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The reception of John Dee's *Monas hieroglyphica* in early modern Italy: The case of Paolo Antonio Foscarini (*c.* 1562–1616)

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ABSTRACT

One of the earliest Italian printed references to John Dee's *Monas hieroglyphica* (1564) is generally considered to be in Giulio Cesare Capaccio's *Delle imprese*(*On devices*), published in Naples in 1592. In the same year, however, another work was published, this time in Cosenza, in which the *Monas* featured prominently. Paolo Antonio Foscarini's *Scientiarum et artium omnium ferme anacephalaeosis theoretica*, a previously unknown work, is a booklet containing 344 theses that the Carmelite friar and theologian Foscarini (*c.* 1562–1616) prepared for a disputation in honour of the new head of his order. Foscarini devoted eleven of those theses to hieroglyphs, taking several of them almost verbatim from the *Monas*. This essay examines each of the eleven theses in turn to explore Foscarini's use of the *Monas* and his attempt to integrate Dee's work with material from other sources, such as Johann Trithemius's *De septem secundeis*. It then briefly looks at Foscarini's interest in hieroglyphs after the *Anacephalaeosis*.

1. Introduction[1]

In recent years, scholars have begun to address the issue of the reception of John Dee's *Monas hieroglyphica* (1564).[2] They have demonstrated that, contrary to previously held views, there were numerous references to the *Monas* in the sixteenth and seventeenth centuries.[3] One of the earliest Italian printed references to the *Monas* is generally considered to be in Giulio Cesare Capaccio's *Delle imprese* (*On devices*), published in Naples in 1592.[4] In the chapter on hieroglyphs, Capaccio paraphrased passages from the preface to the *Monas*, reproduced the figure of the Pythagorean Y and referred to the hieroglyphs that came from a 'recondite Kabbalistic philosophy' about which had written one 'Giovanni Dee da Londino.'[5] In the same year, however, another work was published, this time in Cosenza, in which the *Monas* featured prominently. Paolo Antonio Foscarini's *Scientiarum et artium omnium ferme anacephalaeosis theoretica* (*A theoretical recapitulation of nearly all arts and sciences*, hereafter *Anacephalaeosis*) reproduced material from the *Monas*, albeit without acknowledgement (Foscarini, 1592).

The Carmelite friar and theologian Foscarini (*c.* 1562–1616) is best known for two letters. The first was the letter he wrote in January 1615, attempting to reconcile the Copernican hypothesis with scriptural passages which stated or implied that the earth was at the centre of the cosmos (Foscarini, 1615a). The second was the letter Cardinal Robert Bellarmine wrote to Foscarini on 12 April 1615 to advise him and Galileo to discuss the Copernican system

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[1] In quotations from fifteenth- and sixteenth-century editions of Latin texts, I have modernized the capitalization and punctuation, expanded abbreviations, changed 'u' to 'v' and vice versa to distinguish respectively vocalic and consonantal 'u', changed 'j' uniformly to 'i', and changed long 's' into 's.' I have also omitted accents. In quotations from fifteenth- and sixteenth-century Italian texts, I have modernized the accentuation. All translations are my own, except where otherwise noted.

[2] See, in particular, Clulee (1998) and Forshaw (2005).

[3] Vickers (1979, at p. 308 n. 17), had questioned whether there were 'even ten' references to the *Monas* in the seventeenth century.

[4] Capaccio (1592). See Forshaw (2005, pp. 254–255).

[5] Capaccio (1592, fol. 4v): 'Onde non rinchiudo tra questi, quegli altri modi di ieroglifici che da una recondita filosofia cabalistica nascono, di cui brevemente, ma con illustre gravità scrisse quel Giovanni Dee da Londino.'

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only as a hypothesis. Bellarmine's letter is recognized as a key text in the history of, and relationship between, science and religion. The Catholic Church did not approve of the *Lettera*, and so it was placed on the Index of Prohibited Books on 5 March 1616.[6]

The *Anacephalaeosis*, a previously unknown work,[7] is a booklet containing 344 theses that Foscarini prepared for a disputation in honour of Giovanni Stefano Chizzola, the recently appointed head of the Carmelite Order.[8] Foscarini divided the theses into forty-five topics, which he arranged into five broad groups: subjects related to theology and metaphysics (theses 1–85); physics and natural sciences (86–145); the *quadrivium* (146–272); the *trivium* (273–333); and moral philosophy (334–343).[9] In the first group, after theses on theology, creation, redemption and sanctification, there were eighteen theses on the Kabbalah. These are followed by eleven on hieroglyphs. This essay will examine each of the eleven theses in turn to explore Foscarini's use of the *Monas* and his attempt to integrate Dee's work with material from other sources, such as Johann Trithemius's *De septem secundeis* (*On the seven secondary causes*) (1567). It will then briefly look at Foscarini's interest in hieroglyphs after the *Anacephalaeosis*.

2. Thesis forty-one

The eleven theses on hieroglyphs are divided into two groups. The first seven theses (forty-one to forty-seven) examine hieroglyphs in general, and act as the foundation for the final four theses (forty-eight to fifty-one), which consider specific symbols.

Foscarini, as in several other sections, used the first thesis of the new subject to clarify the subject's relationship with the previous group of theses: 'Hieroglyphic speculation seems to be a sort of part, and as it were a foster daughter, of the Kabbalah.'[10] It was, however, 'real Kabbalah' rather than the 'vulgar one' that had been written down.[11] In the Kabbalistic theses Foscarini did not mention this division, describing the Kabbalah instead as 'the unwritten spiritual and mystical law of the Jews' and 'a sacred and secret science.'[12] This 'real Kabbalah' came not from Foscarini's own thought, but rather from the preface to the *Monas*, Dee's short yet cryptic work on his personal hieroglyph of the title.[13]

Foscarini's use of Dee's division between the two types of Kabbalah was in keeping with his general treatment of sources in the *Anacephalaeosis*. In thesis forty-one, Foscarini removed Dee's reference to one of his earlier works—the lost *Parisian aphorisms*—and the verb 'I called' (*nominavi*), thus converting Dee's text into an impersonal statement. Foscarini's Latin transliterations of the two Greek terms that Dee used to describe his division cast serious doubt on Foscarini's knowledge of Greek. He did not understand a standard abbreviation for the Greek dipthong ῦ̃ in Dee's text, and so wrote 'tu' instead of 'tou' and 'legomenu' rather than 'legomenou.'

Foscarini was not the only scholar of that period to make use of this passage in the *Monas*. In *Delle imprese*, Capaccio (1592, fol. 5r) described Egyptian priests and hieroglyphs in similar terms to thesis forty-one. The alchemist Heinrich Khunrath (1609, p. 6) also paraphrased the same section of Dee's text in his *Amphitheatrum sapientiae aeternae* (*Amphitheatre of eternal wisdom*, first published in 1595, and then in an expanded edition in 1609). Both Capaccio and Khunrath linked Dee's division between real Kabbalah and vulgar Kabbalistic grammar to *gematria*, *notarikon* and *tziruf*. They did so because these Kabbalistic exegetical techniques were fundamental to Dee's exposition of his monad.

Dee's 'real Kabbalah' was a combination of two aspects of the Kabbalah: the description of creation given in the fourth-century *Sefer Yezirah* (*Book of creation*); and the three aforementioned exegetical techniques. In the *Sefer Yezirah* it is declared that God created the world using 'thirty-two paths of wisdom'—ten *Sefirot* and the twenty-two 'elemental letters' of the Hebrew alphabet—which formed the foundation of creation.[14] From the first four *Sefirot* came the 'spirit (*ru'ah*) of the Living God' and the three primal elements of air, water and fire, and onto the element of air God 'engraved' the twenty-two letters (ibid., p. 24). The study of the points, letters, words and sentences of the Torah therefore revealed much about the universe, as Foscarini acknowledged in thesis twenty-six.[15] In the preface to the *Monas*, Dee claimed that the study of these elements should be applied to Latin and Greek as well,[16] which was possible only through the use of the 'three principal keys' to Kabbalah, namely *gematria*, *notarikon* and *tziruf*.[17] In *gematria* each letter and word was assigned a numerical value, the examination of which revealed connections between seemingly disparate words and sentences;[18] in *notarikon* certain letters in phrases were extracted and joined to make new words; while in *tziruf* (also called *temurah*) the permutation and substitution of letters and words produced new meanings. Dee also applied these 'keys' to his monad in a

[6] On Foscarini's role in the so-called 'Galileo affair', see Blackwell (1991), Kelter (1989) and McMullin (2005). On Foscarini's life and works, see Boaga (1990). On the principal Italian studies of Foscarini, see Ponzio (1998, pp. 83–113) and Vasoli (2002, pp. 43–49). Two recent additions that I have not yet been able to consult are Cirino (2009) and Romeo, Lupi, & Pupo (2008).

[7] The only known copy of this booklet, which I discovered in the course of my doctoral research, is held in the Biblioteca del Seminario Vescovile, Asti. I have included a digital reproduction in an appendix to my thesis, Campbell (in press). I am currently preparing an annotated edition of the booklet.

[8] The blanks in the printed notice of the planned date and time of the disputation at the back of the copy held in Asti were not filled in by hand. Although there is no record of the disputation having taken place, Chizzola chaired a provincial chapter meeting in Naples in October 1592, en route to Sicily. He would have passed through Calabria in the winter of that year. On the Renaissance disputation, see Chang (2004) and Weijers (2008).

[9] The numeration is incorrect and 119 appeared twice, resulting in 344, rather than the planned 343, theses.

[10] Foscarini (1592, sig. B2v): '41 Pars quaedam, et veluti alumna cabalae videtur esse hieroglyphica speculatio.'

[11] Ibid.: 'haec realis est cabala, sive (tu ontos), ut illa vulgaris altera, grammatica, sive (tu legomenu) quae notissimis literis ab homine scriptibilibus insistit.'

[12] Ibid., sig. B1r: 'Kabala 23 Legem non scriptam hebraeorum, spiritualem, et mysticam . . . 24 Hanc sacram, secretamque scientiam.' Foscarini took these and four of the other theses on the Kabbalah from Grégoire (1588). The *Syntaxes*, by Pierre Grégoire (1540–1597), a jurist from Toulouse, was first published 1575–1576. It went through several editions in the sixteenth century. The 1588 edition is the only complete one that I have been able to consult.

[13] Dee (1564), fol. 7r: 'Quam, in nostris ad Parisienses aphorismis, realem nominavi cabalam, sive Τῦ ὄντος, ut illam vulgarem alteram, cabalisticam nomino grammaticam sive Τῦ λεγομένῦ, quae, notissimis literis, ab homine scriptibilibus, insistit.' For an introduction to the *Monas*, see Clulee (1988, pp. 77–115) and Josten (1964). For Dee's account of 'real' and 'vulgar' Kabbalah, see ibid., pp. 86–96 and Jean-Marc Mandosio's essay in this volume.

[14] Scholem (1974, p. 23). For a brief survey of this work, see pp. 23–30. I have followed Scholem's transliteration of Hebrew terms.

[15] Foscarini (1592, sig. B1v): '26 Cabalisticae theoriae obiectum, est quid commune ipsi Deo, et omni creaturae in particulari, sub ratione, qua in mysteriis, et symbolis punctorum, literarum, verborum, vel sententiarum, in sacris voluminibus contentarum, omnis eorum natura vis, atque potestas secundum propriam, cuiusque essentiam comprehenditur, atque velatur.'

[16] Dee (1564, fol. 4r): 'Sic enim testificabuntur grammatici, dum rationes esse reddendas, de literarum formis, situ, locis in ordine alphabetario, nexibus variis, valore numerali, aliisque plurimis (quae circa trium linguarum alphabeta primaria considerari debent) hic admoneri se videbunt.'

[17] Ibid., fol. 6v: 'Ad cabalistam iam venio hebraeum: qui, ubi suam (sic dictam) gemetriam, notariacon, et tzyruph (artis suae tres quasi praecipuas claves) extra sanctae, nuncupatae, linguae exerceri fines videbit.'

[18] On *gematria*, see Scholem (1974, pp. 337–343).

mathematical sense to unlock its secrets,[19] making his 'real Kabbalah' superior to the 'vulgar Kabbalistic grammar' that rested 'on well-known letters.'

Despite the importance of the 'three principal keys' to Dee's 'real Kabbalah', Foscarini did not include them in thesis forty-one, instead preferring to incorporate them into the theses on the Kabbalah. In thesis twenty-nine Foscarini stated that the 'three keys [of the Kabbalah] are *gematria*, *notarikon* and *tziruf*',[20] and his spelling of these 'keys' is identical to Dee's distinctive rendering of them in the 1564 edition of the *Monas*.[21] What Dee, Capaccio and Foscarini termed *gemetria* was usually called *gematria*, *notariacon* more conventionally *notarikon*, while *tzyruph* was more commonly known as *tziruf* or *temurah*.[22] Nearly twenty years later, in his 1611 prayer book, the *Meditationes*, Foscarini would still spell *notarikon* in the same manner.[23] Foscarini should have included the three 'keys' in the same thesis as the distinction between the real and vulgar Kabbalah that he borrowed from Dee, as indeed Capaccio and Khunrath did, because they were an integral part of Dee's 'real Kabbalah.' Despite that, a reader or disputation attendee unfamiliar with the *Monas* would not have realized that this element was missing from thesis forty-one, let alone its significance.

3. Theses forty-two and forty-three

Having established the relationship between hieroglyphs and the Kabbalah, Foscarini focused on the origins of hieroglyphs. 'To the treatment of hieroglyphs', thesis forty-two stated, 'seems to pertain not only the many symbols borrowed from Egyptian mysteries, but also those that occur to us through the examination of mathematical shapes.'[24] The former symbols were taken 'from natural things', the latter 'produced by art and learning.' Foscarini did not take this thesis from the *Monas*. Although his source is unclear, by stressing the natural and numerological aspects of hieroglyphs, he was preparing the reader for the ideas that he would present in the remaining theses.

In thesis forty-three Foscarini, introducing the foundation of all hieroglyphs, returned to the *Monas*:

> Just as, according to mathematicians, the circle cannot be understood without the line, nor the line without the point, so it will not be beside the mark if we declare that the first production of all things emanated, the present state of things exists and future rest will be, respectively, from the point, through the line, to the circle, or, which comes to the same thing, from the monad, through the binary, to the ternary.[25]

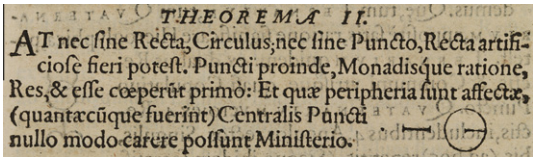
THEOREMA II.
AT nec ſine Recta, Circulus, nec ſine Puncto, Recta artificioſe fieri poteſt. Puncti proinde, Monadisque ratione, Res, & eſſe cœperũt primò: Et quæ peripheria ſunt affectæ, (quantæcũque fuerint) Centralis Puncti nullo modo carere poſſunt Miniſterio.

Fig. 1. The illustration of the point, line and circle from the *Monas*, fol. 12r. By permission of the Wellcome Library, London.

This is the triadic numerological process that underpins all of creation. Foscarini took the first half of the thesis from the first half of the second theorem of the *Monas*, in which Dee outlined the mathematical foundation of both creation and his monad:

> Yet the circle cannot be produced in practice without the straight line, or the straight line without the point. Likewise, things first began to be by way of point and a monad.[26]

Foscarini's observation about how the emanation of the 'first production of all things' occurred 'from the point through the line to the circle' also drew on the illustration accompanying Dee's theorem, which shows a point, a line and a circle (Fig. 1).

Dee returned to this idea in the final theorem of his work.[27] Foscarini's paraphrase, above all the insertion of 'mathematicians' at the start of the thesis, is of a piece with Dee's statements regarding the mathematical language in which his monad, and therefore the world, was constructed. In the preface to the *Monas*, Dee noted that 'the science of the alphabet contains great mysteries, because He, who is the only author of all mysteries, has compared Himself to the first and last letter' of all three languages, Greek, Hebrew and Latin.[28] The constituent parts of the letters of these languages were 'produced from points, straight lines and the circumference of circles',[29] which was why mathematicians, and not 'vulgar grammarians', would appreciate the 'rareness' of Dee's work.[30] It was the mathematical, or rather numerological, dimension of Dee's 'real Kabbalah' that lifted it above the 'vulgar Kabbalistic grammar' (De Léon-Jones, 2006, p. 148). Foscarini did not make this distinction clear, splitting the two elements into a reference to 'real Kabbalah' in the opening thesis and another to the mathematical nature of creation in the first half of thesis forty-three.

Foscarini, however, went further than Dee by explicitly linking the process of the 'first production of all things' to the progression from the monad, through the binary to the ternary. Dee had referred to just the 'point and a monad.'[31] The progression that

[19] On Dee's mathematical application of the three 'keys', see Clulee (1988, pp. 92–95), De Léon-Jones (2006, pp. 149–154), Walton (1976) and Walton & Walton (1997, pp. 44–47).

[20] Foscarini (1592, sig. B1v): '29 Harum tres sunt claves, gemetria, notariacon, tzyruph.'

[21] See above, n. 17. In the 1591 edition Dee (1591, pp. 19–20), 'gemetriam' is spelt 'geometriam.' Khunrath probably used the 1591 edition of the *Monas*, because he called *gematria* 'geometria' in his *Amphitheatrum* (p. 6).

[22] The modern standardized spelling of these terms is *gematria*, *notarikon* and *tziruf*. Dee did use the second form for *tziruf* later in the *Monas* (fol. 25v): 'Hac ego in hebraeorum tziruph (sive thmura) cum maxima voluptate, uti soleo.'

[23] Foscarini (1611, p. 224): 'In secunda via super confirmatione amen, quae dictio per modum theologizandi hebraeorum, quam notariacon vocatum.'

[24] Foscarini (1592, sig. B2v): '42 Ad hieroglyphicam tractationem cum multa ex aegyptiorum mysteriis mutuata pertinere videntur, tum ea quoque quae nobis ex mathematicarum figurarum inspectione resultant symbola, illa quidem a rebus naturalibus, haec vero ab artificialibus, et doctrinalibus desumpta.'

[25] Ibid., sig. B2v–B3r: '43 Iccirco, cum apud mathematicos, nec sine linea circulus, nec sine puncto linea intelligi possit, non ab re erit nos, ex puncto, per lineam, in circulo, vel (quod idem est) ex monade, per binarium, in ternario, primam rerum omnium effluxisse productionem, esseque constitutionem, et futuram quietem, asserere.'

[26] Dee (1564, fol. 12r): 'At nec sine recta, circulus; nec sine puncto, recta artificiose fieri potest. Puncti proinde, monadisque ratione, res, et esse coeperunt primo.' Translation adapted from Josten (1964, p. 155).

[27] Dee (1564, fol. 27v): 'nostrum huius libelli exordium, a puncto, recta, circuloque coepimus.'

[28] Ibid., fol. 4v: 'Cum ipse, qui omnium mysteriorum author est solus, ad primam et ultimam, seipsum comparavit literam. (Quod non in Graeca solum esse intelligendum lingua, sed in Hebraea, tum in Latina, variis, ex arte ista, demonstrari potest viis.)'

[29] Ibid., fol. 5r: '(Quicquid humana iactare solet arrogantia) Earumque omnium figuras, ex punctis, rectis lineis et circulorum peripheriis, (mirabili, sapientissimoque dispositis artifico) prodiisse.'

[30] Ibid, fol. 5v: 'Sed dimissis, hoc modo, literarum istis, et linguae philosophis; mathematicos meos, raritatis istius nostri muneris, adducam sincerissimos testes.' On the previous page, Dee had referred to the 'vulgarium grammaticorum…iudiciis.' On Dee's appeal to mathematicians, see Walton (1976, pp. 118–119).

[31] Dee did use the terms 'binary' and 'ternary' elsewhere in the *Monas*, but not the specific progression that ended in the ternary. See, for example, fol. 19v: 'Ista est via, per quam nostra monas, per binarium, ternariumque progrediens, in quaternario purificato, sibi uni restituatur, per aequalitatis proportionem.'

Foscarini introduced in this thesis was repeated in the theses on magic, when it became the declaration that 'all magical works descend from the monad, through the binary to the ternary, but no further, however, than the quaternary.'[32] Foscarini underlined the importance of this progression in the next thesis on magic:

> One, two, three and four together make ten, the perfect completion of all numbers, because then a regression is made back to one, since there is no simple number beyond ten.[33]

Numbers beyond ten are made up, that is, of ten, or a multiple of ten, plus a 'simple' number. Foscarini had taken both of these magical theses from the same work, the 1567 Cologne edition of the Benedictine Abbot Johann Trithemius's *De septem secundeis*. An appendix to this work contained extracts from Trithemius's correspondence, and in a letter of 10 May 1503 to Count Johannes von Westerberg 'on the three principles of natural magic', Trithemius outlined the numerical progressions involving the quaternary and tens. These became the substance of Foscarini's theses 141 and 142 respectively (ibid., pp. 81–100, at pp. 86–87).

Furthermore, in his letter of 24 August 1505 to the French humanist, Germain de Ganay, Trithemius discussed the numerological progression from the monad to the ternary in similar terms to the second half of thesis forty-three, in particular the idea that 'everything flows from one thing.'[34] Foscarini probably had the progression from the monad to the ternary in mind when he connected the 'first production of all things' to Dee's illustration of the point, line and circle. Dee was also influenced by these ideas, and in theorem twenty he described a process to purify his monad in similar terms to the passage of Trithemius's text that became the basis for thesis 141.[35]

On 6 February 1600, Foscarini compiled an inventory of his personal library as part of an inquiry throughout the Italian peninsula by the Congregation of the Index of Prohibited Books into the state of the libraries of religious orders and their members.[36] The inventory, held in the Biblioteca Apostolica Vaticana, lists 169 items.[37] That Foscarini took the progressions of theses forty-three, 141 and 142 directly from *De septem secundeis*, rather than from the *Monas*, is confirmed by the presence of the 1567 Cologne edition of Trithemius's text in the inventory. In 1600, Foscarini also recorded a copy of Trithemius's *Polygraphia* (*Vat. Lat.* 11272, fol. 571v), which he probably possessed in 1592 when composing the *Anacephalaeosis*, because in one of the theses on grammar he cited Trithemius's works on the secret arts of 'steganography, polygraphy and polilogy.'[38] In short, Foscarini seems to have been an admirer of Trithemius when he composed the *Anacephalaeosis*.

Yet Foscarini did not incorporate all the elements of Trithemius's progression into thesis forty-three. In the same passage from which Foscarini took the progression from the monad to the ternary, Trithemius equated the 'One Thing' of the *Tabula smaragdina* (*Emerald tablet*) with the neo-Pythagorean monad.[39] The *Emerald tablet*, attributed to Hermes Trismegistus, was one of the best known alchemical texts of the Middle Ages and Renaissance, and Trithemius discussed his numerological progression with reference to other concepts from it, such as the identical nature of the superior and inferior realms. Furthermore, the 'One Thing' he examined was also usually considered to be the philosophers' stone, a fundamental part of alchemy (Newman, 1982, p. 129). Many of Trithemius's ideas reappeared in the *Monas*.[40]

There is also a possible Neoplatonic dimension to thesis forty-three, one that Foscarini would examine in a later work. In the *Lettera*, Foscarini claimed that identification of the three heavens (of the planets, the firmament and the empyrean) facilitated understanding of not only certain scriptural passages but also Plato's enigma that 'around the king of all are all things, second things are around the second and third things around the third.'[41] Plotinus and other Neoplatonists interpreted this enigma to refer to the three primary hypostases of the One, Mind and Soul,[42] or, in Ficino's interpretation, the three primary hypostases in which existed the triple distinction of the One as exemplary, efficient and final cause of all things.[43] Although Foscarini's source for the second half of thesis forty-three appears to have been Trithemius's analysis of the 'One Thing' of the *Tabula smaragdina*, the expression he used—'the first production of all things emanated'—is also reminiscent of the Platonic enigma he would later unravel in the *Lettera*.[44]

4. Theses forty-four and forty-five

Thesis forty-four elucidated the connection between mathematical figures and nature first introduced in thesis forty-two, although Foscarini's source was neither Dee nor Trithemius. The thesis stated that the 'simple bodies' that are created are 'squares, or cubes; triangles, or tetrahedrons; circles, or spheres', while the 'composite bodies' consist of 'the remaining figures or bodies.'[45] If the previous thesis contained implicit references to alchemical

[32] Foscarini (1592, sig. D1v): '141 Omnis mirandorum operatio, ab unitate per binarium, in ternarium descendit, non prius tamen, quam a quaternario per ordinem graduum in simplicitatem consurgat.'

[33] Ibid.: '142 Unum, duo, tria, quatuor, simul sumpta faciunt decem, haec omnis numeri perfecta consummatio est, quia tunc fit regressus ad unum, cum ultra denarium non sit numerus simplex.'

[34] Ibid., pp. 65–76, at p. 67: 'Nonne res omnes ab una re fluunt bonitate unius, et quicquid unitati coniungitur, non potest esse diversum, sed fructificat simplicitate et aptatione unius? Quid ex unitate nascitur? Nonne ternarius? Accipe. Unarius est simplex, binarius compositus, ternarius vero ad unitatis reducitur simplicitatem.'

[35] See above, n. 31.

[36] For a general introduction to the inquiry and its results, see the essays in Borraccini & Rusconi (2006).

[37] Biblioteca Apostolica Vaticana, *Vaticanus Latinus* 11272, fols 567r–574v. I am preparing an edited edition of this inventory. The first printed reference to it appeared in Carella (2005, pp. 39–40, n. 49), repeated in Carella (2007, pp. 65–66, n. 68).

[38] Foscarini (1592, sig. F3v): '297 Quibus adiunguntur artes illae reconditiores, steganographia, polygraphia, polilogia, quarum secreta varia, et abstrusa detexit nobis Ioannes Tritemius suis in huiusmodi argumenti libris.' The edition he possessed in 1600 was Trithemius (1550).

[39] Trithemius (1567, pp. 66–67); compare with *Tabula smaragdina*, in Kopp (1869–1875, Vol. 2, p. 377): 'Verum, sine mendacio, certum et verissimum. Quod est inferius est sicut quod est superius, et quod est superius est sicut quod est inferius, ad penetranda miracula rei unius. Et sicut omnes res fuerunt ab uno, meditatione unius, sic omnes res natae fuerunt ab hac una re, adaptatione.' On Trithemius's integration of his progression with this precept from the *Tabula smaragdina*, see Brann (1999, pp. 125–127) and Clulee (2001, pp. 191–194). See also Newman (1982, p. 129) and (2003, pp. 215–218).

[40] For Trithemius's influence on Dee, see Clulee (1988, pp. 101–106), (2001, pp. 194–197) and (2005, pp. 204–205).

[41] Foscarini (1615a, p. 53): 'E così si esplica, e si verifica insieme quel meraviglioso segreto, e profondo misterio rivelato enigmaticamente da Platone a Dionisio Siracusano: *Circa omnium regem sunt omnia, et secunda circa secundum, et tertia circa tertium*.' Foscarini gave his sources for this enigma as book two of Theodorotus's *Graecarum affectionem curatio* and Agostino Steuco's *De perenni philosophia* (first published 1540).

[42] Allen (1984, p. 559). Plotinus outlined the three primary hypostases in, for example, *Enneads*, 5.1.10.

[43] Allen (1984, p. 576). The work to which Allen referred was Ficino's epitome for the *Second letter*.

[44] In the preface to the *Monas* (fol. 4v), Dee did, however, discuss God's role in the mysteries of the 'science of the alphabet' in similar terms: 'Et non est mirum, hoc, in litteris sic constare, cum et visibilia et invisibilia omnia, manifesta, et occultissima (natura vel arte) ab ipso Deo emanantia . . . a nobis, diligentissima indagine sunt perlustranda.'

[45] Foscarini (1592, sig. B3r): '44 Et inter ea, quae creata sunt, simplicia quidem quadrati, vel cubi; trigoni, vel tetrahedri; circuli, vel sphaerae; composita vero, reliquarum figurarum, vel corporum habere rationem.'

and Neo-Pythagorean ideas, the language of this thesis recalls the Platonic solids.[46] Foscarini's exact source, however, remains unclear.

Foscarini's employment of this idea meant that theses forty-three and forty-four interlocked to present creation as a numerological progression (or point, line and circle) that produces bodies in the form of geometrical shapes. By doing so, Foscarini conflated, rather than contradicted, the two parts of the statement he had made in thesis forty-two, for 'mathematical figures' were now an essential part of 'natural things', as well as the objects from which 'art and learning' extracted symbols. Foscarini's mathematical view of nature in these two theses conformed to the tendency in late sixteenth- and seventeenth-century natural philosophy to explain nature through mathematics, and in so doing to describe God as a geometer.

Foscarini openly acknowledged the derivation of thesis forty-five, possibly the most puzzling of the eleven theses on hieroglyphs. If the act and consequence of creation is to be viewed as a mathematical process, what form does the soul take? Foscarini replied:

> The first station of our soul, according to the opinion of Kabbalists and Platonists, is mystically a square, the second a triangle and the third a circle.[47]

This is consonant with the content of the previous theses, and reinforces the Kabbalistic and Platonic aspects of theses forty-one and forty-four respectively. It is, nevertheless, perplexing. Kabbalists and Neoplatonists did not identify either the location, or the form, of the soul in this way.

But one source did contain a comparable geometrical description of the soul's 'station', although Foscarini may have preferred not to acknowledge it. The *Rosarium philosophorum* (*Rose garden of the philosophers*), an influential fourteenth-century alchemical work, outlined the process to obtain the philosophers' stone:

> The philosopher says: Make a circle out of a man and a woman, derive from it a square, and from the square a triangle: make a circle and you will have the philosophers' stone.[48]

This description became the basis of emblem twenty-one in *Atalanta fugiens* (*The fleeing Atalanta*), a 1617 work by the German alchemist Michael Maier.[49] What Foscarini attributed to Kabbalists and Platonists may, then, have derived from alchemical theory. The alchemical overtones of the numerological progression of thesis forty-three were consequently complemented by an alchemical process, disguised as a Kabbalistic-Platonic idea, in thesis forty-five. As noted above, the 'One Thing' of the *Tabula smaragdina*, which Trithemius discussed in his letter to De Ganay, was usually considered to be the philosophers' stone, creating another connection between the two theses.

The stance of the Carmelite Order towards alchemy and alchemists helps explain why Foscarini may have wanted to disguise an alchemical idea as a Kabbalistic or Platonic one. The Carmelite *Constitutiones* of 1586 included alchemy in the section 'on the work of dangerous studies, arts and prohibited games.' Any friar caught with the property of alchemists was 'to be punished severely', and, depending on the severity of the infraction, 'made to suffer in jail.'[50] Explicitly acknowledging a subject that the Carmelite Order considered 'dangerous' in a disputation to be held in honour of the new head of the order would not have been a wise course of action on Foscarini's part.

5. Thesis forty-six

Thesis forty-six brought together the mathematical, alchemical, Kabbalistic and Platonic elements of theses forty-three to forty-five:

> To attribute the first *middot* and *sefirah* of numbering, weighing and measuring to the point and monad, the second *middot* and *sefirah* of number, weight and measure to the line and the dyad and the third *middot* and *sefirah* of the numbered, weighed and measured to the circle and triad.[51]

In this thesis, Foscarini introduced a Kabbalistic element to this numerological process in the form of the reference to the *middot* and *Sefirah*. As mentioned above, the *Sefer Yezirah* declares that God created the world using ten *Sefirot* (singular *Sefirah*) and the twenty-two 'elemental letters' of the Hebrew alphabet (Scholem, 1974, p. 23). The first four *Sefirot* emanated from each other: from the 'spirit of the Living God' came the primal elements of air, water and fire; the final six represented the six dimensions of space (ibid., p. 24). The ten *Sefirot*, or 'numerations', constituted a unity, but not one that represented God (ibid.). By the end of the sixteenth century, many different interpretations of the ten *Sefirot*, the process of emanation and God as the Emanator had been put forward.[52] Generally, the *Sefirot* had by this time become identified as the ten powers of God that formed the intermediate stages between God as the first Emanator and everything that existed apart from what had emanated from him (ibid., p. 99). In the Kabbalistic theses Foscarini, relying in part on Grégoire, summarized the system of these divine emanations. The ten 'most holy and secret' *Sefirot* were divided into seven inferior ones and three superior ones.[53] Man could not be raised above the seventh inferior *Sefirot*, because beyond that lay 'nessamah', or the 'mind in its most purified form.'[54] Kabbalists believed that the three superior, or supreme, *Sefirot*, called 'ensoph, hochma and binah' were 'invisibly venerable, incomprehensible and most holy.'[55] Foscarini,

[46] Plato, *Timaeus,* 53d; Aristotle (1999, p. 120), Guthrie (1978, pp. 285, 459–463) and Steel (2005). See also Cornford (1937, pp. 210–219, 230–239) and Field (1988, pp. 3–14).

[47] Foscarini (1592, sig. B3r): '45 Primam quoque stationem animae nostrae (iuxta cabalistarum, et platonicorum opinionem) quadrato mystice comparare, secundam trigono, tertiam circulo.'

[48] Anonymous (1572), at p. 278: 'Philosophus: Fac de masculo et foemina circulum rotundum, et de eo extrahe quadrangulum, et quadrangulo triangulum; fac circulum rotundum et habebis lapidem philosophorum.'

[49] Maier (1617, sig. H3r): 'Fac ex mare et foemina circulum, inde quadrangulum, hinc triangulum, fac circulum et habebis lapidem Philosophorum.' On this emblem, see De Jong (1969, pp. 166–176).

[50] Carmelites (1586, pp. 86–87) (Pt 2, Ch. 6, §5): 'De dantibus operam studiis, artibus, et ludis prohibitis. Capitulum VI . . . 5. Alchimistae, poena proprietatiorum, acriter puniendi, etiam carceribus macerentur secundum qualitatem, et quantitatem delicti.'

[51] Foscarini (1592, sig. B3r): '46 Primamque midoth, et sephiram, numerantis, ponderantis, et mensurantis, puncto, ac monadi, secundam numeri, ponderis, et mensurae, linae, ac dyadi, tertiam numerati, ponderati, et mensurati, circulo, triadique tribuere.'

[52] For a detailed account of the various interpretations, see ibid., pp. 96–116.

[53] Foscarini (1592, sig. B2r): '33 Intelligi[bili]bus porro, atque supercoelestis mundi, decem sunt numerationes, quas vocant Hebraei sephiroth secretissimae, atque sanctissimae, quarum septem inferiores.'

[54] Ibid.: '36 Non potest autem homo, ultra septimam sephiroth supercoelestem elevari, quia ibi ultimus terminus nessamah hoc est mentis in summo purificatae.'

[55] Ibid.: '34 Tres supremae sephiroth a cabalistis positae praecaeteris invisibiliter venerabiles, incomprehensibiles, et sacratissimae: ensoph, hochma, binah. Tribus respondem divinae Trinitatis personis a nobis creditis, Patri, et Verbo, et Spiritui Sancto.'

following Grégoire, stated that these three *Sefirot* corresponded to the 'three persons of the Holy Trinity…of God, the word and the Holy Spirit.'[56]

The *middot* to which Foscarini referred in thesis forty-six corresponded, in all likelihood, to the three supreme *Sefirot*, or 'three properties.' These also corresponded to the 'three lights at the head of the *Sefirot*' that Jews called the morning light, the bright light and the clarified light, 'in which they say the one God exists without any imperfection or multiplicity.'[57] The three *middot* or 'properties' therefore corresponded to the Trinity. In the *Syntaxes*, Foscarini's source for his definition of the *middot*, Grégoire linked them to the soul,[58] which may explain why Foscarini included the *middot* after the thesis on the stations of the soul. Grégoire's, and hence Foscarini's, definition of the *middot*, apart from the assignation of the three supreme *Sefirot*, is on the whole conventional. The three hidden lights, or *zahzahot* ('splendours'), form the 'roots' to the three supreme *Sefirot*, which emanate from them (Scholem, 1974, pp. 95–96).

In thesis forty-six Foscarini combined the act of creation as expressed in thesis forty-three (although here the monad, binary and ternary become the monad, dyad and triad) with the description of God's arrangement of the universe from *Wisdom* 11:21, namely that He created 'all things in weight, number and measure.' Many thinkers had interpreted this statement to mean that mathematics or numerology was the key to understanding God's work and to substantiate the idea that, as Foscarini implied in thesis forty-four, God was a geometer.

Trithemius referred in his letter to De Ganay to the importance of number and measure (but not weight) when discussing the numerological progression from the monad to the ternary (1567, p. 72). In the same letter, Trithemius mentioned number, order and measure in relation to the mystical ascent of the soul, alchemy and natural magic, a passage that Foscarini turned into theses thirty-one and thirty-two, on the Kabbalah (ibid., pp. 73–74; Foscarini, 1592, sigs. B1v–B2r). Foscarini thereby made number, order and measure a fundamental part of the Kabbalah before he introduced the *middot* and *Sefirot* into thesis forty-six.[59] In the theses on magic, he connected number, weight and measure to Trithemius's progression, albeit indirectly, by first identifying number, weight and measure as elements of natural magic in thesis 139 before stating in thesis 141 that the numerical progression lay behind all wonderful operations.[60] In thesis forty-six Foscarini's allusion to *Wisdom* 11:21 complemented the numerological view of creation he had set out in theses forty-three and forty-four.

The reader of the *Anacephalaeosis* thus needed to consult Foscarini's exposition of the *middot* and *Sefirot* in his Kabbalistic theses in order to understand fully the terms *middot* and *Sefirah* in thesis forty-six. In this thesis, Foscarini placed the numerological, geometrical, alchemical, magical and Neoplatonic elements of creation as outlined in the previous three theses in a Kabbalistic context of the 'roots' and emanations of the *Sefirot*. These elements were then arranged according to 'number, weight and measure', reiterating the Christian and numerological dimensions of creation.

The introduction of *middot* and *Sefirah* in thesis forty-six seemed to fit with Dee's 'real Kabbalah', as outlined in both the preface to the *Monas* and thesis forty-one of the *Anacephalaeosis*, but Foscarini went further than Dee in his use of the Kabbalah. Even though the *Monas*, as mentioned above, was based on Kabbalistic cosmogony and the three exegetical 'keys', the terms *middot* and *Sefirah* (or *Sefirot*) did not appear in that work. It was precisely the absence of these mystical elements that made Dee's 'real Kabbalah' so distinctive (De Léon-Jones, 2006, pp. 147–149). Foscarini adopted Dee's 'real Kabbalah' and in thesis forty-six made it part of the three lights that lay at the root of the *Sefirot*, which he had already identified with the Trinity in the theses on the Kabbalah. Within thesis forty-six the *Sefirot* became part of creation and a universe arranged on mathematical lines. Dee ascribed powers to his monad that were Kabbalistic in nature, such as the erosion of boundaries between the elemental, celestial and supracelestial realms,[61] but through the *middot* and *Sefirah* Foscarini made such powers an explicit part of all hieroglyphs.

6. Theses forty-seven to fifty-one

The subject of thesis forty-seven, the final thesis on the general background of hieroglyphs, was the intellectual status of the interpretation of symbols:

> To apply memory, intellect and will, too, to these ineffable mysteries and most secret judgements, to secret meanings, springing from making comparisons, connections and correspondences made in a marvellous way through analogy, though they are now concealed beneath the outer shell of emblems.[62]

In the *Syntaxes*, Grégoire established memory, intellect and will as the *middot* expressed in the soul through the image of God.[63] Their presence in this thesis connected it to the theme of the previous thesis, *middot* and *Sefirah*, and that of thesis forty-five, the stations of the soul. Although Foscarini's source for the remainder of thesis forty-seven is uncertain, features of it can be found elsewhere

[56] Grégoire (1588, Vol. 1, pp. 267–268): 'Trium sephiroth superiorum sephira…en soph sive finito et termino…sephira prima…principio pater dicitur…secunda dicta apud cabalistas hocma sapientia…vocatur apud Christianos verbum Dei…tertia quae a cabalistis vocatur binah…intelligentia vocatur a Christianis spiritus sanctus.' Grégoire's nomenclature for the three superior *Sefirot* was extremely unconventional. The standard sequence was *Keter*, *Hokhmah* and *Binah*, while *Ein-Sof* ('Infinite') was not an individual *Sefirah*, but rather the ineffable aspect of the Divine above the *Sefirot*. Grégoire had taken this order from Carret (1554, sig. C1r–C2r). On Grégoire's general use of Carret, see Secret (1964, pp. 245 and 253, n. 14).

[57] Foscarini (1592, sig. B2r): '35 Ad idem referuntur tres midoth seu proprietates, et tres luces in capite sephiroth declaratae a iudaeorum [blank space for Hebrew text] prima lux orientalis, secunda lux clara, tertia lux clarificata, in quibus esse Deum unum, absque imperfectione aliqua, aut pluralitate fatentur'; Grégoire (1588, Vol. 1, pp. 265–266): 'Et ut abstrusiora illorum communicem, ii tres numerationes supremas, in nostro schemate tres gradus ultimi, iuncto humine Dei qui omnia fovet adnixus ut diximus est summitati scalae, dixerunt tres luces, de quibus sic scribit…id est, tres luces sunt: lux orientalis, lux clara, lux clarificata vel purificata. Et cum omnibus, his et omnium Deus unus, nec est ibi multiplicitas, absit enim hoc, et hae sunt in capite sephiroth.'

[58] Ibid., p. 266: 'Nam sicuti in Genesim cap. 1. super verba בראשית ברא אלהים beresçit bara elohim, per אלהים elohim intelligunt tres proprietates quas vocant מרות midoth, nempe patrem, filium et spiritum sanctum. Sic in anima per imaginem אלהים intelligunt memoriam, intelligentiam et voluntatem.' Compare with Galatinus (1561, p. 37): 'Et per consequens, iuxta veterum Talmudistarum dogma, necessario fatendum est, tres in Deo esse personas, quibus tres…Middoth, id est, proprietates attribuuntur: patrem scilicet, filium et spiritum sanctum.'

[59] On the importance of this passage to Trithemius's so-called 'magical theology' and his defence of 'true alchemy', see Brann (1999, pp. 128–129). See also Borchardt (1990, pp. 67–68) and Clulee (2001, p. 193).

[60] Foscarini (1592, sig. D1r–v): '139 Ad activam porro magicen duplex genus pertinet, naturale, et supernaturale: primum genus, vel pure naturale est, cuius elementa, herbae, lapides, animalia, fossilia, vel etiam mathematicum, quod numeros, pondera, mensuras, constellationes, activi, et passivi proportiones, tum inferiorum, et superiorum maritationem adiungit; secundum genus per sacra verba, imagìnes, et characteres procedit ignotos, unde goetia, et theurgia.' For the text of thesis 141, see above, n. 32.

[61] See, for example, the illustration in Dee (1564), at fol. 27r. On this illustration, see Clulee (2001, pp. 195–196). See also Clulee (2005, p. 211) and Jean-Marc Mandosio's essay in this volume.

[62] Foscarini (1592, sig. B3r): '47 Et memoriam, et intellectum, et voluntatem, his etiam applicare ineffabilibus mysteriis, secretissimisque sensibus, ex factis comparationibus, nexibus, correspondentiis, ex vi proportionis mirabiliter manantibus, nunc autem sub ipso emblematum cortice velatis.'

[63] See above, n. 58.

in the *Anacephalaeosis*. Foscarini, following a long tradition, identified memory, intellect and will as powers of the rational soul in thesis seventy-seven (Foscarini, 1592, sig. C1r), while 'ineffable' is the adjective he used to describe God and his miracles in theses four and twelve (ibid., sigs. A3v and A4r).

A puzzling element of this thesis is Foscarini's lexical switch to 'emblems.' Emblems were distinct from hieroglyphs, but Foscarini did not acknowledge this in thesis forty-seven. The cryptic concluding statement of the *Anacephalaeosis* was similar to the final line of a poem in Achille Bocchi's *Symbolicarum quaestionum*.[64] Foscarini recorded a copy of the 1555 Bologna edition of Bocchi's work in his inventory of 1600, along with the 1564 Lyons edition of Andrea Alciati's *Emblemata*. He may have already possessed Bocchi's emblem book in 1592, and thus been aware of the difference between emblems and hieroglyphs, when he prepared the *Anacephalaeosis*.

Nonetheless, the idea of concealing philosophical and theological knowledge, especially recondite knowledge of the kind Foscarini discussed here, was almost universally accepted in the Middle Ages and Renaissance. More importantly, thesis forty-seven connected the seven theses on the context of hieroglyphs and the remaining four on specific symbols, including Dee's monad.

Theses forty-eight to fifty-one drew once again chiefly on Dee's *Monas*. Thesis forty-eight studied the composition of astronomical glyphs, affirming that,

> it is well known by almost everybody that all characters of astronomical signs and planets are derived from [blank space for the character for the moon] and [blank space for the character for the sun], with the addition of a cross. This abundantly reveals anagogy.[65]

The first sentence derived from the first sentence of theorem twelve of the *Monas*.[66] Dee referred to a cross as the 'sign of the elements' because in the illustration accompanying theorem ten he had equated the cross in the middle of his monad with the elements (Fig. 2).[67]

Thesis forty-eight also ignored Dee's reference to the 'hieroglyphic sign of Aries', which, Dee claimed, helped to form the 'hieroglyphic signs' of some planets. The likeliest explanation for this is that Foscarini based his thesis on both the opening sentence of Dee's theorem twelve and the illustration accompanying it. The illustration was a table of the eight astronomical signs for the five planets. It is possible to construct the astronomical signs for all the planets using, as Foscarini claimed, just the moon, the sun, and a cross (Dee, 1564, fol. 14r) (Fig. 3).

This was an example of Dee's application of *tziruf*, one of the exegetical 'keys' to his 'real Kabbalah', with the constituent parts of his monad being recombined to produce the signs of all the planets (Clulee, 2001, p. 181; 2005, p. 206; Walton, 1976, p. 120). Foscarini may not have recognized Dee's use of *tziruf* in a non-exegetical context, because Dee did not refer to it in the text of theorem twelve. It was consistent, however, with Dee's declaration in the preface of the *Monas* to apply the three exegetical 'keys' outside their normal field.[68] Foscarini's paraphrase of theorem twelve is another reminder of why he, like Capaccio and Khunrath, should have maintained the connection between the three 'keys' and 'real Kabbalah', rather than moving the 'keys' to the theses on the Kabbalah.

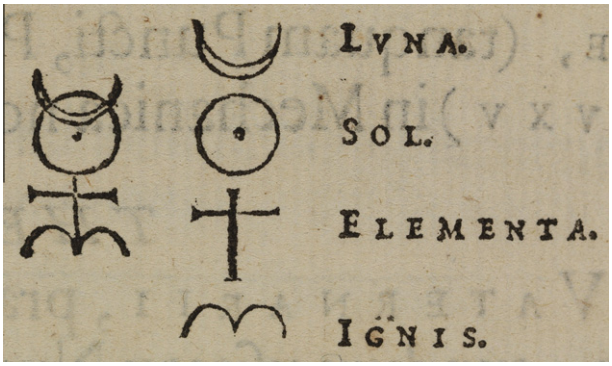

Fig. 2. The cross of Dee's monad identified with the elements in theorem ten of the *Monas*. By permission of the Wellcome Library, London.

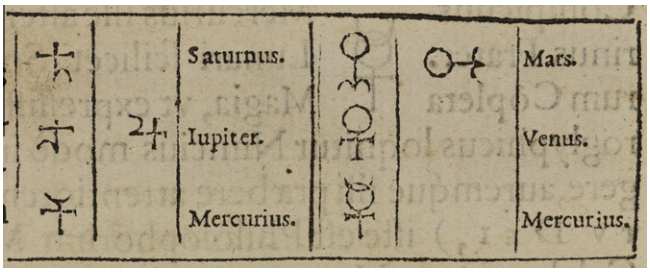

Fig. 3. Table illustrating Dee's view that all astronomical characters can be formed using a combination of the characters for the moon, the sun, the elements (a cross) and Aries. By permission of the Wellcome Library, London.

Foscarini's comment at the end of the thesis that the composition of all astronomical signs 'abundantly reveals anagogy' did not come from Dee's theorem twelve. 'Anagogically' was one of the senses in which Dee promised to explain the mysteries of his monad in the full title of the *Monas*,[69] while in the preface Dee referred to an unknown work in which, he claimed, he had discussed a monad and 'illustrated [it] with clear anagogical evidence.'[70] Earlier in the preface, Dee had stated that the 'mysteries' of the Hebrew alphabet taught 'the wise many great things (by a most absolute anagogy).'[71] More generally, 'anagogically' was, according to standard accounts of scriptural exegesis, one of the four ways to interpret the scriptures and one of the seven senses of scriptural interpretation that Foscarini listed in thesis twenty-two, concerning the types of exegesis.[72] In thesis forty-eight, however, Foscarini added this phrase possibly to replace any allusions to the 'ancient wise men [who were] magi', whom Dee named as the begetters of the 'hieroglyphic signs of the five planets' in theorem twelve. Such an

[64] Compare ibid., sig. G3v: 'Finis. Heic plus latet, ac legitur'; Bocchi (1555, p. 5): 'Prosperus os potuit, non mentem pingere Achillis./ Res minimo pingi maxima in orbe nequit./ Pura tamen mens ipsa potest comprendere mentem. Qui sapit, heic plus intelligit, ac legitur.'

[65] Foscarini (1592, sig. B3r): '48 Quod autem omnibus fere perspectum est, omnes signorum astronomicorum characteres, et planetarum, ex . . . et . . . cruce adiuncta derivari; id non minimam prae se fert anagogiam.'

[66] Dee (1564, fol. 13v): 'Antiquissimi sapientes magi, quinque planetarum, nobis tradidere notas hieroglyphicas, compositas quidem omnes, ex lunae vel solis characteribus, cum elementorum aut arietis hieroglyphico signo.'

[67] On this illustration, see Clulee (2001, pp. 178–180). The 'elements' here refer to those of earth, air, fire and water.

[68] See above, n. 17.

[69] Dee (1564, fol. 12r): 'Monas hieroglyphica . . . mathematice, magice, cabalistice, anagogiceque explicata.'

[70] Ibid., fol. 7v: 'Deinque de adeptivo genere . . . licet ad parisienses, sua monade peculiari (anagogica apodixi illustratum) altas [res] scripserimus.'

[71] Ibid., fol. 5r–v: 'Dum tamen, quo sese ad omnem literarum et nekudoth generationem, et quam mirabili accommodent artificio, apte a sapientibus considerantur, maxima, perpluraque (absolutissima anagogia) illos edocent mysteria.'

[72] Foscarini (1592, sig. B1r): '22 Huc item referendae variae ipsorum expositiones, quae ut plurimum per literales, seu historicos sensus, allegoricos, typicos, physicos, morales, anagogicos, et mysticos assignari solent.' On 'historical' as a gloss for 'literal', see Smalley (1969, p. 214).

Fig. 4. The 'uterine brother' of the character of Mercury. By permission of the Wellcome Library, London.

Fig. 5. The 'small tips' of Aries to be added to the 'uterine brother' of Mercury. By permission of the Wellcome Library, London.

Fig. 6. Dee's monad. By permission of the Wellcome Library, London.

Fig. 7. The constituent parts of Dee's monad. By permission of the Wellcome Library, London.

addition would also have prepared the reader for the religious dimension of the next thesis.

Thesis forty-nine identified a singularly powerful hieroglyph:

> But because it contains the most secret energy, order and node of the whole universe, the character of Mercury, with small tips in the form of a semicircle attached to the bottom of the cross, is the symbol of Mercury, the god of wisdom, and of the word of God, in whom have been concealed all treasures of the most profound wisdom and knowledge.[73]

This hieroglyph is Dee's monad. The 'character of Mercury', to which the small tips were added, was what in theorem thirteen Dee identified as the 'uterine brother' of Mercury and '(by God's command), that most famous Mercury of the philosophers, the microcosm and Adam' (Fig. 4).

The 'small tips in the form of a semicircle' completing this symbol were those that Dee had identified in theorem ten as forming 'the symbol of the zodiacal division of Aries.'[74] In theorem eleven he called the symbol 'the mystical sign of Aries consisting of two semicircles joined together at one point.'[75] Dee had included an image of this symbol of Aries in the text of theorem ten (Figs. 5 and 6).

This 'Mercury of the philosophers' was fundamental to Renaissance alchemy. It played an important role in many alchemical transformations, as 'prime matter', part of the philosophers' stone or even the stone itself.[76] In the *Monas* Dee linked this Mercury to alchemy by describing in the remainder of theorem thirteen, albeit obliquely, the difficulty in producing the 'sun of the philosophers', or gold (Dee, 1564, fol. 14v). The diagram that accompanied the description showed the individual parts of Dee's monad in a sequence that reflected 'the principal monadic anatomy of the whole [subject of] inferior astronomy',[77] another term for alchemy.[78] Dee even incorporated a passage from the *Tabula smaragdina* (Clulee, 2005, p. 205) into theorem fourteen. The *Monas* was replete with alchemical ideas and allusions.

Yet in thesis forty-nine Foscarini did not hint at the alchemical significance of either the symbolism of the Mercury of the philosophers or Dee's complete monad. He instead styled the monad 'the symbol of Mercury, the god of wisdom, and of the word of God.' By describing Dee's monad as the symbol of the 'word of God', Foscarini linked the monad to the Creation. In thesis seven of the *Anacephalaeosis*, Foscarini stated—like every theologian before him—that 'the world was created through the word [of God].'[79] Foscarini had already implicitly made such a connection between the monad and the Creation by placing it in the context of the seven introductory theses that established the act of creation as a numerological progression producing bodies in geometrical shapes.

While Foscarini's claim about the 'treasures' of the monad was not a verbatim quotation from the *Monas*, it was in keeping with the tone of the work, especially when viewed in the context of Dee's grandiloquent comments regarding the power of his symbol.[80] In the first part of thesis forty-nine, Foscarini marginalized

[73] Foscarini (1592, sig. B3r–v): '49 Sed quod secretissimam continet, totius universi vim ordinem, ac nexum, character Mercurii est, parvis apicibus in semicirculi formam in inferiore crucis parte annexis: sanctissimi Mercurii Dei sapientiae, et Dei verbi symbolum, in quo omnes thesauri sapientiae, et scientiae profundissimae sunt absconditi.'

[74] Dee (1564, fol. 13v): 'Dodecatemorii arietis, omnibus est notissima, quae est in astronomorum usu (quasi acioaedes, acuminataque) figura [image of this symbol] ista.' For meanings of *dodecatemorion*, including the one that I have attributed to Dee here, see Tester (1987, pp. 27–28).

[75] Dee (1564, fol. 13v): 'Arietis nota mystica, ex duobus semicirculis, in communi puncto connexis, constituta.'

[76] Josten (1964, p. 165, n. 53). See also Clulee (2001, p. 206).

[77] Ibid.: 'Totius astronomiae inferioris, anatomia monadica, principalis.'

[78] Josten (1964, p. 165, n. 52). See also Clulee (2001).

[79] Foscarini (1592, sig. A3v): 'Mundus per verbum creatus est.'

[80] In the preface, for example, Dee claimed that practitioners who would learn something from his monad included the arithmetician, the geometer, the musician, the astronomer, the optician and those who studied weights (fols. 5v–6r).

the alchemical elements of Dee's monad, in particular the powers of the Mercury of the philosophers, in order to stress its religious function as the symbol for the *logos*. His generalized description of the secrets concealed in the monad suggests that Foscarini purposely omitted any reference to the alchemical sciences so as not to undermine the religious function of the symbol. This was also a sensible tactic in view of the censure of alchemy in the Carmelite *Constitutiones* of 1586. Even so, the context in which Foscarini presented Dee's monad, namely the seven introductory theses on hieroglyphs, contained overtly alchemical elements.

In thesis fifty, Foscarini described another way of constructing the monad:

> The same [symbol as described in thesis forty-nine] appears when it is produced from the characters of Aries and Taurus, with a cross attached in the middle.[81]

Foscarini based this thesis on the illustration to, rather than the text of, Dee's theorem fifteen, or so it seems, given that it was only in the table that Dee used together the labels Taurus and Aries to describe the upper and lower parts of his monad (Fig. 7).

In theorem ten, Dee presented the 'symbol of the zodiacal sign of Aries' as two conjoined semicircles, a point that he reiterated in theorem eleven, but in thesis forty-nine Foscarini did not describe the lower part of the monad as (the symbol of) Aries, instead preferring the label 'small tips in the form of a semicircle.'

This indicates that Foscarini followed the illustrations rather than the text of the *Monas* when preparing theses forty-eight to fifty. Thesis forty-eight derived chiefly from the table of astronomical signs in theorem twelve. The 'character of Mercury' of thesis forty-nine was the Mercury of the philosophers illustrating theorem thirteen, and thesis fifty is a paraphrase of the diagram in theorem fifteen. Moreover, in thesis fifty, Foscarini did not include or adapt text from Dee's theorem fifteen, such as the section on the 'Kabbalistic anatomy' of the monad regarding the 'the exaltations of moon and sun.' Once again, Foscarini marginalized the alchemical aspects of Dee's monad, despite situating it in a context—theses forty-one to forty-seven—that contained overtly alchemical elements.

The final thesis on hieroglyphs, fifty-one, drew together the two different ways of constructing the monad presented in theses forty-nine and fifty:

> Indeed the winged character of Mercury, both that produced by Aries, Taurus and a cross, and that produced by [blank space for the character for the moon], [blank space for the character for the sun] and a cross, reproduce the same sign, assume the same meaning and are equivalent to each other in every respect.[82]

This thesis is notable for Foscarini's term for the monad (*character talareatus*). The word *talareatus* may be Foscarini's invention—it does not feature in Renaissance or modern Latin dictionaries, or in the *Monas* itself. Foscarini coined it, presumably, from the Latin noun *talaris* (meaning 'winged sandals'), an allusion to the winged sandals that the god Mercury, the messenger of the gods, wore according to classical mythology. Many scholars in this period appropriated Dee's distinctive monad without acknowledging its provenance, but none spoke of it as 'winged.' Capaccio referred to the 'Figure of Mercury, called Monad',[83] while the Jesuit Athanasius Kircher, in his *Oedipus Aegyptiacus* (1653–1655), labelled his version of the monad the 'Hermetic Cross' (*Crux Hermetica*).[84] Foscarini's 'winged Character of Mercury' is, therefore, one of the earliest alternative names for Dee's monad to appear in a printed work.

7. Hieroglyphs after the *Anacephalaeosis*

Foscarini's interest in hieroglyphs continued after the disputation of 1592, albeit less prominently than in the *Anacephalaeosis*. Dee's *Monas* did not appear in Foscarini's 1600 inventory of his personal library. The inventory records only works that Foscarini possessed on 6 February 1600, so the *Monas* may have been in another location, borrowed perhaps by another friar. Other members of his convent, but not Foscarini, for example, possessed copies of the *Anacephalaeosis* when they compiled their inventories. The absence of the *Monas* is noticeable not just because of its importance for Foscarini's theses on hieroglyphs, but also because other works central to the compilation of the *Anacephalaeosis*, such as Poliziano's *Panepistemon* (written 1490–1491) and Francesco Barozzi's *Cosmographia* (first published in 1585), were present in the inventory. The *Monas*, despite its references to alchemy and the mysterious powers of the monad, was never placed on the Index of Prohibited Books, so Foscarini would not have felt that he had to omit it from the inventory. This is not to say that religious orders did not disapprove of it, though. The word 'prohibitus' appears in ink on the frontispiece of the copy of the *Monas* held in the Biblioteca Casanatense in Rome, which formerly belonged to the library of a Dominican convent.[85]

In February 1600, Foscarini possessed just one work devoted to hieroglyphs, the 1595 Lyons edition of Giovanni Piero Valeriano's *Hieroglyphica*, first published in 1556. He did, however, possess copies of two of the most popular emblem books of the sixteenth century, Alciati's *Emblemata* and Bocchi's *Symbolicarum quaestionum*.

Hieroglyphs did not feature in either of Foscarini's next two publications, the *Meditationes* of 1611 and the *Institutionum omnis generis doctrinarum tomis VII comprehensarum Syntaxis* (*Syntaxis of the Institution of all Learning*) of 1613. The *Syntaxis* was a blueprint for a planned seven-volume encyclopedia of all knowledge.[86] In the *Institutiones* Foscarini intended to include, in a treatise 'on the sympathy and antipathy of natural things', sections 'on the transmutation of metals, the philosophers' stone and the possibilities of the chemical art',[87] which was alchemy in all but name. The Kabbalah, on the other hand, became simply 'a universal art…described by Ramon Lull',[88] while the words 'hieroglyph' and 'Egyptian' (or variations of them) did not appear at all.

Despite the absence of hieroglyphs from the *Syntaxis*, Foscarini's final published works suggested that his passion for them had not died after the publication of the *Anacephalaeosis*. Hieroglyphs featured in the text of the *Trattato della divinatione naturale cosmologica* (*Treatise on natural cosmological divination*), Foscarini's work on weather forecasting,[89] in the form of two references to Horapollo's *Hieroglyphica* (Foscarini, 1615b, pp. 103 and 195). Foscarini did not mention hieroglyphs in the *Lettera*, but that did not mean that he

[81] Foscarini (1592, sig. B3v): '50 Idem prae se fert, qui ex arietis, et tauri characteribus resultat, annexa in medio cruce.'

[82] Ibid.: '51 Ipse enim Mercurii character talareatus, tum qui ex ariete, et tauro, et cruce, quique ex…et…cruceque resultat, eandem, et figuram representant, et recipiunt significationem, et omnibus sibi invicem aequivalent.'

[83] Capaccio (1592, fol. 5r): 'Come per esempio nella Figura di Mercurio, che Monade addimandano, mostrar la chiarezza in tutte le professioni.'

[84] Forshaw (2005, pp. 257–258). On this and other unacknowledged appropriations in this period, see ibid.

[85] This information, and a confirmatory scan of the frontispiece, were kindly supplied by Sabina Fiorenzi in an email of 18 October 2007.

[86] On this work, see Caroti (2003).

[87] Foscarini (1613, pp. 57–58): 'Tractatus sexti, de partibus subiectivis corporibus naturalis, qui erit de sympathia et antipathia rerum naturalium, erunt capita duo…Secundum…de metallorum transmutatione, lapide philosophorum, et artis chymicae possibilitate.'

[88] Ibid., p. 63: 'Deque constitutione et censura artis eius universalis, qualem fertur aduvenisse et descripsisse (quamus admodum obscure) Raymundus Lullus Hispanus.'

[89] On this work, see Cirino (2010) and Vasoli (2002).

thought them irrelevant to the Copernican hypothesis. In a letter to Galileo—written at some point between the publication of the *Lettera* in spring 1615 and its absolute prohibition in March 1616—he outlined his next work on the Copernican hypothesis, which would, he said, take the form of a dialogue.[90] In this work Foscarini planned to defend the Copernican hypothesis using 'a very great number of reasons and arguments',[91] including arguments 'from many hieroglyphic signs of the Egyptians.'[92] In his mind, hieroglyphs, possibly such as Dee's, which incorporated so many astronomical signs, had a part to play in the defence of the Copernican hypothesis.

8. Conclusion

The eleven theses on hieroglyphs in the *Anacephalaeosis* reveal much about Foscarini's intellectual interests and his manipulation of sources when preparing the disputation booklet. Perhaps the most surprising aspect of the theses is not so much Foscarini's use of Dee's *Monas*, which has been called 'possibly the most obscure work ever written by an Englishman' (Vickers, 1979, p. 308, n. 17), as the central role that it played in six of the eleven theses. Dee's perplexing, multilayered work will probably never be completely understood, thanks to its wilfully esoteric character,[93] and it is unlikely that in 1592 Foscarini picked up every allusion in it, especially those to the alchemical arts. This may explain why Foscarini based theses forty-eight to fifty chiefly on the illustrations to, rather than the text of, theorems twelve to fifteen. Yet there can be no doubt that Foscarini thought highly of Dee's hieroglyph, making it the 'symbol of the word of God, in whom have been concealed all treasures of the most profound wisdom and knowledge.' His willingness to engage with the hieroglyph distinguished him from contemporaries such as Capaccio, who took material from the preface to Dee's work, but not the theorems themselves.

The first seven theses on hieroglyphs indicate why Foscarini favoured Dee's hieroglyph. Using Dee's comments in theorem two on the point, straight line and the circle as a point of departure, Foscarini outlined a view of creation and the arrangement of the universe based on a numerological progression and geometrical shapes respectively. Trithemius's correspondence on alchemy and magic, from which Foscarini also took theses on the Kabbalah and magic, seems to have informed Foscarini's comments on the monad, binary and ternary in thesis forty-three. This thesis, coupled with those on the Kabbalah, magic and grammar cited above, suggests that Foscarini was an admirer of Trithemius in 1592. Dee was also a great admirer of Trithemius (French, 1987, p. 52), and incorporated into the *Monas* the same numerological progression that Foscarini used as the basis for thesis 141.[94] In the absence of definitive evidence, we cannot say whether Foscarini read Dee or Trithemius first, but his use of Trithemius in theses other than those on hieroglyphs makes it likelier that he was drawn to the *Monas* after having obtained copies of Trithemius's *Polygraphia* and *De septem secundeis* (both of which he still possessed in 1600). In Trithemius and Dee, Foscarini saw the basis for a general definition of the subject and a specific, powerful hieroglyph.

Although the *Monas* was the main source for theses forty-eight to fifty-one, Foscarini was not an uncritical reader of Dee's work. He accentuated the Christian element of Dee's symbol at the expense of its alchemical and Kabbalistic dimensions, which he ignored. Foscarini did not even mention that the 'character of Mercury' in thesis forty-nine was the Mercury of the philosophers. Yet, paradoxically, he situated Dee's symbol in a context that contained overt alchemical and Kabbalistic elements. Trithemius originally examined the numerological progression in thesis forty-three in relation to the *Tabula smaragdina*, a core alchemical text, while the stations of the soul in thesis forty-five was a description of an alchemical symbol, notwithstanding Foscarini's assignation of this to Kabbalistic and Platonic sources. In thesis forty-six, Foscarini introduced Kabbalistic terminology into his description of the universe that Dee did not mention in the *Monas*. It has recently been argued that the *Monas* offered a spiritual interpretation of alchemy (Clulee, 2005). Foscarini introduced such a dimension to Dee's symbol by connecting it to both the *Sefirot* and the *Tabula smaragdina*. Although Dee referred to his three 'keys' and the 'Kabbalistic expansion of the quaternary' (1564, fol. 13r), Foscarini linked Dee's symbol to the Kabbalah in a different and more explicit manner than Dee via the reference to the *middot* and *Sefirot*.[95]

Given the influence of the *Monas* on the theses on hieroglyphs, its absence from the inventory of 1600 and Foscarini's later works is surprising. Foscarini's interest in hieroglyphs endured, even if the sources changed. As his outline of his proposed dialogue on the Copernican hypothesis shows, he still regarded hieroglyphs as a valuable intellectual resource over twenty years after the publication of the *Anacephalaeosis*. While his interest in the subject became more conventional, with references to Horapollo, rather than Dee, in his later works, the theses on hieroglyphs remain the fullest and most striking of Foscarini's considerations on that popular strand of Renaissance thought.

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[90] The original is held in the Biblioteca dell'Accademia Nazionale dei Lincei e Corsiniana in Rome, *Archivio Linceo 1*, fols 169r–171v, and was printed in Galilei (1890–1909, Vol. 12, pp. 215–220). On this letter, see Kelter (1992).

[91] Galilei (1890–1909, Vol. 12, p. 216): 'addurrò una grandissima selva di ragioni et argomenti.'

[92] Ibid.: '[si addurranno] oltre gl'altri probabili, che saranno cavati dalle allegorie profundamente nascoste nell'antichissime favole de' primi et più vecchi poeti, da' quali ogni filosofia hebbe principio, da oracoli di Dei gentili e di sibille e di altri, da molte note ieroglifiche de gl'Egittii, da molte imagini misteriose et altri attributi di Dei gentili, dal consenso di molti antichi et moderni filosofi.'

[93] Dee left no clues in his personal copy of the 1564 edition of the *Monas*, which is held in the University of Glasgow Library, shelfmark Sp. Coll. Hunterian R.6. 15. Sharon Lawler kindly confirmed the provenance of, and absence of manuscript annotations from, this copy in an e-mail of 18 February 2011.

[94] See above, n. 31–32.

[95] On other Christians who appropriated Jewish Kabbalah in this period, see Blau (1944), Secret (1964) and the essays in Dan (1997).

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