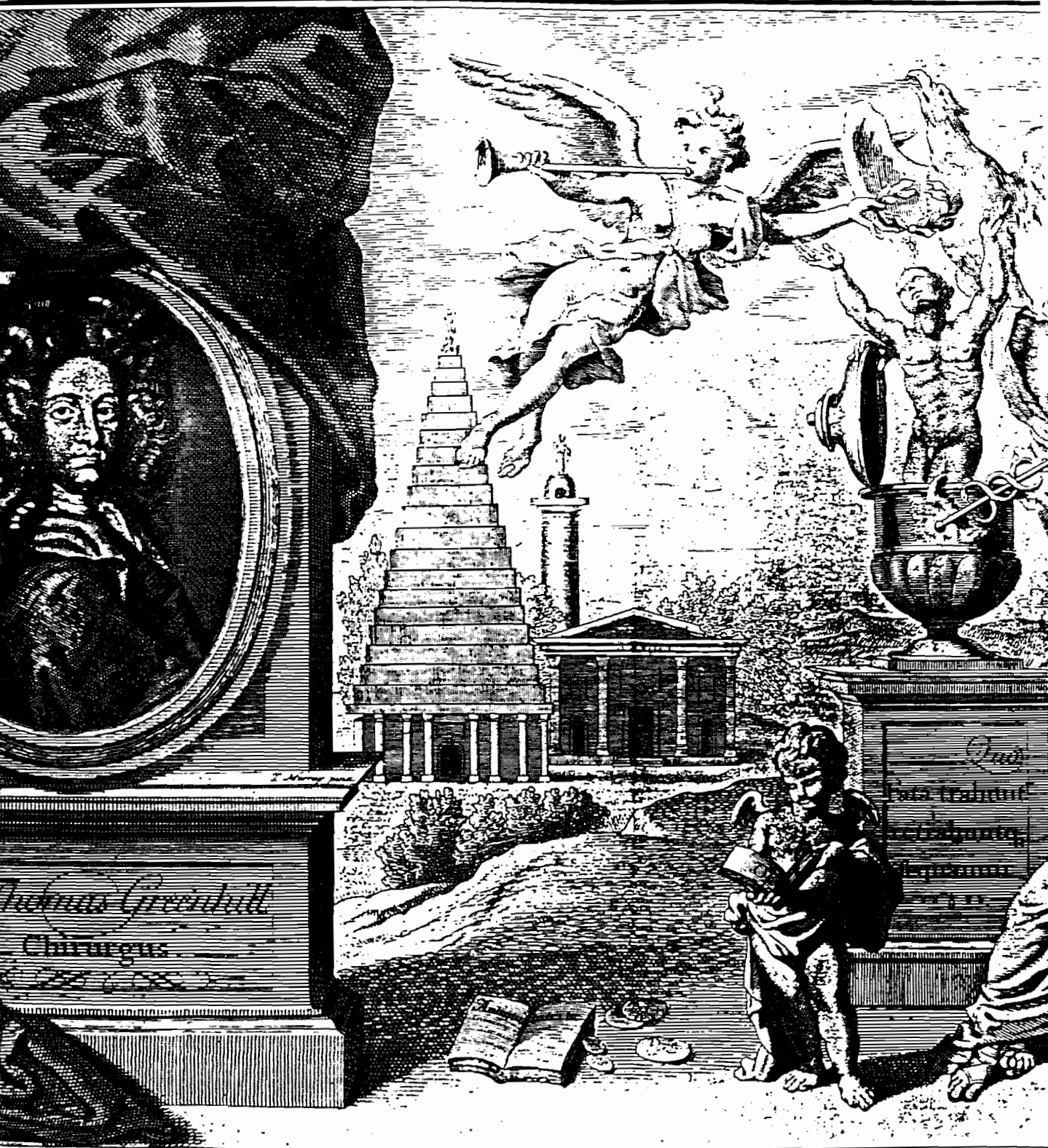
But his great *Soul*, full of *Cœlestial Flame*,  
Disdaining *Death*, strives to extend his *Name* ;  
And conscious of our too too fickle *State*,  
Would fain elude the Force of *Time and Fate* :  
The narrow Boundaries of *Life* would pass,  
By *Statues, Pillars, Monumental Bras*,  
Aspiring *Pyramids*, that lift on high  
Their spiral Heads to reach his kindred *Skie*,  
Which in their dark *Repositories* keep  
The *Bodies* safe in their *Immortal Sleep* ;  
While healing *Balm* and *Aromatic Spice*,  
*Death's* odious *Dissipation* to their *Form* denies.

*Death* baff'd thus by wise *Chyurgie Art*,  
Wounds *Mortals* there but with a blunted *Dart* ;  
And half the Terror of the *Grievly Fiend*  
Is lost, when *Mortal Bodies* know no end.

The *Bodies* thus *Preserv'd*, the thinking *Part*  
*Men* strive to keep alive by various *Art*,  
And fine wrought *Medals* and *Inscriptions* use,  
But above all the *bright-recording Muse* ;  
Thro' *Time's* revolving Tide the faithful *Page*  
Conveys their earliest *Rise* to the remotest *Age*,  
While *Death* and *Time* oppose their *Force* in vain,  
*Superior Men* above their *Force* remain ;  
*Temples* and *Fanes* they to the *Godhead* raise,  
To bribe the only *Power*, that can destroy, with *Praise*.

*Jove* pleas'd, in *Pity* of the pious *Race*,  
Two *Messengers* sends down the *Airy space*,  
To raise *Man's Ashes* from the silent *Urn*,  
Which touch'd by *Hermes* wand resume their pristine *Form*.

*Jove's Royal Bird* attends to bear on high  
Th' *Immortal Soul* up to its *Native Skie*,  
While *Fame* aloud her *Silver Trumpet* sounds,  
And with the *Lawrel Wreath* the *Victor Crowns*.  
And thus *Eternal* lives the *deathless Mind*,  
Which, here on *Earth*, no settled *State* could find.

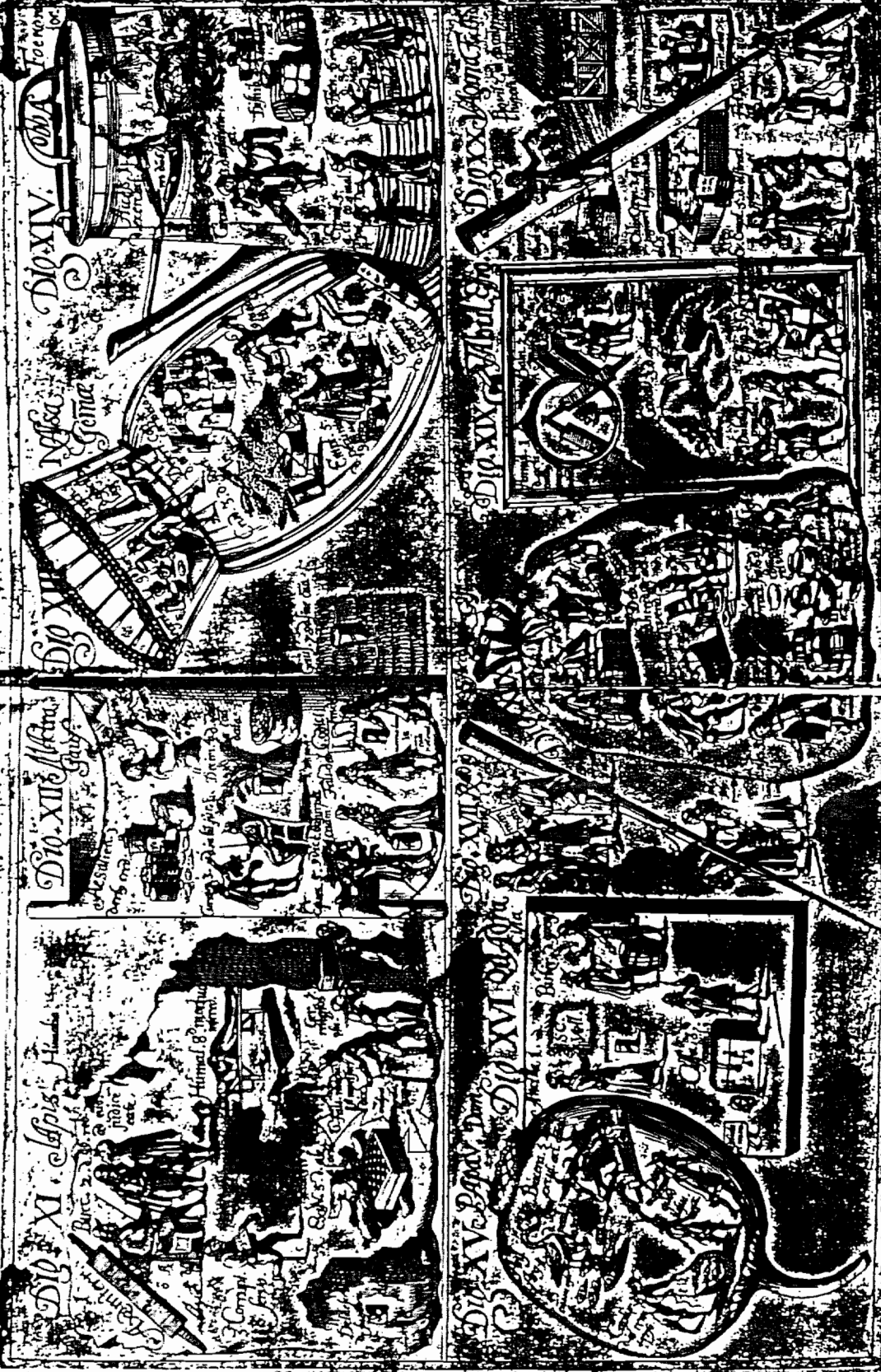


Thomas Greenhill  
Chirurgus

Quid  
Pata trahunt  
trahunt  
trahunt



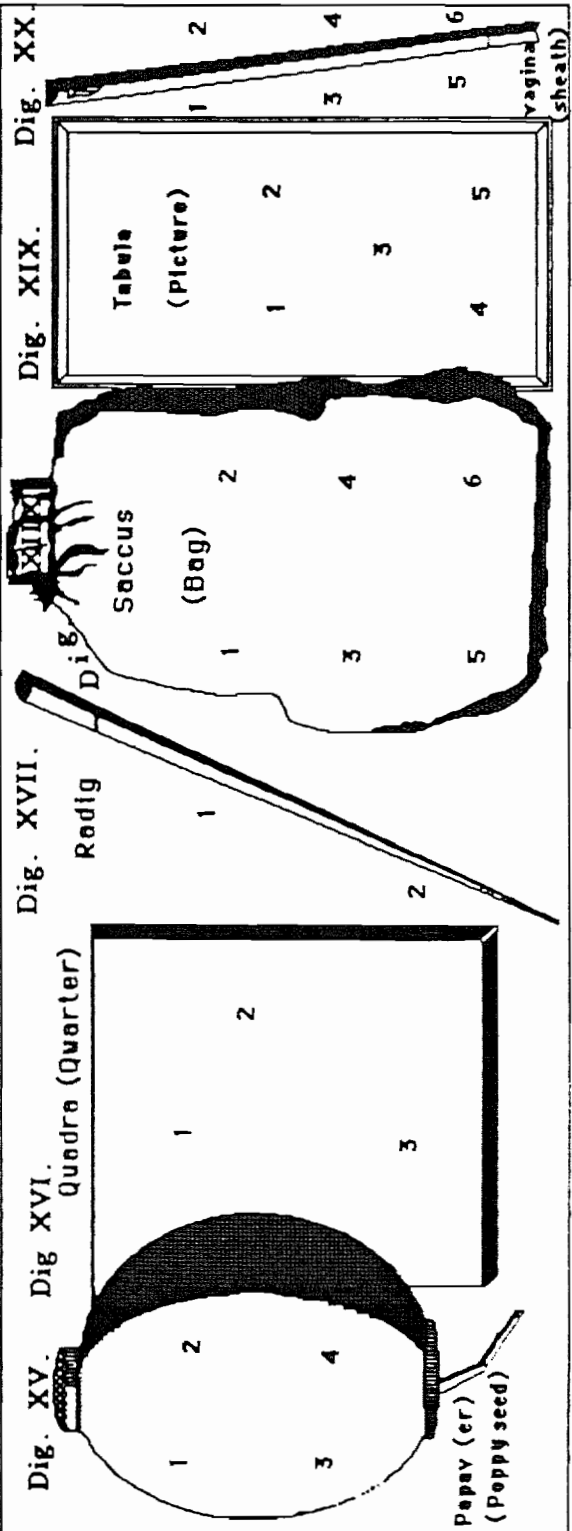
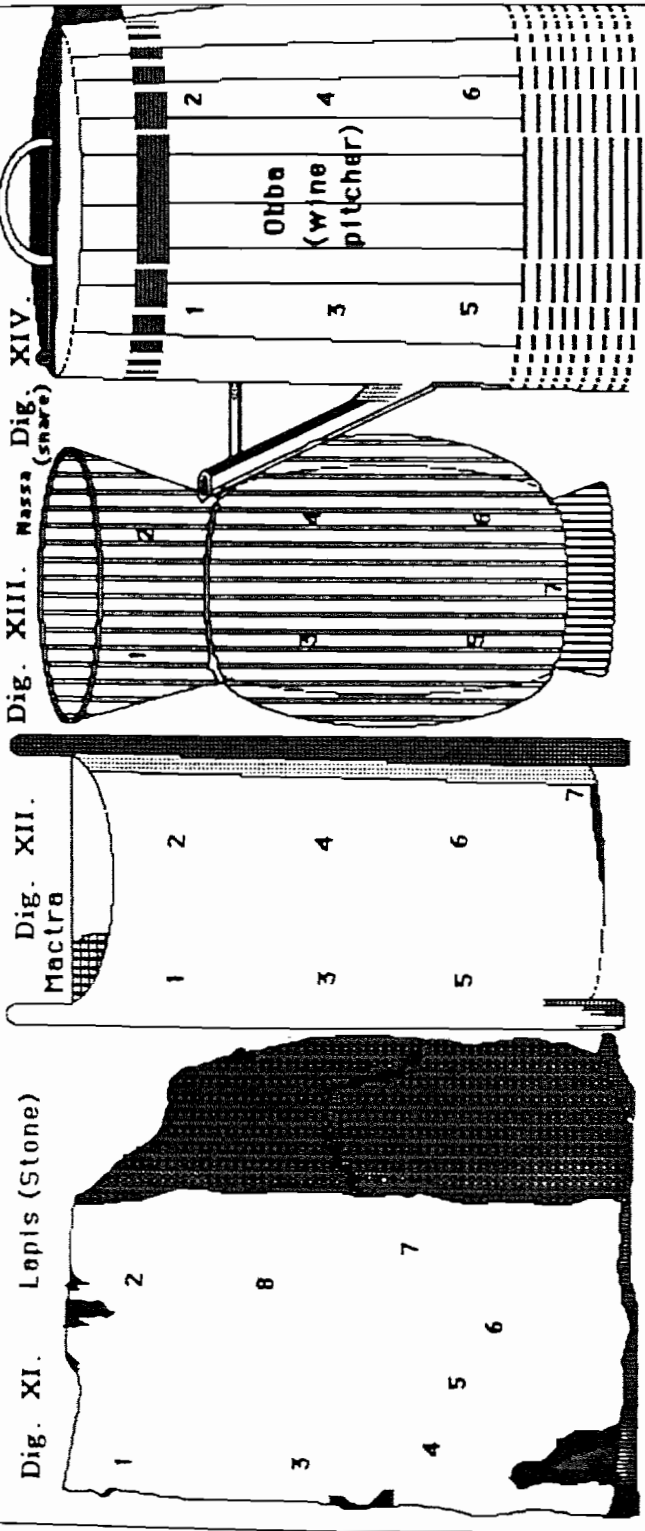
BUND





BBB

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BOOK FIFTEEN

BOOK FIFTEEN

1. Conclusion of the Contract of Purchase, Special Terms Agreed between the Vendor and Purchaser, and Things Which Cannot Be Sold
2. In Diem Addictio
3. The Forfeiture Clause
4. Sale of an Inheritance or of a Right of Action
5. Rescission of a Sale and the Circumstances in Which a Purchase May Be Departed From
6. Risk and Benefit of the Thing Sold

BOOK FIFTEEN

1. Interrogations before the Magistrate and Interrogatory Actions
2. What Matters May Be Taken to the Same Judge
3. The Action for Making a Slave Worse
4. Runaway Slaves
5. Gamblers
6. If a Surveyor Gives a False Report about Measurements
7. Religious Things, Funeral Expenses, and the Right To

8. Ruvving the head and Building Tombs

BOOK TWELVE

1. Things Credited Giving Rise to Fixed Claims and the Condictio
2. Voluntary, Compulsory, and Judicial Oaths
3. Oaths as to the Value in Issue
4. The Condictio for Nonreciprocation
5. The Condictio for Immoral or Illegal Payments
6. The Condictio for Money Not Owed
7. The Condictio for No Fixed Cause

BOOK THIRTEEN

1. The Condictio for Theft
2. The Condictio under Statute
3. The Condictio for Fixed Quantities
4. Where the Obligatio is To Give at a Fixed Place
5. The Constitutum of Money
6. Loan for Use: The Actions for and against the Lender
7. Pignus: The Actions for and against the Pledgee

BOOK FOURTEEN

1. The Action against the Shipowner
2. The Rhodian Law of Litterison
3. The Action for the Business Manager's Conduct
4. The Action for Distribution
5. Transactions Allegedly Effected with a Person in the Power of Another
6. The Senatus Consultum Macedonianum

BOOK FIFTEEN

1. The Peculium
2. The Action on the Peculium Which Prescribes in One Year
3. Benefit Taken
4. Authorized Transactions

BOOK SIXTEEN

1. The Senatus Consultum Velleianum
2. Est-Off
3. The Action and Contrary Action on Deposit

BOOK SEVENTEEN

1. The Action on Mandate or the Counteraction
2. Partnership

Provision That They Re (or Not Re) Manumitted

BOOK NINETEEN

1. The Actions for Sale and Purchase
2. Lease and Hire

BOOK TWENTY-ONE

1. The Edict of the Aedile, Rescission, and the Action for Diminution
2. Evictions and the Stipulation for Double the Price
3. The Defense That the Thing Has Been Sold and Delivered

BOOK TWENTY-TWO

1. Interests, Fruits, Incidentals, Accessions, and Delays
2. Transmarine Loans
3. Proof and Presumption
4. Documentary Evidence and Loss of Documents
5. Witnesses
6. Mistake of Law and Fact

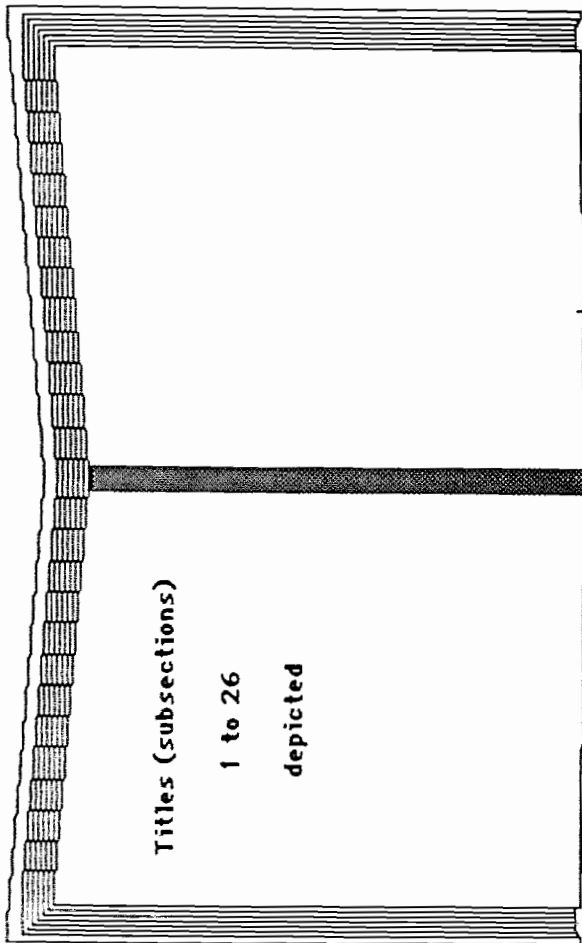
BOOK TWENTY-THREE

1. Retrothals
2. Formation of Marriage
3. The Law of Dowry
4. Dotal Facts
5. Dotal Lane

BOOK TWENTY-FOUR

1. Gifts between Husband and Wife
2. Divorces and Repudiations
3. The Recovery of the Dowry on Dissolution of the Marriage

Book I. Institutes Adollescens (young boy)

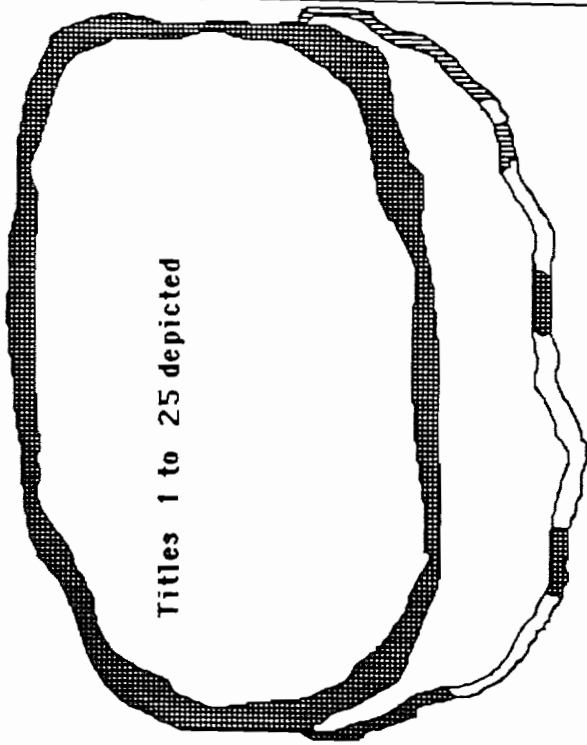


Titles (subsections)

1 to 26

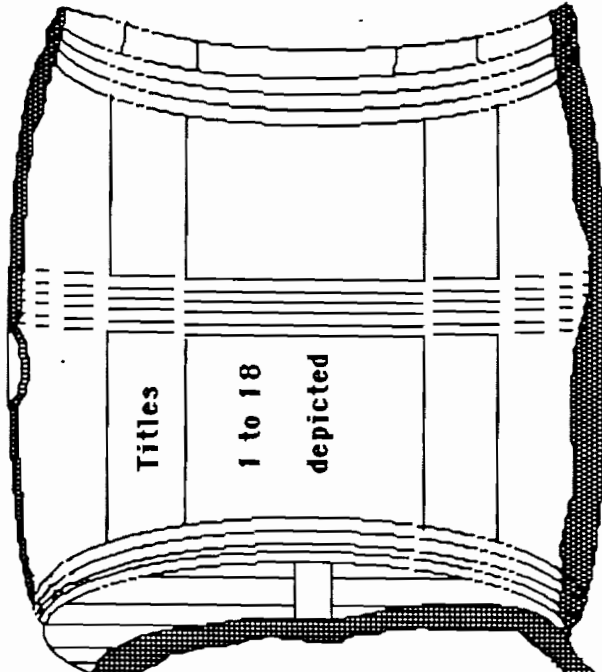
depicted

Book II. *Bulga* (Rucksack)



Titles 1 to 25 depicted

Book IV. *Dolium* (Barrel)

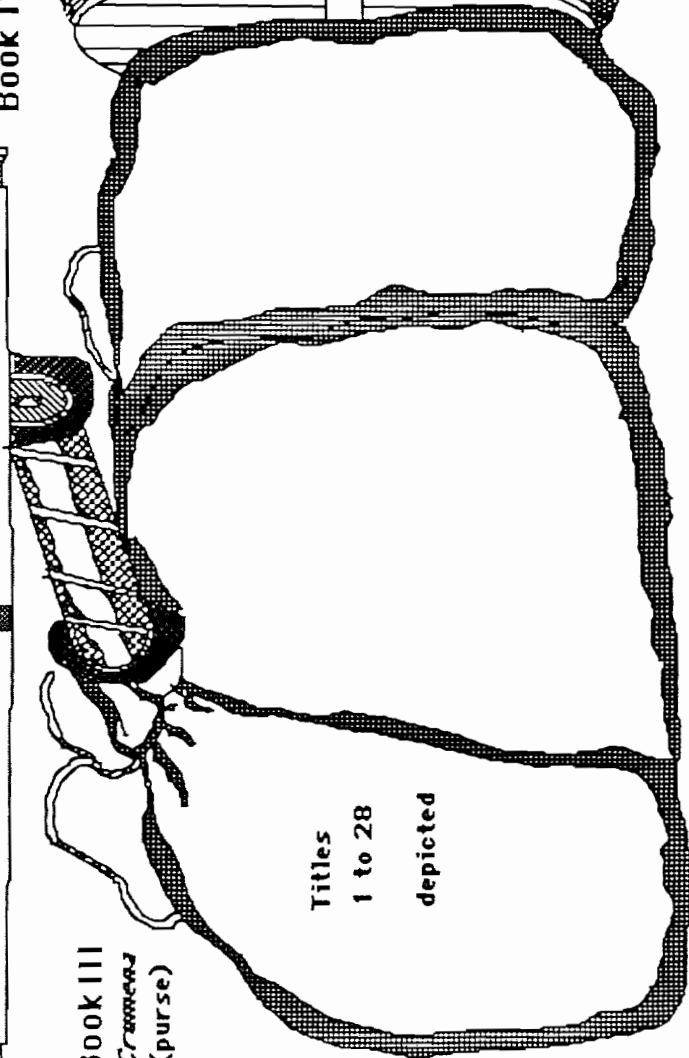


Titles

1 to 18

depicted

Book III  
*Gramena*  
(purse)

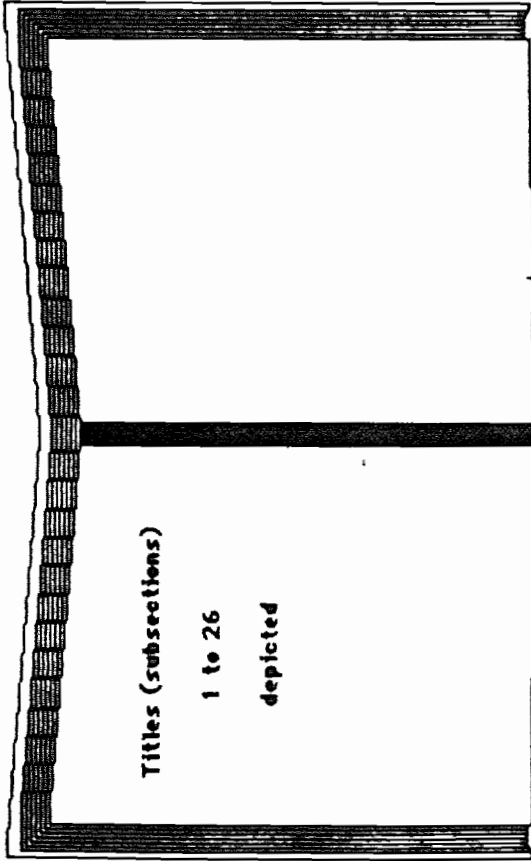


Titles

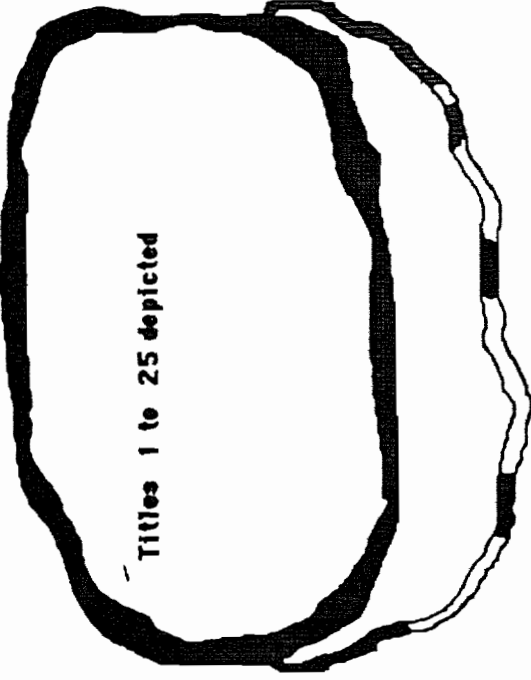
1 to 28

depicted

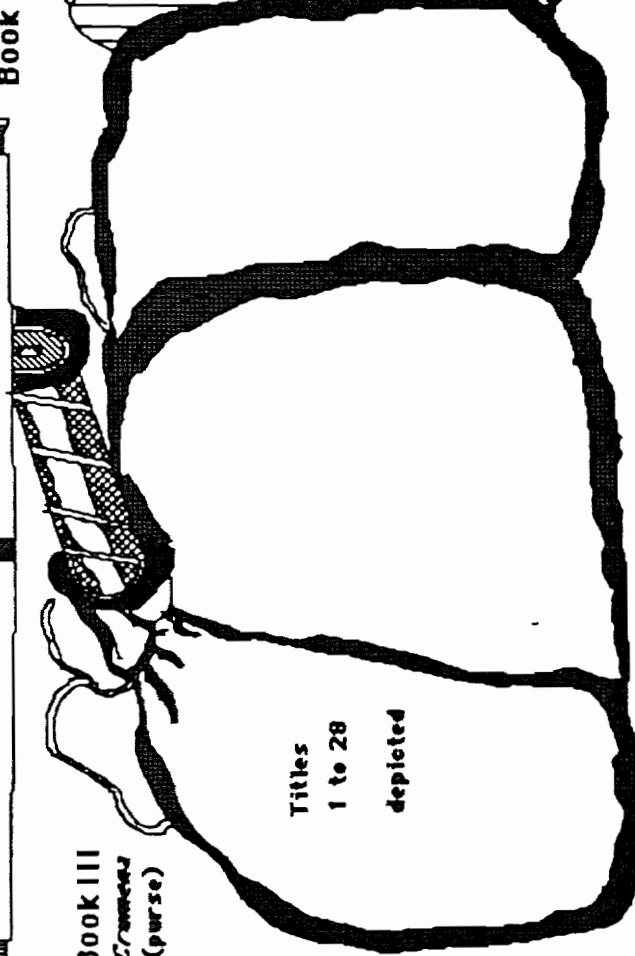
Book I. Institutes Adollescens (young boy)



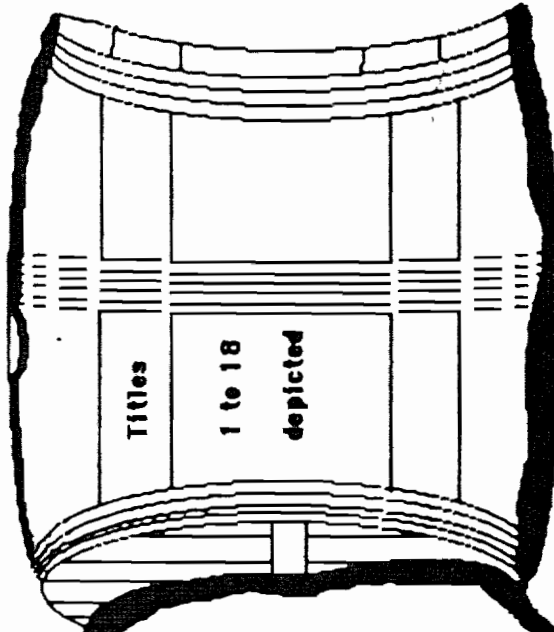
Book II. *Bulga* (Rucksack)



Book III  
*Crument*  
(purse)



Book IV. *Dalium* (Barrel)



2. Concerning Natural Law, the Law of Nations, and the Civil Law
1. Concerning the Rights of Persons
4. Concerning Freeborn Persons
5. Concerning Freedmen
6. Who Cannot Manumit Others, and Why They Are Unable To Do So
7. Concerning the Abrogation of the Lex Furia Caninia
8. Concerning Those Who Are Their Own Masters, or Are Under the Control of Others
9. Concerning Paternal Authority
10. Concerning Marriage
11. Concerning Adoption
12. In What Ways the Right of Paternal Power is Abrogated
13. Concerning Guardianship
14. Who Can Be Appointed Testamentary Guardians
15. Concerning the Legal Guardianship of Agnates
16. Concerning the Loss of Civil Rights
17. Concerning the Legal Guardianship of Patrons
18. Concerning the Legal Guardianship of Ascendants
19. Concerning Fiduciary Guardianship
20. Concerning the Atilian Guardian, and the One Appointed Under the Lex Julia Et Titia
21. Concerning the Sanction of Guardians
22. In What Ways a Guardianship is Terminated
23. Concerning Curators
24. Concerning the Giving of Security by Guardians and Curators
25. Concerning the Reasons for Excusing Guardians or Curators
26. Concerning Suspected Guardians or Curators

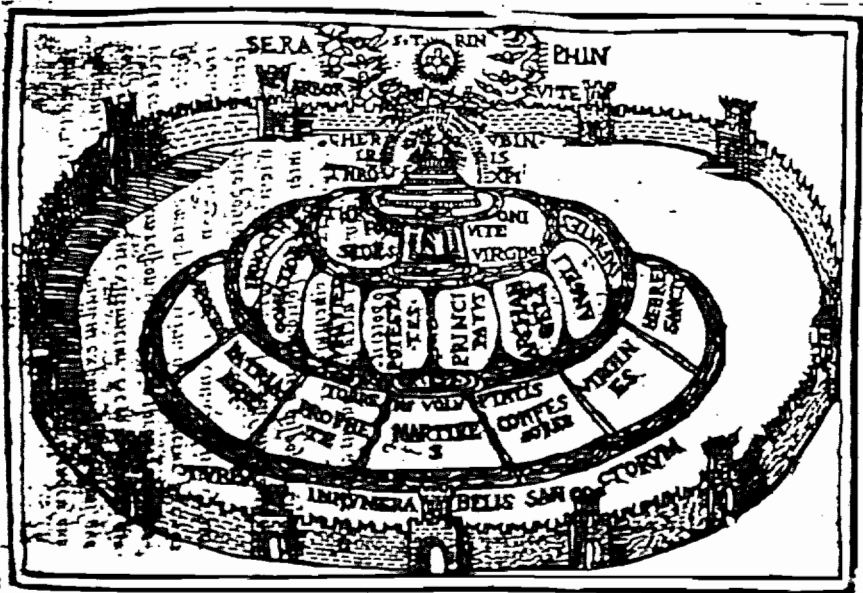
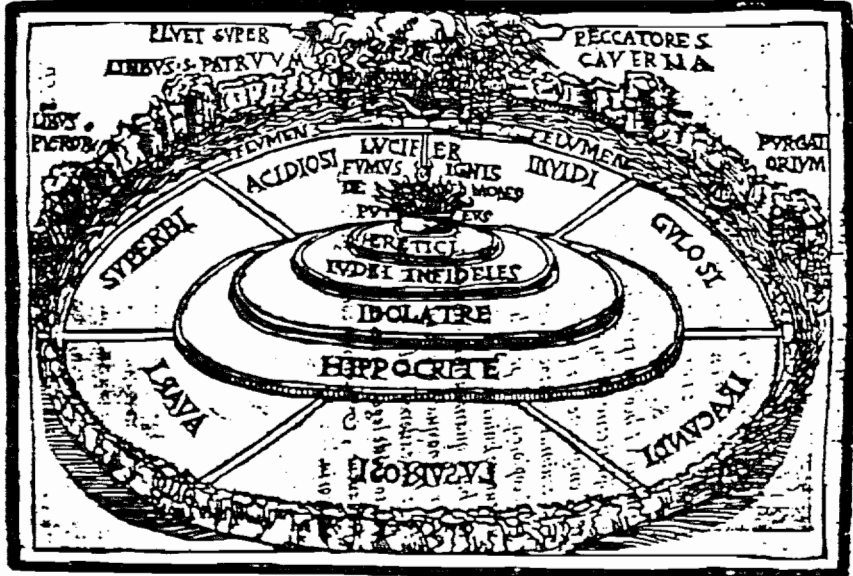
BOOK II

1. Concerning the Division of Things
2. Concerning Incorporal Property
3. Concerning Servitudes
4. Concerning Usufruct
5. Concerning Use and Habitation
6. Concerning Usucapion and Possession for Long Time
7. Concerning Gifts
8. Who is Permitted to Alienate, and Who is Not
9. Through What Persons Property Can Be Acquired for Us
10. Concerning the Execution of Wills
11. Concerning the Will of a Soldier
12. Who Are Not Permitted to Make Wills
13. Concerning the Disinheritance of Children
14. Concerning the Appointment of Heirs
15. Concerning General Substitution
16. Concerning the Substitution of Minors
17. In What Ways Wills Are Rendered Invalid
18. Concerning an Inofficious Will
19. Concerning the Different Kinds of Heirs
20. Concerning Legacies
21. Concerning the Revocation of Legacies
22. Concerning the Lex Falcidia
23. Concerning Trust Estates
24. Concerning Particular Things Left in Trust
25. Concerning Codicils

3. Concerning the Tertullian Decree of the Senate
4. Concerning the Orphitian Decree of the Senate
5. Concerning the Succession of Cognates
6. Concerning the Degrees of Cognation
7. Concerning the Succession of Freedmen
8. Concerning the Assignment of Freedmen
9. Concerning the Possession of Property
10. Concerning Acquisition by Arrogation
11. Concerning the Person to Whom Property is Transferred on Account of Freedom
12. Concerning the Abrogation of Successions Which Formerly Arose Through the Sale of an Estate and From the Claudian Decree of the Senate
13. Concerning Obligations
14. In What Way an Obligation is Contracted by Means of the Property
15. Concerning Verbal Obligations
16. Concerning Two Parties to a Stipulation or Promise
17. Concerning the Stipulation of Slaves
18. Concerning the Division of Stipulations
19. Concerning Inoperative Stipulations
20. Concerning Sureties
21. Concerning Obligations in Writing
22. Concerning Obligations by Consent
23. Concerning Purchase and Sale
24. Concerning Leasing and Hiring
25. Concerning Partnership
26. Concerning Mandate
27. Concerning Obligations Arising From Quasi-Contracts
28. Through What Persons an Obligation Can Be Acquired for Our Benefit
29. In What Ways an Obligation is Dissolved

BOOK IV

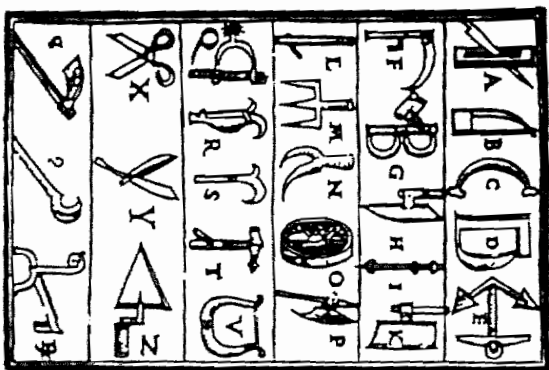
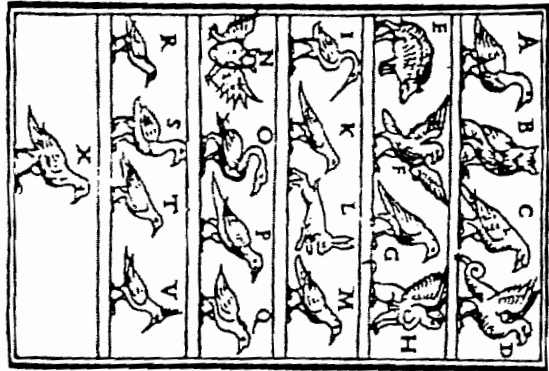
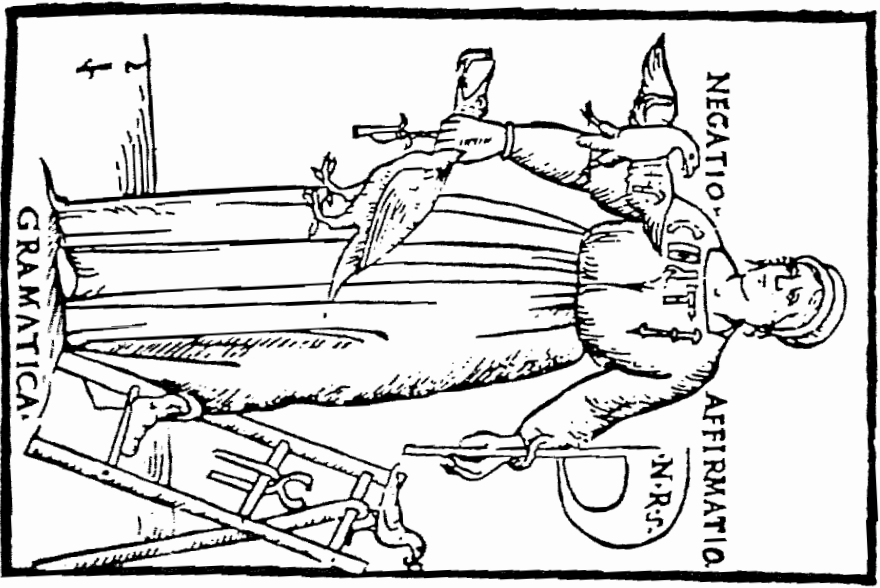
1. Concerning Obligations Arising From Crime
2. Concerning Robbery by Violence
3. Concerning the Aquilian Law
4. Concerning Injuries
5. Concerning Obligations Which Arise From a Quasi-Crime
6. Concerning Actions
7. Concerning Business Transactions Entered Into With a Person Under the Control of Another
8. Concerning Noxal Actions
9. Where a Quadruped is Said to Have Caused Damage
10. Concerning Those by Whom We Can Bring Suit
11. Concerning the Giving of Security
12. Concerning Perpetual and Temporary Actions, and Those That Are Transmitted To, and Against Heirs
13. Concerning Exceptions
14. Concerning Replications
15. Concerning Interdicts
16. Concerning the Penalty For Reckless Litigation
17. Concerning the Duty of a Judge
18. Concerning Public Prosecutions



7a ABOVE Hell as Artificial Memory

7b BELOW Paradise as Artificial Memory

From Cosmas Rossellius, *Thesaurus Artificiose Memoriae*, Venice 1579 (p. 122)



6a Grammar as a Memory Image  
 6b and c Visual Alphabets used for the Inscriptions on Grammar  
 From Johannes Romberch, *Congestorium Artificialium Memorie*, ed. of  
 Venice, 1533 (pp. 119-20)

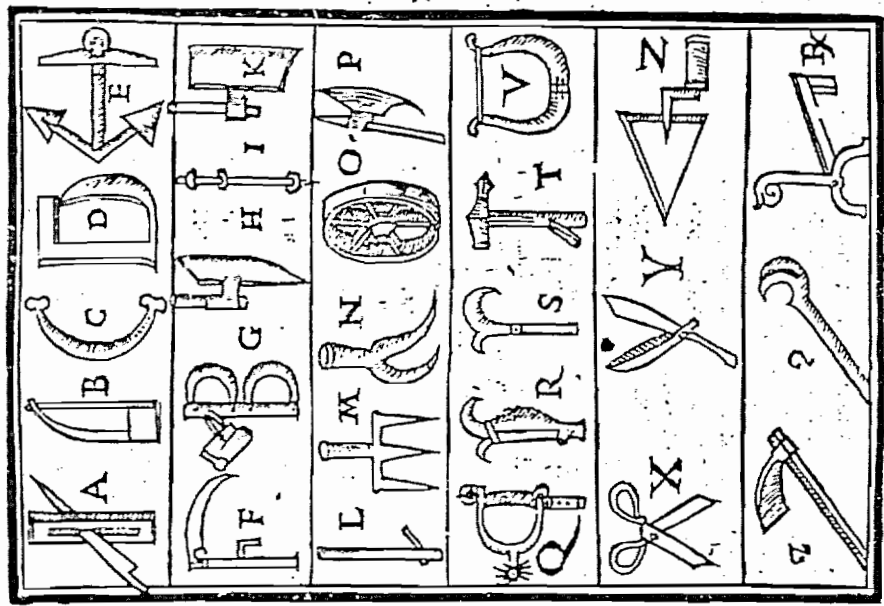
Ex 64437

of memory  
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 22 Petrus  
 sigs. b iii-b  
 24 Ibid, s

119

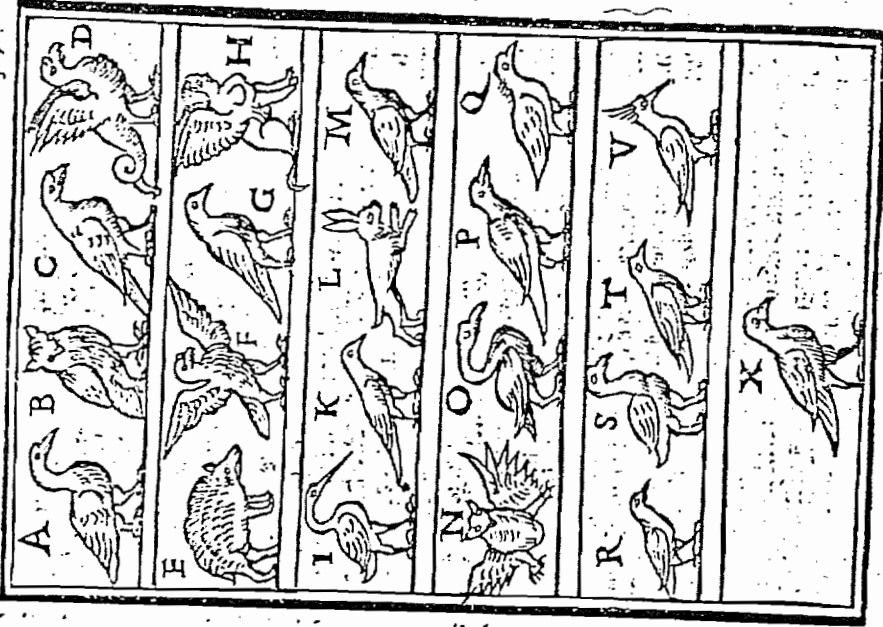
Capitulum Novum.

53



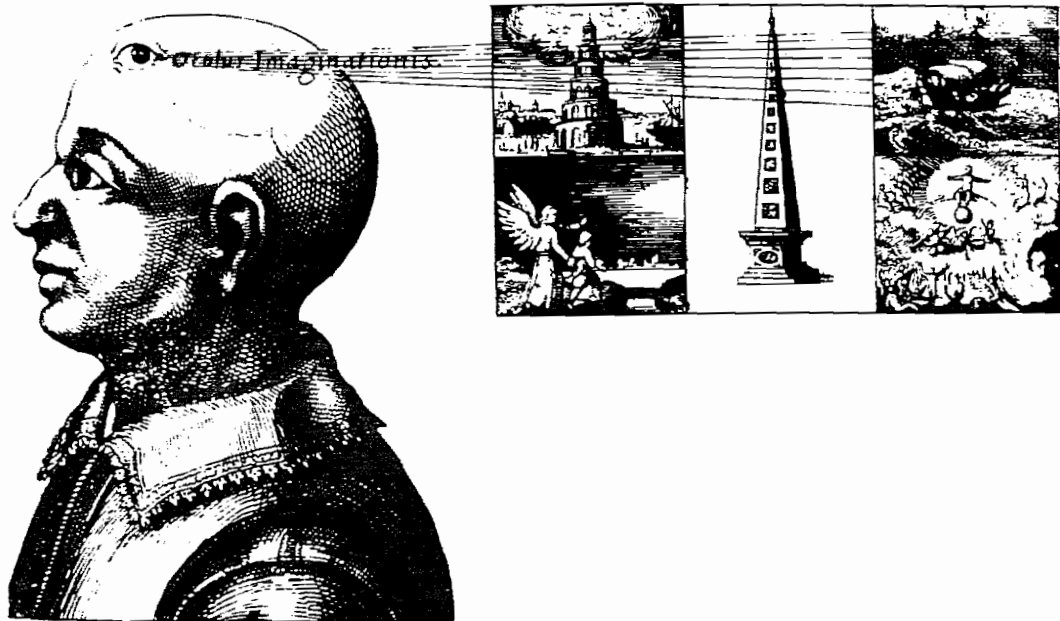
Capitulum Decimum

54





A R S M E M O R I Æ.



Seeing with a "third eye" in the seventeenth century. After their original functions were outmoded, ancient memory arts acquired an occult significance and received a new lease on life in printed form. From Robert Fludd, *Utriusque cosmi maioris . . .* (Oppenheim: Johan-Theodor de Bry, typis Hieronymi Galleri, 1621, II, 47). Reproduced by kind permission of the Folger Shakespeare Library.

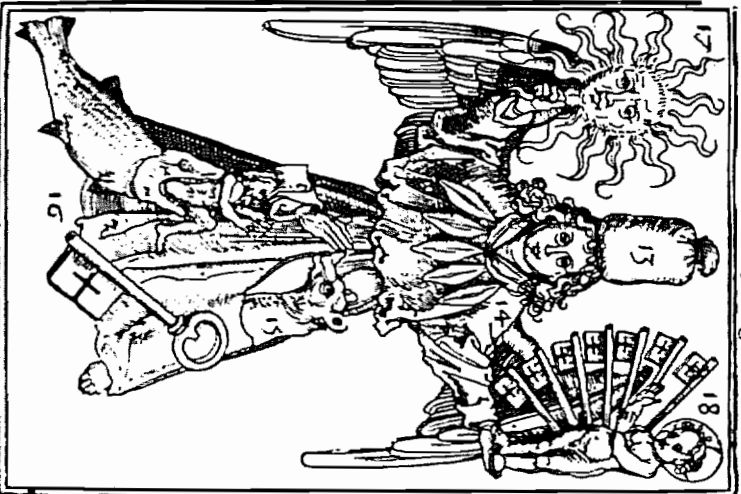
but received a "strange new lease on life." They provided the content for magnificent emblem books and for elaborate baroque illustrations to Rosicrucian and occult works in the seventeenth century. They also helped to inspire an entirely new genre of printed literature—the didactic picture book for children. Leipzig boys in Leibniz's day "were brought up on Comenius' picture book and Luther's Catechism." In this form, the ancient memory images reentered the imagination of Protestant children, ultimately supplying Jung and his followers with evidence that suggested the hypothesis of a collective Un-

Georgius Reliquus Anpinus lectori seclitatem



Vas esse memorias apud C. Herennii M. Cicero de preceptoribus Rhetorice abinde differuit: Vnā qua perspicere (qui ea predictus est) si sapientia quis doctus curat & esse autē ingenij vim quā dā iustā demonstrat: & a cunctis hominibus inolecentē, hancq; ut egregia conspiciat: arte efficerē ipsam: quę nature cōmoda confirmat atq; augeat: Altera est, quā artificio cōstare vult: ex inda. & de precepto itq; ratiōe: ad litteras ceterē retinēdas p̄sentat. cū O lector remediū, illis p̄feram: qui manus ingenij hñc exquissimū inuentū legit per imagines, varijs in signis rēbus: & quidē placitura simulastra (quę ad modum speramus) ubi congestissimas: quo memoriam huiusce modi formis eulbrares: quas cernis venisse p̄ctas effulgatas vni meliores posse fieri cernere neq; Rogamus ob id eas facere atq; sortere nō sinas: In hoc enī animum nostrū autē dīmus vt ne utiq; displiceret facies illę in rebus: opera: atq; labor nostro illustrēs: Appensis cuiusdā Petri Rosenheim numeris (monasterij mellicensis quondam moachi) Alphabeticā serie per capita coherentibus: dimissā neglectaq; littera cōsulito: cuius faciam. I consona supplet neglectūs quoq; tribus novissimis x y z que ad rem nō quinebant Vale. a 19

Tercia Martij Imago



an. 11

63

# SYSTÈME FIGURÉ DES CONNOISSANCES HUMAINES.

## ENTENDEMENT.

**PHILOSOPHIE.**  
**SCIENCE DE L'HOMME.**  
**SCIENCE DE LA NATURE.**  
**SCIENCE DE LA NATURE.**  
**SCIENCE DE LA NATURE.**

### RAISON.

MÉTAPHYSIQUE GÉNÉRALE. = ONTOLOGIE. = SCIENCE DE L'ÊTRE EN GÉNÉRAL, DE LA POSSIBILITÉ, DE L'EXISTENCE, DE LA DURÉE, &c.

SCIENCE DE DIEU. } THÉOLOGIE NATURELLE. } RELIGION.  
 } THÉOLOGIE RÉVÉLÉE. } SUPERSTITION.  
 } SCIENCE DES ESPRITS. } DIVINATION.  
 } SEM ET MAL FAITÉS. } MAGIE NOIRE.

PSYCHOLOGIE = SCIENCE DE L'ÂME. } RAISONNABLE.  
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ART DE PENSER. } JOURNALISME. } SCIENCE DE L'ÊTRE.  
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### IMAGINATION.

POÉSIE  
 SACRÉE. PAUVRE.  
 NARRATIVE. } FORME ÉPIQUE.  
 } MADRIGAL.  
 } ÉPIGRAMME.  
 } ROMAN. &c.  
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 } ÉPIGRAMME.  
 } ROMAN. &c.  
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 } MADRIGAL.  
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 } MADRIGAL.  
 } ÉPIGRAMME.  
 } ROMAN. &c.

DRAMATIQUE. } TRAGÉDIE.  
 } COMÉDIE.  
 } OPÉRA.  
 } PASTORALES, &c.  
 } ALLÉGORIE.

PARABOLIQUE. } ALLÉGORIE.

PHILOSOPHIE.

SCIENCE DE L'HOMME.

MUSIQUE.

MATHÉMATIQUES.

SCIENCE DE LA NATURE.

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V E R S U C H  
E I N E R  
**MAPPE-MONDE LITTERAIRE**

P R O S P E C T U S

MINERALOGIA	JURISPRUDENTIA IUS CIVILE	PHILOSOPHIA LOGICA	MEDICINA ANTHROPOLOGIA	MATHEMATICA ARITHMETICA	HISTORIA UNIVERSALIS	ZOOLOGIA HISTORIA LITTERARIA
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Page from Christian Frederic Wilhelm Roth, *Versuch einer Mappemonde litteraire* (Erfurt, 1785). Rare Books Collection, Princeton University Library.

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# THE SYNOPSIS OF THE FIRST PARTITION

General: { intemperance, all second causes, &c.  
 Epidemical; as Plague, Plica, &c.  
 Or  
 Particular; as Gout, Dropic, &c.  
 In disposition; as all perturbations, evil af-  
 fection, &c.

Dotage  
 Phrenic  
 Madnesse  
 Extase  
 Lycanthropia  
 Chorus sancti Viti  
 Hydrophobia  
 Possession or obsession of De-  
 vils  
 Melancholy. See γ

Disposition, Improper, &c. *Subsect. 5.*  
 Humours, & Blood, Phlegme, &c.

... natural, animall  
 ... permatual, or flesh, bones,  
 ... braine, heart, liver, &c.

... with their leve-  
 ... ralle causes, symp-  
 Of the whole } prognos-  
 } ticks, cures  
 ... the subject of the third

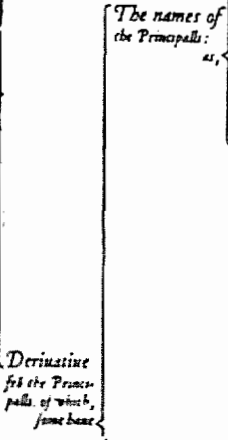
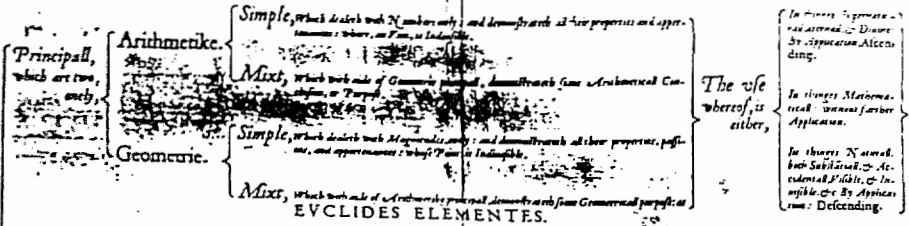
the second Partition.

# Here have you (according to my promise) the Groundplat of my MATHEMATICAL Praeface: annexed to Euclid (now first) published in our English tongue. An. 1570. Febr. 3.

sciences, and Artes Mathematicall,

Mathematical Praeface.

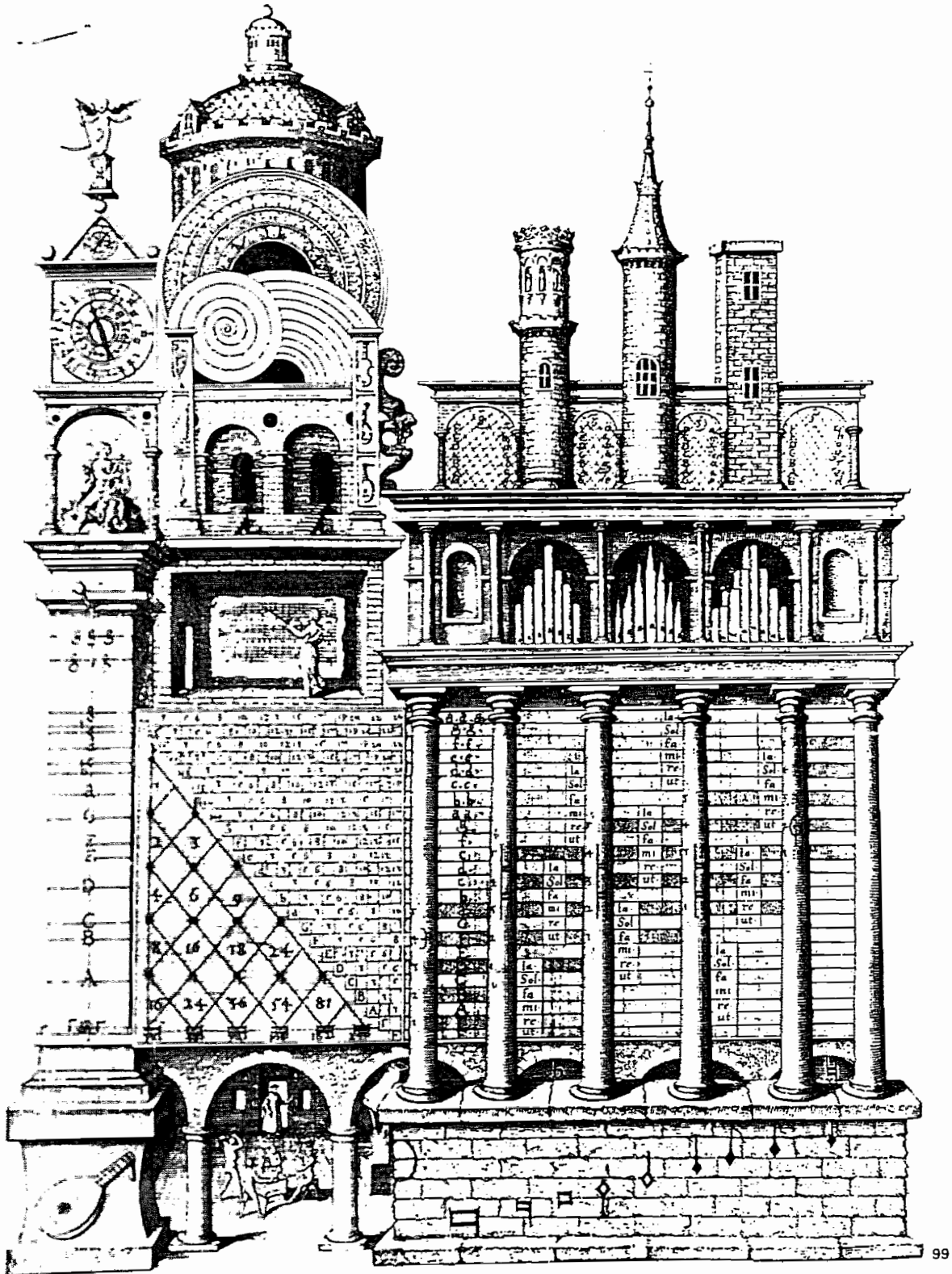
I am faine to see this book printed, and his brother's name knowne (for that hath any one of this kinde) Neither any other age and Stayed; doo think of the same; for a veruous able doing; and for a English man in the English tongue; methinks, for that, as by his Groundplat Created all things, in Number, or Measure, he hath revealed Men's true knowledge of the faculty by nature, I have thousandly proued veru true; and I am faine to see this way, I could not but have beene hoping of continuance; I intend to write, and bring you to the end of this, I do not doubt, but as the world will be ready to see you. In the end, the wonderful fruit thereof, highly proued, and better remember. The proof, I will give you the Groundplat of it from the first to the last, as hath beene where, to shew you, that I am not proud, but will to please.



- Perpectiue**, — Which demonstrateth the manner and properties of all Radiations: Directe, Broken, and Reflexed.
- Astronomic**, — Which demonstrateth the Distances, Magnitudes, and all other motions, Appearances, and Passions, proper to the Planets and fixed Starres for any time, past, present, and to come: in respect of a certain Horizon, or without respect of any Horizon.
- Musike**, — Which demonstrateth by reason, and teacheth by practise perfectly to iudge and order the diuisions of Soundes, low or high.
- Cosmographic**, — Which teacheth perfectly the description of the Heauenly, and also Elementall parts of the World: and of best parts maketh hunting all application, and constant relation necessary.
- Astrologic**, — Which reasonably demonstrateth the operations and effects of the nature all bodies of light, and ferre Influence of the Planets, and fixed Starres, in every Element and Element all body: in all times, in any Horizon offered.
- Stanke**, — Which demonstrateth the causes of heatnes, and lightnes of all things: and of the manners and properties to become and lightnes belonging.
- Anthropographic**, — Which describeth the Nübers, Measures, Weights, Figures, Situations, and value of every diuise thing contained in the perfect body of Man, and teacheth reasonable knowledge of the Figure, Symmetrie, Weight, Clean all relation, &c. doe Local motion of any part of the body offered: and of numbers to the face perch appertaining.
- Trochilike**, — Which demonstrateth the properties of all Circular motions: Simple and Compound.
- Helicosophic**, — Which demonstrateth the description of all Spirall lines: in Planes, on Cylinder, Cone, Sphere, Conoid, and Spheroid: and their properties.
- Pneumatic**, — Which demonstrateth by itselfe hollow Geometrical figures (Regular and Irregular) the strange properties (in motion or stay) of the Air, Smoke, and Fire, in these Conditions, and as they are applied to the Elements next them.
- Menadic**, — Which demonstrateth, how, about 24 hours, Verie, and power simple: Verie and force may be multiplied: and so re divide, to 12, to 10, to 6, and so on, or call for any multiplied, or simple determined Partes, Weight, or Force: naturally, not, if, desirable, or measurable.
- Hypogeoidic**, — Which demonstrateth, how, under the Sphere all Surfaces of the Earth, in any depth, in any perpendicular line offered (which differ from the perpendicular of the entrance: and the Arithmetike likewise, in respect of the Joyd entrance, or Verie) in any way, may be performed and gone on.
- Hydragogic**, — Which demonstrateth, how, the possible leading of water by Nature's law, and by artificial help, from any head, being Spring, Standing, or running water: to any other place offered.
- Horometric**, — Which demonstrateth, how, in all times, appears to be present, usual demonstration, of time may be knowne for any place offered.
- Zographic**, — Which demonstrateth and teacheth, how, the Intersections of all solid Figures, made by any plane offered (the Center, Axis, and height being determined) may be by lines, and proper colours represented.
- Architecture**, — Which is a Science gathered with many distances, and diuise instructions: by which judgement, all works by other workmen finished, are iudged.
- Navigation**, — Which demonstrateth, how, by the Shortest good way, by the speed direction, and in the shortest time, a seafaring Shipper, between any two places (in sailing navigable regions) may be conducted, and in all times, and under all difficulties, may be performed, how to get the best possible manner, to recover the place first offered.
- Thaumaturgic**, — Which teacheth, how, to make strange works, of the faculties be perceived, and of more greatly to be wondered at.
- Archematic**, — Which teacheth, how, to all and experiences, suitable all works conclusions, by all the Artes Arithmeticall, Geometrical, and by the use of all other, &c. is included. And how, to direct to be a faster Shipper, in the terms of the same Artes: and also, by the use of the best possible manner, to recover the place first offered.

printed by Iohn Day at the North Doore.

Ex 2654. 331. 570g

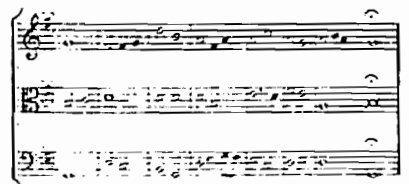


a low A and wants to write a middle C against it. The chart shows that all is well, the interval is a tenth. Try a B, however, and one meets a blank, the interval is a discord.

The clerestory on the level of the three towers is a similar device, enabling one to check at a glance the notes respectively an octave, sixth, third and fifth from any given note. The windows

for the sixths and thirds are smaller, these being only imperfect consonances as opposed to the perfect octave and fifth.

Finally, in the alcove beneath the twin portals representing ears, a Muse stands pointing at a phrase in three parts, the triumphant result of these combinations aids (right) UC 160-1



(Transcribed by Todd Barton)

711

T H E

# Dutch Fortune-Teller :

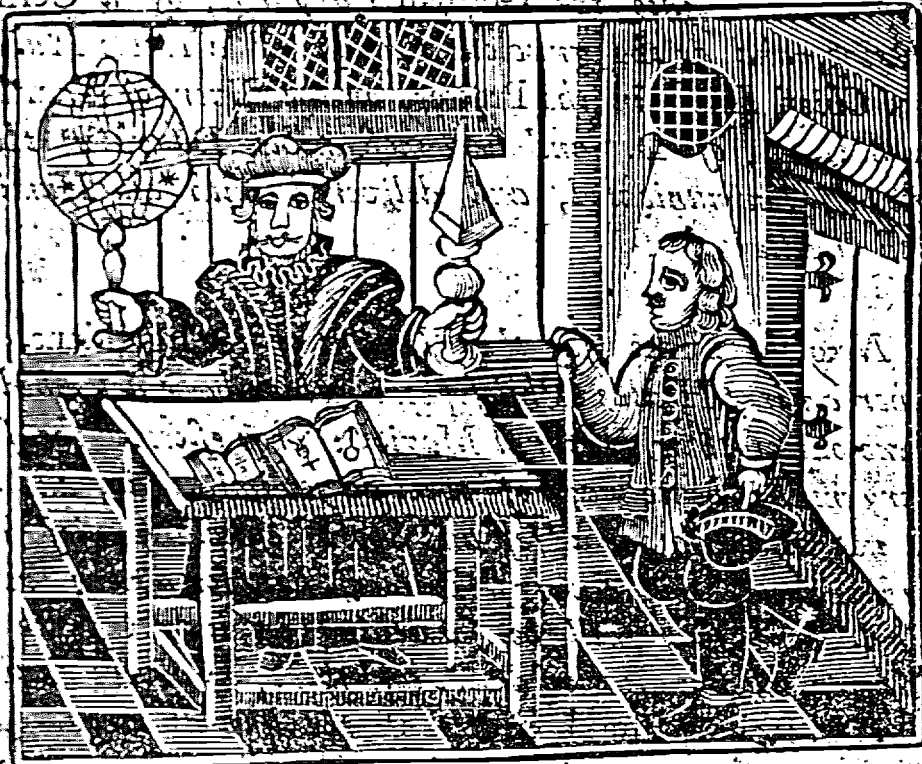
DISCOVERING

## XXXVI several Questions.

Which } OLD } MARRIED MEN } BACHELORS  
 and } } and } and }  
 } YOUNG, } WOMEN, } MAIDS,

DELIGHT to be RESOLVED of.

Brought into England by JOHN BOOKER.



L O N D O N

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7-1



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DAVID L. RIKE '27  
to Annual Giving

S6.694

# The Tragicall History of the Life and Death of Doctor Faustus.

With new Additions.

Written by Ch. Mar.



LONDON,  
Printed for Iohn Wright, and are to be sold at his shop without  
Newgate, at the signe of the Bible. 1619.

1620

Christopher Marlowe. *The Tragicall History of the Life and Death of Doctor Faustus*. London, 1619. Gift of Johnson Garrett. Class of 1935.

The Library's holdings are rich in works of the Jacobean and Caroline theater. One of the rarest and most interesting volumes in this area is the only known copy of the 1619 edition of Marlowe's *Doctor Faustus*. Its title page exhibits a woodcut of the famed actor Edward Alleyn in the role of Mephistopheles.

731



'Tis to the Press and Pen our Mortals owe,  
 All we believe, and almost all we know:  
 All hail! ye great Preservers of these Arts,  
 That raise our Thoughts, and cultivate our Parts!

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 How to undertake each Work, and at what Price  
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 Measures, with Gunter's Line, and Cogwheel's  
 the Sliding Rule.  
 Likewise the Practical Gauger made easy, the  
 and how to erect and fix any Dial, with Rules  
 Dying and Colouring, and making Colours.

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EXTRACTED FROM  
VOLUME XLIX · NUMBER 1  
Autumn 1987

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Martin Meurisse, *Artificiosa totius logices descriptio*. [Paris], 1614. Graphic Arts Collection, Princeton University Library.

# System and Schema

## *Tabulae* of the Fifteenth to Eighteenth Centuries

BY STEPHEN FERGUSON

Since 1977, Professor W. S. Heckscher, Agnes Sherman, and Curator of Rare Books Stephen Ferguson have been examining the Library's distinguished collection of emblem books. Their work led to the 1984 publication, *Emblem Books in the Princeton University Library: A Short-Title Catalogue*, and to Mr. Ferguson's interest in the relationship between emblem books and other printed materials of the Renaissance and Baroque which use text, image, and allegory. Among the examples of such forms are *tabulae*, several of which have been acquired recently by the Library. They were included in the Autumn exhibition, "Knowing Through Seeing: Diagrams, Schemata, and Tableaux in Early Printed Books, Medieval Manuscripts, and Prints," in the Library's Gould Gallery.

In the following article, Mr. Ferguson discusses a few of these new acquisitions.

At the bottom edge of the illustration on the facing page, a Franciscan monk gestures towards several novices. Behind him is a walled courtyard surmounted by a formal garden above which stands a grove of trees. Exactly what is the monk doing? Why such an exotic scene of trees, fountain, half-clad women, and numerous small objects?

The monk is Martin Meurisse (1584–1644), a Cordelier Franciscan who eventually became Bishop of Madaure. His duties included training novices, and toward that end he prepared three instructional charts. In 1983 Princeton University Library acquired the first in the series, "A technical and artfully-done depiction of logic in its entirety" (*Artificiosa totius logices descriptio*), published in 1614.<sup>1</sup> In the *Logices de-*

<sup>1</sup> It was followed in 1615 by the *Clara totius Physiologiae Synopsis* ("A clear synopsis of

*scriptio*, Meurisse is shown teaching the novices how the three chief operations or processes of the intellect—according to Duns Scotus and Aristotle, as interpreted by Meurisse—can be apprehended by studying the details of the chart.

The chart is divided into two principal parts: the three-tiered central feature depicting the *operationes mentis*, and a surrounding border of emblems. The three tiers of *operationes* are the traditional Scholastic processes of the intellect arranged in a hierarchy, with the lowest, Categories, at the bottom, followed by Judgment, and Syllogism at the top.<sup>2</sup>

Categories are represented by a walled-in courtyard entered by ascending five steps and going through a portal. The steps are the five predicables of Aristotelian logic as interpreted by Porphyry, among others: genus, species, difference, property, and accident. Within the courtyard are Aristotle's ten categories (substance, quantity, quality, relation, action, passion, place, time, position, and state) flowing from the central source, the *fons* of being. The *fons* is a pool adorned with a statue of a half-clad man standing with one foot on a sphere. A banner over his head reads: "The first process of intellect refers to differentiating thinking, which explains the nature of an object."

The second process of intellect, Judgment, is depicted as a formal, hedged-in garden at the gate of which sits a half-clad woman, perhaps Judgment personified. Like the man below, she has a banner over her head. Hers reads: "This is the dividing process in which the whole is distributed into its parts, or the manifold is separated according to the multiplicity of the whole." In the garden behind the woman are inscriptions giving particulars concerning the process of judgment.

Syllogism is a grove of three trees that sit above the second realm. The central tree is the "Tree of Knowledge," flanked on the left by the "Tree of Sophisms," and on the right by the "Tree of Beliefs." Each tree is ripe with its corresponding fruit; the Sophists' tree bears the fruit "error" and "ambiguity." In front of the central tree sits a gowned woman with outstretched arms. An inscription above her arms reads:

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physiology in its entirety"), and the *Artificiosa totius Moralis Philosophiae tabella* ("A technical and artfully-done tableau of moral philosophy in its entirety"), probably dated 1630. The 1614 *Logices descriptio* acquired by Princeton is kept with other oversize prints of 17th-century France in the Graphic Arts Collection, Firestone Library.

<sup>2</sup> C.R.S. Harris, *Duns Scotus*, 2 Vols. (Oxford: Clarendon Press, 1927), Vol. 2, p. 7.



“This is argumentative process (syllogism) in which the one is concluded from the other.”<sup>3</sup>

Embedded in the border surrounding the three realms of *operationes mentis* are many emblems. Outside the first and lowest realm lie bits and pieces of reality (*ens incompletus*) separated from their completed form by the wall of *carentia*, or deprivation. Outside the second realm the Sophists pipe on their harmonicas, perhaps a reference to fools and their pipes. In the upper corners are miniature portraits of Aristotle (right) and Duns Scotus (left), whose doctrines Meurisse is explicating in his chart. In the uppermost compartment, the *Logices descriptio* is dedicated to Jacques Auguste de Thou, the great French bibliophile, a nobleman and member of the Third Order of St. Francis.

These are only a few of the most obvious readings of the chart. A full explanation would take many pages, just as Meurisse intended, and just as is entailed by the instructional form which he used, a *tabula*.



Looking back over the history of printed books, one can see shifts in the forms and means by which mankind has sought to communicate large and complex bodies of knowledge. One of those changes occurred with the use of *tabulae*, which are charts, plans, maps, or tables summarizing an extensive body of information usually within the space of just one page. The intent of such a summary is quick reference, or to aid the memory, or to provide a ready means for seeing complex relationships.

The tabular form has ancient roots and it is even speculated that Aristotle's works could have been “illustrated” by diagrams or tables.<sup>4</sup> In the Middle Ages not only philosophy, but also theology, alchemy, astrology, astronomy, geography and several other divisions of human knowledge used *tabulae*. In early modern Europe, some of these uses withered away, as in the case of theology, while others proliferated, as in the case of astronomy and other natural sciences. Today, the tabular form seems mainly reserved for scientific, statistical, and technical in-

<sup>3</sup> I wish to thank Professor William S. Heckscher for assistance with the translations.

<sup>4</sup> Michael Evans, “The Geometry of the Mind,” in *Architectural Association Quarterly*, Vol. 12, No. 4 (1980), p. 35.

formation. But this was not always so; *tabulae* had much more varied forms and functions, especially during the centuries when they were used as devices designed to aid the memory and cultivate the mind.

Over the years, the Latin term *tabula* acquired a number of meanings, many of which were figurative or nonliteral. The most fundamental meaning of *tabula* was “wooden plank.” This sense survives in our everyday term “table,” which has replaced the less socially-prestigious Saxon term, “board.” *Tabula* also took on the meaning of “a picture painted on a wooden panel.”<sup>5</sup>

A related sense of the word in the singular was “an expanse of land,”<sup>6</sup> and this sense probably led to the use of *tabula* to mean “land-map”; Ptolemy’s *Tabulae Geographicae*, published during the Renaissance, come immediately to mind.

The *Tabula Cebetis* was an ancient “map” of a different kind. It represented the journey of mankind on a moral “Pilgrim’s Progress,” ascending the mountain of purification and perfection. In the Renaissance, the *Tabula Cebetis* was a popular text for teaching the Greek language to *studiosi adolescentes*. Thus, an abstraction, a schema of morality, is made concrete and memorable through a series of images.

For the learned of medieval and early modern Europe, *tabula* was a powerful descriptor. Like the *tabula* before the schoolboy, other kinds of *tabulae* were meant to provide a key to further and deeper knowledge. It provided a kind of “ante-knowledge.” This meaning of *tabula* rests on the premise that knowledge is thematic and is arranged by connectives. Thus, in order to get more and other knowledge, we must have some knowledge already. This sense of the term survives today in our “table of contents,” usually printed at the front of books.

*Tabulae* allowed immediate apperception; the mind was reached through the eye with ideas that normally would have been spoken or read. The means of transfer is vision; the structure of knowledge is intended to be seen. Moreover, the process of knowing through seeing stands in direct contrast to another analogue for knowing, namely, hearing.<sup>7</sup>

<sup>5</sup> This use appeared in several ancient authors and is discussed in William S. Hecksher’s forthcoming Latin glossary for Alciati, Vol. III in the *Princeton Emblem Project Series*, published by the Princeton University Library.

<sup>6</sup> For example, in the Scheide Library Collection of Documents, document 20-382 dated Fabriano, 20 October 1212, the Consul of the town, Todius, promises that the next day he will give a *tabula* of land to the Abbot Moricus and his brethren of St. Victor.

<sup>7</sup> Walter Ong, *Orality and Literacy. The Technologizing of the Word* (London and New

*Tabulae*, the tangible products of such thinking, can be divided into two types: non-figural and figural. The non-figural consists principally of words, numbers, and typographic symbols such as brackets arranged in a pattern. Images are normally excluded. Examples include tables of contents, multiplication tables, tax tables, tide tables, and schemes of dichotomies.

The figural type is part of a tradition “the intent of which was to give . . . instruction by means of schemas organized in a memorable figural form—a tower, a tree, a cherub—and containing elements related through numerical correspondence—the 12 articles of faith, the 12 prophets, the 12 apostles.”<sup>8</sup> The figural *tabula* is intended to provoke a quiet, contemplative process, in which one wanders through a kind of gallery of images or “memory palace.”<sup>9</sup>

Meurisse’s logic chart, described at the beginning of this article, is a clear example of the figural *tabula*. It is a complex array of images arranged in fixed and memorable locations. Recently, the Philadelphia rare-book dealer Bruce McKittrick gave the Library another, bolder example of a figural *tabula*. It is from a Latin text discussing the Justinian Code, and was published in Hamburg in 1673–1674. Distinguishing this text from many other schoolbooks on the Code are a series of 22 engravings designed to assist students with memorizing important points. The text and plates are the ingenious work of Johannes Buno, a schoolmaster who also prepared a Bible similarly adorned with exotic aids to memory.<sup>10</sup>

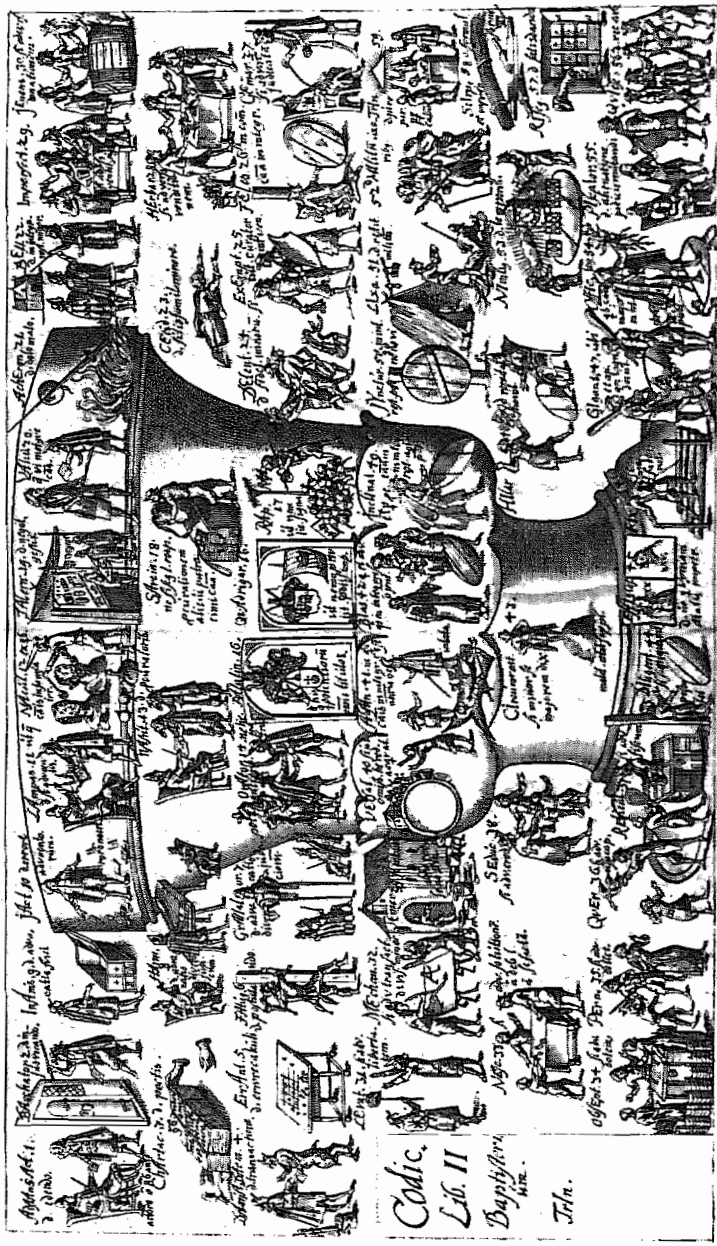
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York: Methuen, 1983), p. 119. As Ong points out, “Ambrose of Milan [states] in his *Commentary on Luke* (iv. 5): ‘Sight is often deceived, hearing serves as guarantee.’ In the west through the Renaissance, the oration was the most taught of all verbal productions and remained implicitly the basic paradigm for all discourse, written as well as oral. . . . Writing served largely to recycle knowledge back into the oral world, as in medieval university disputations, in the reading of literary and other texts to groups . . . and in reading aloud even when reading to oneself. At least as late as the twelfth century in England, checking even written financial accounts was still done aurally, by having them read aloud. [One scholar] describes this practice and draws attention to the fact that it still registers in our vocabulary: even today, we speak of ‘auditing,’ that is ‘hearing’ account books, though what an accountant actually does today is examine them by sight.”

<sup>8</sup> Lucy Freeman Sandler, *Gothic Manuscripts 1285–1385*, 2 vols. (Oxford: Oxford University Press, 1986), Vol. II, p. 59.

<sup>9</sup> See Jonathan Spence, *The Memory Palace of Matteo Ricci* (New York: Viking Penguin, 1984) for discussion of instructive pictures.

<sup>10</sup> The Library’s call-number for the suite of plates is (Ex) KBD.B86 1673. The plates are extracted from Buno’s *Memoriale juris civilis Romani, quo tituli omnes et praecipuae leges, quae in quinquaginta Digestorum seu Pandectarum libris sunt, emblematis & imaginibus ita efficta exhibentur, ut una cum titulorum materiis eorum etiam numeri memoriae imprimi, contineri*



Engraving showing mnemonic images for the 59 Titles in Book II of the Justinian Code in Johannes Buno's *Memoriale juris civilis Romani*, . . . (Hamburg, 1673–1674). Gift of Bruce McKittrick, Rare Books Collection, Princeton University Library.

Buno's engravings were to be used in accord with a specific program. First, the student had to discover the underlying image on a single *tabula*. In the engraving for Book II of the Code of Justinian, the principal image is the baptismal font of a church. The student was expected to know that the principal image of the preceding plate (Book I) was an altar, and that the following plate (Book III) carried the image of a *cancelli* ("lattice," or "grid-work"), and so on in exact alphabetical and numerical order.

Next, the student examined and memorized the series of small images fixed on the baptismal font itself. These images are arranged according to the numerical order in which the major subdivisions of a Book in the Code, called Titles, appear, all with mnemonic tags in alphabetical order. Each small, tagged scene depicts the gist of a Title. Thus Title I, "Concerning the bringing of an action," is tagged *Adstans Act[or]*, "The plaintiff appearing in court"; Title II, "Concerning the summons to court," is labelled *Bacchator*, "Rantor," and so on throughout all 59 Titles of Book II. Clearly, the intent of Buno's engraving was to provide a table of contents which the student could recall by seeing it in his mind's eye.

The figural *tabulae* of Meurisse and Buno point to a technique of memorization called "artificial memory," memory developed purposefully by an individual.<sup>11</sup> The technique is actually quite ancient and was once considered to have been developed by Cicero. It rests on the common judgment that sight is the most powerful of the six senses and thus should be used for remembering. Just as the distinction between object and background is necessary for seeing to occur, so is this distinction central to the classical theory of memory.

In essence, the theory tells us that, to establish background, we must first memorize places. Go to a building, view the doorway, fix it in mind, move along, view a window, fix it and so forth. At this first stage, we build a storage system, an aggregation of niches into which something can be put. Secondly, we proceed to fill these places (*topoi* or *loci*) with images. The images (*imagines agentes*) represent specifics that are

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*ac reddi quin etiam leges illae praecipuae ad suos referri titulos facili negotio queant . . . edidit Johannes Buno*, 2 vols. (Hamburg, 1673-1674). Title of Vol. 2 varies. A complete copy, text and plates, is in the Library of the Harvard Law School.

<sup>11</sup> The best introduction to this subject is Frances A. Yates, "Architecture and the Art of Memory," in *Architectural Association Quarterly*, Vol. 12, No. 4 (1980), pp. 4-13, and in her book, *The Art of Memory* (Chicago: University of Chicago Press, 1966).



*Distict. Dilem. 4. d. transactione. Err. Ant. 5. d. errore calculi.*



Detail from Book II of the Justinian Code in Johannes Buno's *Memoriale juris civilis Romani*.

Photo: Chem Front

intended to be remembered. The images are to be striking (e.g. a bloodied face) so that their power to provoke emotion helps the mind to remember. To recall the memorized data, we then visualize a gallery of images in place, and by scrutinizing them carefully we decode the abstractions represented by the images. The classic example of this process is told in the story of Simonides, who, in addition to Cicero, was credited with inventing the system of artificial memory. Simonides escaped death at a banquet because he was called away from the feast just before the roof collapsed, killing all below. The bodies were so mangled that relatives could not recognize their kin, but Simonides could identify the bodies by remembering where particular guests had been lying. It was by recalling a series of relationships, charted as images arranged on fixed locations, that Simonides was able to perform this mental feat.<sup>12</sup>

The 5th-century A.D. author, Martianus Capella, when discussing

<sup>12</sup> The story is told in Cicero, *De oratore*, II.lxxxvi, 351-354.

rhetoric in his *De nuptiis Philologiae et Mercurii*,<sup>13</sup> recommended that his readers follow

the Quintilian method of memorising through visualising the tablet, or the page of manuscript, on which the material is written—divided into clearly defined parts with some marks or *notae* on it at special points—which is to be committed to memory in a low murmur.<sup>14</sup>

From the Middle Ages to the end of the Baroque period, tabular thinking, both figural and non-figural, focused on complex philosophical and religious matters. In *tabulae* like the *Epitome of Gospel Mystery emblematically illustrated* (London, ca. 1650),<sup>15</sup> the major visual elements and their arrangement in space serve as an exposition of theological dogma. The central scene is flanked by two tall columns covered with text, and surmounted by open sky and clouds. A cherub floats over each capital and trumpets a banner on which a rhymed triplet is inscribed. Below the banner and filling the central space is a scene emblematic of the “Gospel Mystery.” Flowing from a fiery sun, a river runs through two hearts (one “of love,” the other “of stone”) and thence through wounds to irrigate the Tree of Life, beneath which is a portal to a holy place. In front of the door is a porch, which only a few figures have reached. In front of the porch is “The Broad Way to Destruction” on which figures in wigs and waistcoats walk toward a burning pit. To the left of the porch stand Adam and Eve exiting Paradise. All of the figures and scenes are labeled, usually in rhymed couplets and triplets.



Towards the end of the Baroque period, non-figural *tabulae* appear which seem to presuppose a figural image like a tree. The trees, however, are horizontal rather than vertical, and schematic rather than

<sup>13</sup> This work “. . . preserved for the Middle Ages the outline of the ancient educational system based on the seven liberal arts (grammar, rhetoric, dialectic, arithmetic, geometry, music, astronomy).” See Yates, *Art of Memory*, p. 50.

<sup>14</sup> Yates, *Art of Memory*, p. 52.

<sup>15</sup> The *Epitome* is a large-folio figural *tabula* engraved on a single sheet. It was purchased on the Reed Fund during 1984–1985 and its Library call-number is (Ex) N7710.E64.165of.





top, as with standard tree diagrams. The utility of the tables, the author declares, is that many things can be compressed into a few words. Moreover, they show an orderliness that aids memory and reason, and they display the correspondence that one thing has with another. Here, *philosophie* is construed in a wide sense to include moral teaching, logic, and metaphysics.

In his *Sacrorum Novi Testamenti librorum omnium analysis catholica, et oeconomia generalis* of 1670,<sup>17</sup> Jacobus à Sancto Michaelē also used schematic trees turned on their sides to make systems of divisions and parallelisms. At the left, we read the single summarizing statement; as we progress from left to right, the divisions of the unity are explicated. In the *tabula* illustrated, an analysis of the Revelation of St. John, Jacobus says at far left that the book contains three parts: preface, tractate, and conclusion. In turn, each of these parts is subdivided yet again. Two of the other *tabulae* analyze the New Testament as a whole, and one sets out Roman Catholic doctrines in a hierarchy. All the remaining sheets tabularly explicate the contents of one or more New Testament books beneath a short prose synopsis in large italic type.

In the system of artificial memory, the images were the substance to be recalled and their place was important, but secondary. Over time, subject matter embodied in images became known by place in series—in other words, by topic, a word which comes from the Greek *topos*, meaning place. Similarly, arrays of topics were considered to be *tabulae* which in their entirety provided a key to further knowledge.

One example of such a *tabula* is a late 15th-century book of only 18 pages headed *Tabula Christianae religionis*.<sup>18</sup> The closely printed text covers all the essential points of faith: the Apostles' Creed (complete with an Apostle's name next to a point to serve as a mnemonic), the Ten Commandments, the Lord's Prayer, the Seven Sacraments, the Seven Cardinal Virtues, the Seven Deadly Sins, the Seven Ages of Man, the Six Eras of the World, important feast days, and the like. No images are included. At least nine editions of the *Tabula Christianae religionis* are known, all undated and with no indication of printer. Most of them are thought to have been printed in Italy between ca. 1485 and ca. 1520.

<sup>17</sup> Published at Lyon by Antoine Jullieron, and purchased in 1987 on the Sanxay Fund. Its Library call-number is (Ex) BS2355.S23.

<sup>18</sup> It was purchased on the Reed Fund in 1986. The Library call-number is (Ex) BX1754.T32.1495.

Given the simplicity of both content and language, this was just the sort of book appropriate for a wide and general audience. It could have been used by clergy for training new clergy or instructing the laity. Similarly, it could have been used by laity to help them learn the basics of the faith, or when teaching other laity, as a household master would have taught servants. Such a book was the companion to missal and breviary, both of which are essential for the outward demonstration of inward faith; it would also supplement Italian vernacular literature such as saints' lives, which played a major role in the religious life of ordinary clergy and laity alike. Because *tabulae* like the *Tabula Christianae religionis* were undoubtedly heavily-used, their casualty rate

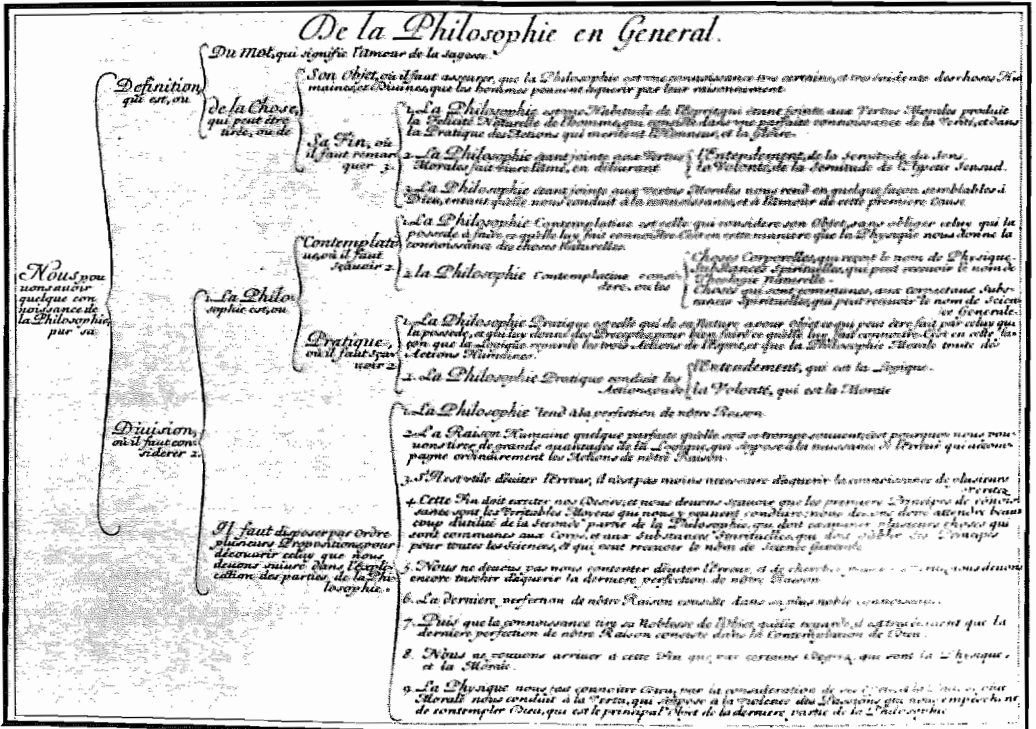


Plate from Louis de Lesclache, *La philosophie expliquée en tables* (Paris, 1652–1653). Rare Books Collection, Princeton University Library.

might have been high, much higher, perhaps, than the 10 to 25 per cent estimated loss of all books produced during the 15th century.<sup>19</sup>



Both figural and non-figural *tabulae* as understood in the Middle Ages and the Renaissance have all but vanished from the modern world, in part, perhaps, because the sheer quantity of knowledge has increased to the point where no tabular synopsis can pretend to present even one of its divisions. Nonetheless, earlier *tabulae* attempted ambitious synopses of large segments of sacred or profane knowledge. Jean Boulaese's scope was nothing less than the entire span of time. His 16th-century *Tabula chronographica ex collatione temporum Hebraeorum, Italarum, Chaldaeorum, et Aegyptiorum* is a peculiar chart, and probably unique.<sup>20</sup>

Boulaese was born about 1540 in the parish of Arrou near Courtaulin. In 1611 one writer described him as the "fiery Boulaese." His life seems to have been filled with strife. He entered the priesthood in 1556 and took vows of poverty in 1568. A professor of Hebrew, he became principal of the Collège de Montaigu, but the position proved difficult to hold. Between 1568 and 1571 Boulaese seems to have been in Rome in order to present to Church officials details of the 1566 exorcism of a demon from a young girl in the Cathedral of Laon. Upon his return, Boulaese learned that his position as principal had been challenged by one Jean Margot; the dispute was not settled until 1578 in Boulaese's favor. Boulaese then proceeded to impose a change on the Collège, ordering that it be a school for the religious who had taken vows of poverty, and calling himself "father of the religious poor." This action did not please the wealthy regents of the Collège. In the end Boulaese lost, was condemned for obstinacy, and was excommunicated in 1579.

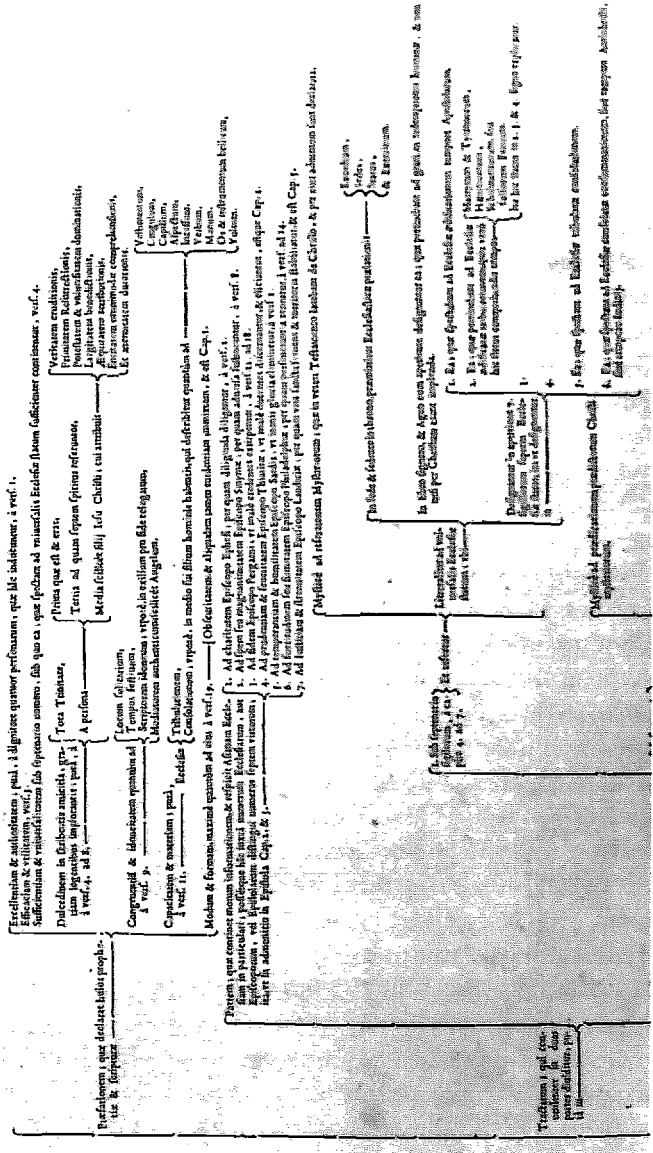
Boulaese published a number of books which were highly esteemed in their day. His mainstay was an account of the exorcism performed at Laon. This account first appeared in 1573 and again in an expanded

<sup>19</sup> Rudolf Hirsch, *Printing, Selling, and Reading, 1450-1550* (Wiesbaden: Otto Harrassowitz, 1967), p. 11.

<sup>20</sup> Boulaese's chart was purchased on the Reed Fund during 1981-1982. Its Library call-number is (Ex) D11.B68e.

# Apocalypsis Beati Ioannis Apostoli Analysis & Oeconomia Generalis.

*Qualis sit in hoc prophetali libro Apostoli scriptura, satis patet, aperire nempe totius Ecclesiae decus, & statum futurum: siue quantum ad prospera, siue quantum ad adversa notabiliora: prout, à fundatione Ecclesiae usque ad consummationem saeculi: & conuenienter in tres partes liber diuisum; ut videlicet in praefationem; qua continet praesambulum; in narrationem, qua continet processum, & conclusionem, qua declarat librum esse firmum, & authenticum. & hinc,*





form in 1578 and in 1598; Princeton has both versions of the story issued during the 1570s. In addition to this, Boulaese published a commentary on Daniel, books on Hebrew, and another Biblical work. Unrecorded and published during Boulaese's turbulent years of the 1570s is his *Tabula chronographica*.

Boulaese's *Tabula* lays out in non-figural detail four time systems: the Biblical (based on the genealogy of Christ as given in Luke), the Roman, the Babylonian, and the Egyptian. He names his sources, including among them Philo, Berosus, Metasthenes,<sup>21</sup> Manethos, Eusebius, and Jerome. According to Boulaese's chartings, all systems demonstrate clearly that 3,960 years had passed from the creation of the earth to the birth of Christ. As Boulaese points out at the end of the table's dedication to René de Birague,<sup>22</sup> his chart is intended to aid Christians engaged in acquiring the "sacred things." In the dedication he also expresses his interest in eschatological matters (*anagogicus*).<sup>23</sup>

The eschatological import of the *Tabula chronographica* is of particular interest. It is known that Boulaese was concerned with the Second Coming of Christ. In his *Ad mysticos sacrae scripturae sensus varia dictionum significatio in compendium collecta . . . cum vera demonstratione Septuaginta, Hebdomadum Dan.9*, published in Paris in 1575, he mentions the star of 1572: "From the 11th or 12th of November 1572 up to this day on which I write, the 22nd of November 1574, two entire years and 11 days have occurred since the day the new star appeared. It is not certain what this signifies, but it is possible, as the Scriptures say, that it indicates the Second Coming."<sup>24</sup>

<sup>21</sup> The name Metasthenes is said to be a corrupt spelling of Megasthenes, a Greek who wrote ca. 300 B.C. about India.

<sup>22</sup> Birague was Keeper of the Seals for the French Court, Bishop of Lavaur, cardinal, and one of the prominent Catholic leaders who agreed to the Massacre of St. Bartholomew's Day in 1572.

<sup>23</sup> For a brief discussion of *anagogicus* see Anna C. Esmeijer, *Divina Quaternitas: A Preliminary Study of the Method and Application of Visual Exegesis* (Amsterdam, 1978), p. 9.

<sup>24</sup> The passage quoted appears on page 70: "Ab undecimo aut 12 die novembris 1572 ad hanc diem qua haec scripsimus vigesimam secundam mensis nov. 1574 sunt duo anni integri et undecim dies ex quibus stella nova . . . apparuit . . . nec tamen quid significet adhuc vulgo certum est, licet quidam scriptis editis dicant significare secundum Christi adventum." Moreover, the 70-weeks material of Daniel 9 has long been considered to relate to the "End-Time." The "new star" was the supernova of 1572 described by Tycho Brahe in his *Progymnasmata*. Tycho observed the star from November 1572 until March 1574. "His records of its variations in color and magnitude identify it as a supernova"; see C. Doris Hallman, "Tycho Brahe" in *Dictionary of Scientific Biography* (New York: Charles Scribner's Sons, 1970) Vol. 2, p. 403. Moreover, ". . . consideration of the absence of both parallax and retrograde motion, which [Tycho] established by careful observation, led him to conclude that the new star was neither sublunar nor attached to the

TABVLA CHRONOGRAPHICA EX COLLATIONE TEMPORVM HEBRAEORVM, ITALORVM, CHALDEORVM, ET AEGYPTIORVM, SECVNDVM PVBLICÆ FIDELI, certissimæ, auctoritatē, Adonæ ad Quesnellum, ad Veronæ sacrorum antequam, et in suis Bibliothecarum relictis, Galindus, Galindi per Jacobum... Boudy, Peristerum, pauperum, Gallegi, et Sancti-anni, et Hebraice lingua, profectum.

Photo: Clem Fiori

Jean Boulaese, *Tabula chronographica ex collatione temporum Hebraeorum, Italorum, Chaldaeorum, et Aegyptiorum* (Paris, 1574). Rare Books Collection, Princeton University Library.

planetary spheres. It lacked the proper motion of a comet (which, according to Aristotle, would have been sublunar), quite apart from its totally different appearance. Despite attempts he made in his book to ascertain the astrological significance of the nova, his account is, on the whole, greatly superior to contemporary accounts;" John David North, "Tycho Brahe" in *Biographical Dictionary of Scientists* (New York: John Wiley, 1982), p. 78.

In his *Tabula chronographica*, Boulaese is at pains to demonstrate that his estimate of the time that had passed from the creation of the world to the birth of Christ was correct. Why such anxiety over fixing the precise number of years? And why 3,960? As C. A. Patrides points out, during the Renaissance there was a distinct received tradition that the world would last no longer than 6,000 years.<sup>25</sup> But determining where one was in that sequence of 6,000 years was not a simple matter. The learned of the age knew that the Second Coming was near, but how close? Over 100 writers of Boulaese's period agonized over this question, presenting more than 40 separate solutions to the problem. Luther, for example, chose exactly 4,000 years. The learned Joseph Scaliger settled on 3,948. The variations depended in part on the source of one's information. If one selected the Septuagint, then at the time of the Renaissance the world was at least 6,500 years old. This was some 500 years past the "due date" and the world had not yet ended. So, for some, the chronology of the Septuagint contained an error, and the answer to the question must lie elsewhere.

Boulaese, like others, chose Luke's recounting of the forebears of Christ as his primary authority; the 42 generations listed there worked out nicely to 3,960 years. Moreover, given the authority of Luke, the chronologies of the Romans and others could all be shown to agree with the Bible. In Boulaese's *Tabula chronographica*, columns two, three, and four to the right of the listing of Luke's 42 generations show in detail the parallels as well as the sometimes arbitrary adjustments required to make the chronology work out.

The *Tabula chronographica* has its original imprint canceled by a pasted-over square of paper. Underneath it reads "Apud Thomam Belot, sub D. Barbarae signo, in via Iacobaea." Belot held a 10-year royal privilege granting exclusive rights to the works of Boulaese.<sup>26</sup> Apparently Belot wished to disassociate himself from Boulaese; he sold the publication to Denis Duval, whose name as printer/publisher appears in the lower left corner. Exactly why Belot ended the relationship (he never published a Boulaese work again) is not known. Certainly Boulaese's life was in turmoil in 1573, and he had his detractors.

<sup>25</sup> C. A. Patrides, "Renaissance Estimates of the Year of Creation," in *Huntington Library Quarterly*, Vol. xxvi, (1962-1963), pp. 315-322.

<sup>26</sup> *Imprimeurs & libraires Parisiens du xvie siècle. Ouvrage publié d'après les manuscrits de Philippe Renouard par le Service des Travaux historiques de la Ville de Paris avec le concours de la Bibliothèque nationale*. Tome Troisième (Paris, 1979), p. 252.



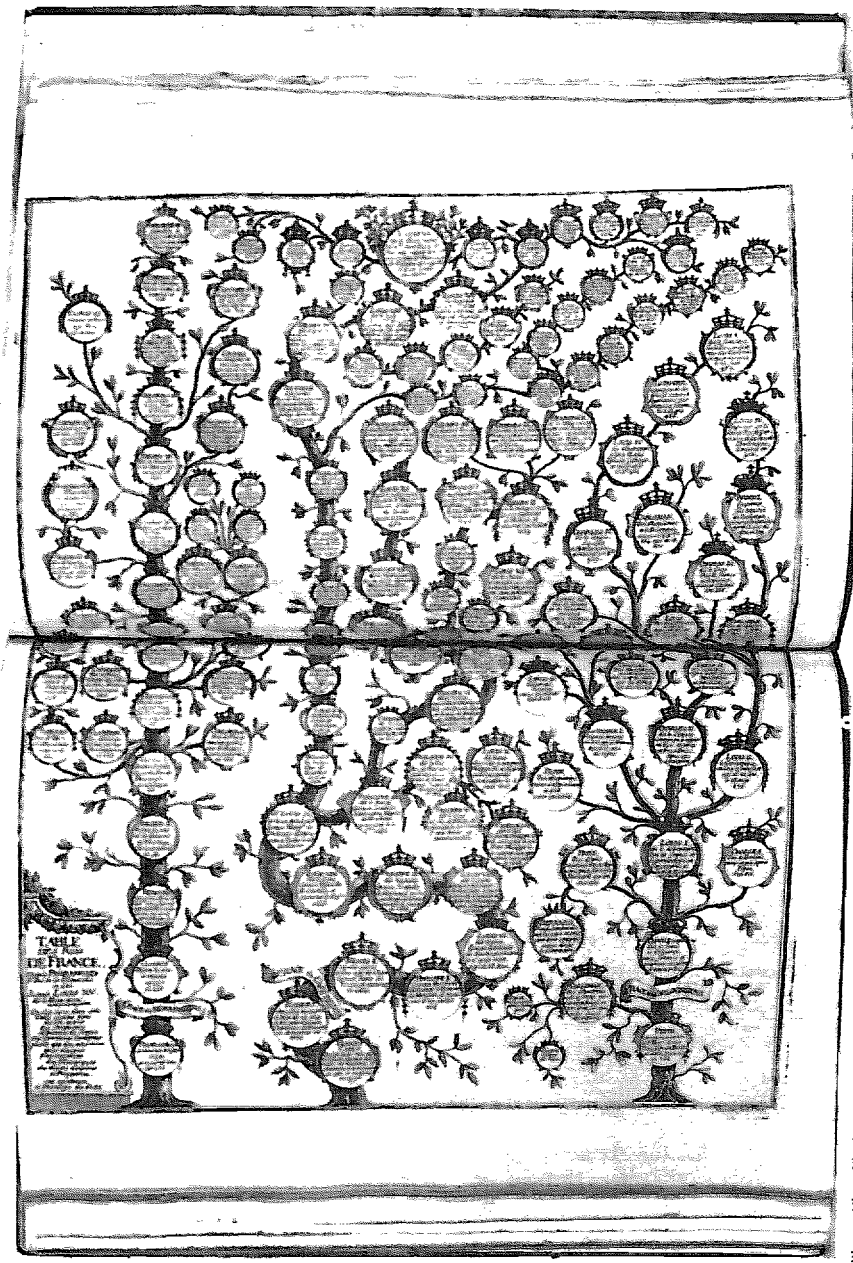


Photo: Clem Fiori

Jean Joseph Lionnois, *Tables généalogiques, et géographiques* (Nancy, 1771). Rare Books Collection, Princeton University Library.



And in the 16th century, as Anthony Grafton points out,<sup>27</sup> chronology could make tempers flare. It was a subject fiercely argued. Moreover, the authenticity of one of Boulaese's sources, Berosus, was debated by a number of scholars; perhaps Belot decided to distance himself from Boulaese because of such doubts regarding his sources.

Whereas Boulaese took the entire span of time as understood in theological terms, others sought to expand the tabular form to encompass all of human history, or the entire world of letters. Two 18th-century books recently acquired by Princeton provide examples of such an effort as well as a glimpse of the moment of transition, when an old intellectual age was dying and a new one was being born. Jean Joseph Lionnois' *Tables généalogiques et géographiques*<sup>28</sup> cover established knowledge, such as Biblical history. Each plate is dedicated to Louis Philippe Joseph Orléans, Duke of Chartres. The entire book has all the marks of one produced in the age of patronage, and it is officially approved and licensed. Its contents are laid out in the well-known tree form, as shown in the genealogy of the Kings of France.

Christian Frederic Wilhelm Roth's *Versuch einer Mappemonde litteraire* (Erfurt, 1785)<sup>29</sup> offers an interesting contrast. Roth covers the whole range of knowledge. He charts a *Mappe-monde Litteraire*—"Map of the World of Letters." He does so using a columnar arrangement, with each column filled with text and disposed left to right across the page. There are no images on the *tabula*, only text. In Roth's thinking, "Letters" is the total intellectual culture of humankind, not just philosophy, theology, and the genealogies of kings. Significantly, financial backing for the book did not come from a single patron, but from a group of subscribers. True, the list is headed by eight members of the German nobility, but they are far out-numbered by the more than 150 others on the list. These others are lesser men: merchants, booksellers, kappellmeisters, and so forth. From both the list of subscribers and Roth's ambitious attempt to represent all the new knowledge of his time, we get a glimpse of the democratic age arriving, an age when knowledge

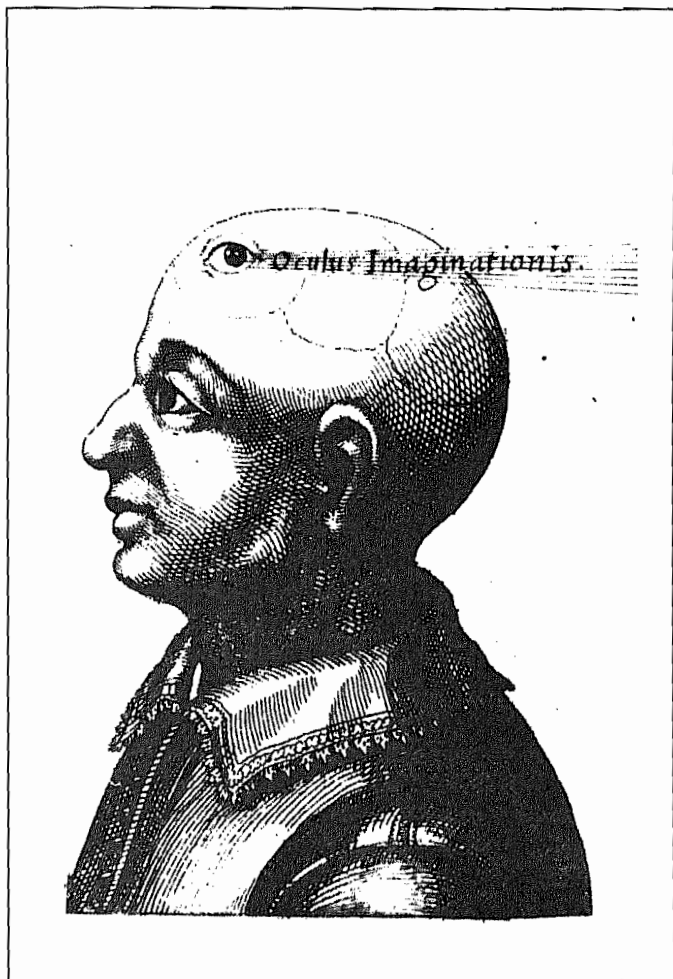
<sup>27</sup> Anthony Grafton, "From *De Die Natali* to *De Emendatione Temporum*: The Origins and Setting of Scaliger's Chronology" in *Journal of the Warburg and Courtauld Institutes*, Vol. 48 (1985), pp. 100-143.

<sup>28</sup> Published at Nancy in 1771, it was purchased on the Sanxay Fund in 1985. Its Library call-number is (Ex) D11.L76e.

<sup>29</sup> The Library's call-number for Roth is (Ex) Z2000. R67 1785f. It was purchased in 1986 on the Theodore F. Sanxay Fund.

would be transmitted by means more accessible to the common man, unversed in the systems and schema of “artificial memory” and the often esoteric meanings of emblems.

Princeton’s recent acquisitions of complex visual arrays known as *tabulae* provide a glimpse into a vanished world—a world that depended on images and memory to teach, to remind, and to edify.



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Detail from the divisional title page for the *Ars memoriae* in  
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Knowing Through Seeing  
DIAGRAMS, SCHEMATA AND  
TABLEAUX IN EARLY  
PRINTED BOOKS, MEDIEVAL  
MANUSCRIPTS, AND PRINTS



ON VIEW



This detail from the divisional title page for the *Ars memoriae* in Robert Fludd's *Utriusque Cosmi ... Historia*, Tomus Secundus, Oppenheim, 1619, is part of the Rare Book Collection, and is included in the current exhibit at Firestone Library.

Ouroboros, who can himself be read as a figure for blood-relationships' continuity. From Athanasius Kircher's 1652 *Oedipus Aegyptiaci* comes a diagram of man as microcosm of the macrocosm. It appears also in *The Spiritual in Art* and shows the Doctrine of Correspondences still thriving 24 years after the death of Shakespeare. Kircher shows five-pointed man within borders that relate his organs to planets, signs of the zodiac and the healing plants they control. "Map of the Man of Sinn," signed W.G. and dated to 1622-23, may have been familiar to John Bunyan; certainly it's a sort of pilgrim's progress that illustrates teaching's descent from occult to didactic. If W.G. was in fact William Gouge, as the map's label suggests, the writer and translator was a Puritan. The engraving follows a sinful man's striving — from A for Antichrist, symbolized by a bishop blinded by the (allegorical) sun, to the New Jerusalem, "where none unclean are admitted."

Shoemaker-seer Jakob Boehme's diagram of First and Second Principles, from his *Forty Questions of the Soul*, requires more-rigorous study and presumably received it from Jean Arp, a Boehme student concerned with the 20th-century crisis of mysticism.

*The Spiritual in Art* shows the same diagram and explains it by paraphrasing Bohme as follows:

*The divine eye, a circle, must be split into two and the two resulting arcs placed back to back and rotated in opposite directions. One eye becomes two eyes, which propel each other through their mutual opposition .... One arc issues from the corrosive eye of the Father, the other from the loving eye ... of the Holy Spirit. The heart at the center ... is the Son.*

Banned by his Lutheran church during his lifetime, Bohme became known through clandestine circulation of his works. Once they were published in the 17th century, they became (to again quote the book) "the basis of a Western tradition of mysticism ...."

A ca. 1230 manuscript *Biblia Sacra Latina* belongs to Scheide Library, headquartered at Firestone. It's open to a double page showing a pair of hands whose fingers illustrate the Devil's wiles and calls to repentance. The label tells us that the work also illustrates correspondences between, for example, the 12 prophets, 12 articles of faith and 12 apostles. These days we're surprised to learn that the intervals between the seven major planets match those between the seven tones of our scale.

# 'Knowing Through Seeing'; 'Premiere Showcase'

## Diagrams and Tableaux in Early Printed Books at the Firestone; and young emerging artists at Sheila Nussbaum Gallery

BY ESTELLE SINCLAIRE

**A**S Curator of Rare Books," says Stephen Ferguson of Princeton University's Firestone Library. "I study the history of the printed book. (We've) been printing in the West for over 400 years, and a lot can and did happen in four centuries.

"In my studies I happened to notice that many old books had interesting diagrams and illustrations. What prompted me when asked to do an exhibition was my own interest, plus what I thought the public would like."

Mr. Ferguson's second hat is Assistant University Librarian for Rare Books and Special Collections. He titles the show in Firestone's main-floor gallery *Knowing Through Seeing: Diagrams, Schemata and Tableaux in Early Printed Books, Medieval Manuscripts, and Prints*. These are of more than antiquarian interest.

Invitations to the show's formal opening profile head and shoulders of a 17th-century gentleman from whose frontal *Oculus Imaginationis* (Eye of the Imagination) rays flow forth to the space around him. He illustrates Robert Fludd's 1619 *Utriusque Cosmi ... Historia* one of several exhibition authors and works represented also in *The Spiritual in Art: Abstract Painting 1890-1985* (TIME OFF review, July 9).

The book elucidates and catalogs an exhibition of the same subject still traveling in Europe after a Chicago opening. The Fogg Museum is rumored to be planning an exhibition on a similar subject.

Briefly put, the *Spiritual in Art* shows abstract painting's retrogression from search for super-literal truths to decorative self-expression.

Mr. Ferguson has arranged *Knowing As Seeing* clockwise by categories: Cosmology, Geology, Astronomy, Astrology, Genealogy, Theology, Philosophy, Logic, Allegory, Poetry, Artificial Memory and Systems of Knowledge. The 80 works on view, however, could be subsumed under the single heading "The Universe Unified," in which the alchemist represents the universal seekers for higher truths. Indeed, in a panel that faces the Gallery's entrance, laboratory instruments appear within the alchemist's body.

The engraving is one of a series ascribed to Canon George Ripley, who died in the late 15th century. He was studied until the so-called Age of Reason swept away levels of knowledge higher than its own and set the bare stage for truth as consensus.

The "Serpent of Araby" panel is perhaps the most accessible to literal thinking; his heart's blood spurts downward into spheres that (we learn from another panel) represent corpus, anima, (glossed aqua) and piritus. Red and black riddling verses around his include the observation, "I shall here be geyne/ For to teche the a redey weye/ Or ellys." The last word is translated elsewhere as "elixir." By biting his own tail, the Serpent becomes a figure for the Worm

Sheila Nussbaum Gallery

**M**ANAGER Liz Gonis says of Sheila Nussbaum Gallery in Princeton: "The Gallery is a showcase for young emerging artists from all over the country and for some from Europe. In this opening exhibition, *Premiere Showcase*, we're featuring work by all 200 of the artists we represent."

The Gallery, she adds, "plans five shows a year. Our *Holiday Showcase* will feature Karen Aumann's ceramics." The new Princeton Gallery is a child of the Millburn gallery of the same name.

Architect Marin Holub of New York has done a splendid job with interior design; the Gallery's feeling of space belies the breadth and depth of its stock of paintings, prints, sculpture, textiles, glass, ceramics and constructions.

Michael Eastman is the sole photographer among Nussbaum artists. He lives and works in St. Louis. His work, Ms. Gonis says, has been purchased by the Metropolitan Museum. Mr. Eastman's broad print of a cropped marble-tiled facade reflects amber light in its windows. Foreground plantings of evergreen and just-budding saplings add geometric interest to satisfying but unobtrusive color.

Prices for hand-crafted jewelry that fills floor cases, Ms. Gonis says, begin at \$15. Most pieces are pleasantly chunky; all stop short of the bizarre. England's Wendy Ramshaw turns gold and silver rings, some set asymmetrically with stones, into small sculptures: Each has its own acrylic display column. Sue Sachs combines fre-form silver hearts with freshwater pearls. A multi-strand pearl necklace uses three hears as a pendant; a fourth becomes a clip above them.

Naida Seibel uses chunky natural and deep-toned weaving to cocoon a group of three women wearing buskas. Their brass faces and feet shine out above and below.

It's good to see glass by Tom and Matthew Buechner's Vitrex and Thames Street Studios, long overdue for introduction to Central New Jersey. Their skilled blowing translates into classically pure curves in ruby and sapphire above and within crystal.