

Notes to Chapter 6

(1) C.R. Ch. 4, pp. 11-12. "Her Majestie very graciously took me to her service at Whitehall before her Coronation" (on the recommendations of Pembroke and Leicester) "At which tyme her Majestie used these wordes unto the said Lordes `Where my brother hath given him a crowne, I will give him a noble.'" Dee however, as will appear, received little material benefit from Elizabeth—similarly his friend, another scholar—Ascham, also very close to the Queen, perhaps more so than Dee, and holding an official position at Court, only received from her a salary of £20 p.a. until his death in 1568.

(2) C.R. Ch. 5, p. 21. It took place on the 14th Jan. 1559, which cannot be said to have been an unfortunate recommendation. Dee's services as a prognosticator do not on the whole appear to have been extensive, and the verdict is probably exaggerated at least as far as he is concerned, that "It was Queen *Elizabeth* and her famous Astrologer *John Dee* who did more than any persons to popularize astrology. Under them it became more or less of a court fad." (C. Camden Jr., *Astrology in Shakespeare's Day*, p. 45, Isis XIX, 1933, 26 ff.)

(3) C.R. Ch. 4, p. 13. (This offer was not perhaps made until 1571, Dee records it among a list of preferments promised to him by Elizabeth.) If Foxe's accounts are accurate, Dee's experiences in filling this function as Bonner's Chaplain had been obviously far from encouraging. In 1564 (Dec. 8) after he had escorted the Marchioness of Northampton back from Antwerp the grant of the deanery of Gloucester was actually made to him but was soon after revoked (C.R. p. 12).

(4) An MS of Bacon's *De Scientia Perspectiva* (Magdalen College Pepys Lib. (1207) which he obtained at Oxford in 1559 is the last record we possess of a visit by Dee to either of the English Universities.

(5) f. 268 r-v Note to Euclid Bk. X, prop. 53. Some scribbled notes of Dee. Cotton MS Vitell. C. VII, f. 274 et seq may represent some portion of this treatise, but they are not clear written, complete or in anyway prepared for the press or MS reader, as is the treatise that precedes it in the MS. Moreover, this *de trigono circinoque analogico* (f. 260-273) Dee dates as written 1565 (vide infra Ch. VII, p. 624; n. 28, p. 335). They are possibly extracts from the work of 1559 which Dee intended to employ in his notes in the *English Euclid*. They deal with various problems concerning irrationals and proportions. Dee's approach is entirely geometrical—he seeks to construct lines that will be equivalent to quantities that could not be exactly expressed in numbers. His speculations seem clearly to derive from and relate to Euclid's tenth book.

(6) Reissued, with Dee's name, 1579, 1582, 1590 etc. subsequent revisers to Dee were John Mellis, Robt. Norton, Robt. Hartwell, Dee's revision is usually dated later than this (e.g., Cooper, *Ath. Cantab.* Vol. I, p. 176, gives 1583, and the D.N.B. article on *Recorde* dates Dee's Revision as 1588, but the title page of 1561 edition carries the words "now of late overseen and augmented with new necessarie additions" below which stand the initials I.D.—which seems conclusive.

(7) Of the number of notices of re-estimates that have recently appeared, probably the fullest are: *Robert Recorde's Mathematical teaching, and the Anti-Aristotelian movement*, F.R. Johnson and S.V. Larkey (H.L.B. n. 7 April 1935) that in the Johnson's *Astronomical thought in Renaissance England*, p. 124 et seq, and F.M. Clarke's *New Light on Robert Recorde* (Isis VII, 50-70, 1926).

(8) Tonstall 1474-1559 had been in favour under Mary but was excluded from his benefice by Elizabeth—it was perhaps one of those offered to Dee.

(9) *A booke named Tectonicon*, 1556. To the Reader.

- (10) *The Whetstone of Wit*, 1558, Preface Cj^f.
- (11) E.g., *Ibid*, Cj^{r-v}.
- (12) *The Castle of Knowledge*, 1556, Preface a iij^f.
- (13) His well known reference to it occurs in *The Castle of Knowledge*, 1550, p. 165, where the Master sharply rebukes the pupil for mocking it as "a vaine phantasie," for when he has studied further he may be "as earnest then to credite as you are now to condemne it." (The passage is quoted in full with comment in Johnson, *Astronomical Thought*, pp. 126-128.)
- (14) Gunter, *Early Science in Oxford*, Vol. I, pp. 107-108, reproduces about 50 items from it, but does not supply any source reference. Like Dee, also, Recorde's antiquarianism led him to collect such deeds and chronicles as he could gather from dispersed monastic libraries; a letter from the Privy Council in 1560, among the owners of such ancient monuments of British history lists "the executors of Dr. Robert Recorde" (quoted Wright, *Dispersal of the Monastic Libraries*, p. 213).
- (15) The D.N.B. mentions editions in 1540, 42, 43, 49, 51, 52, 58, 61, 70, 71, 73, 82, 90; 1600, 07, 10, 18, 23, 36, 40, 48, 52, 54, 58, 62, 99. To these may be added from the Bodleian catalogue of 1575, 96, 1615, 40, 42, and a second of 1602. The earliest copy in the Bodleian is 1542 (and in the B.M. 1543) but there was at least one earlier edition as both these contain the section "Nombrynge by the hande newly added."
- (16) G.A. 1543. 47^v-48^v; it depends on the equivalence, in modern notation, (10-a) (10-b) + 10 (a-(10-b))=ab).
- (17) As in Edward Worsop's work on surveying, *A Discouerie of Sundrie Errors*, 1582.A2^v or Hylle's, *Arte of Vulgar Arithmeticke*, 1600, which defending mathematics "as that without which no man can ever have right passage nor anie entrie into learning divine or humane," refers its readers for their full satisfaction on this point to the prefaces of "that notable learned man (woorthy of eternal memory) M.D. Recorde," and to "that notable preface of *M. John Dee* prefixed to Euclid" (preface; unnumbered page).
- (18) G.A. 1582 Epistle to Robert Forth Aij^v-Aij^f.
- (19) G.A. 1582 Pref. to Ed. VI Avj^v "as Berosus doth testifie, Saron that was the third king over all the West parts of Europe, for to bring the people from beastly rage to manly reason did erect schools of liberal Artes." Here were taught the subjects of the trivium (for tongues) Arithmetic and Geometry (for practical purposes), Astronomy (for its revelation of God) and Music (for its moral effects) "And as these sciences did increase so did virtue increase thereby: Again as those Sciences did decay, so virtue lost her estimation, and consequently was little in use."
- The source of this is the Pseudo-Berosus, of Annus de Viterbe (*De antiquitate Italiae ac totius orbis*, 1554, Vol. I, p. 200); "His temporibus regnavit apud Celtas Sarron, qui ut contineret ferociam hominum tam recentium publica literarum studia instituit" etc.), his mythical account of early European history had considerable influence in England at the time—thus Bale follows him in tracing the genealogy of Sarron from Japhet, and thence onwards to the early British kings (see T.D. Kendrick, *British Antiquity*, 1950, p. 70) from him it seems probable Dee imbibed his reverence for and perhaps the greater part of his knowledge of the Druids. (For the equally extensive influence on French writers, as on Guy le Fèvre de la Boderie, see A.M. Schmidt, *La poesie scientifique au XVIème siècle*.)
- (20) G.A. 1561, XVI. This ramistical pronouncement is probably contributed by Dee as it occurs in the newly added second part, the second on "Rule of Fellowship." (Similarly in the

Monas he declares that although he may cite the ancients as witnesses he does not rely on them as authorities.) There are, however, plenty of parallels undoubtedly from Recorde's pen, which reveal this as a favourite theme of his, as the little rhymed colloquy at the beginning of the course, in the opening discussion "of the profyte of Arythmetyke."

"S(cholar): And I to your auctorite my wittes do subdewe:

Whatsoever you say, I take it for Trewe.

M(aster): Though I might of my Scoler some credence

requyre, yet except I shew reason,

I do not it desire."

(G.A. 1543, 5^v). His *Castle of Knowledge* is similar in one of its most important features, a critical analysis of the errors found in the *Spheres* of Sacrobosco and Proclus—the two standard university astronomical texts of the day.

(21) G.A. 1543 to Rychard Whallege (unpaginated epistle). This as the essential distinction between man and lower animals is developed in lengthy doggerel verses (considerably enlarged by Dee in his revisions) showing how one or other of these equals or surpasses man as regards each of the other faculties and abilities. Although this position does not appear explicitly in the Platonic dialogues (the myth in the *Protagoras* 318e records that Epimethis squandered all the special qualities on the beasts and Prometheus thereupon gave men the divine gifts of fire and wisdom) the citing of this criterion—possession of the number concept—as that which particularly sets man with his divinely illuminated mind and immortal soul, apart from the brute creation (language and even logic, as exemplified in the behaviour of the stoic tracking dog, automatically, or by nature, behaving according to inference from syllogistic reasoning, at a cross roads—might be ascribed to them, but in this alone were they defective) is recurrent among later Platonic thinkers. Thus Bacon, following Isidore's *Treatise on arithmetic*, "Take from the world computation and blind ignorance enfolds all things, and men cannot differ from other animals, which are ignorant of the method of calculation" (*Opus Majus*, Pt. IV, ed. cit. a^v, I, p. 198). Thus Cusa states that numerical computations specifically are the work of that Reason which makes men superior to brutes, for counting, weighing and measuring are operations inaccessible to animals (*de Idiota* dial I). Pico takes up the same position for "Scribet Plato in Epimenide [a lost dialogue, but one of the ten Diogenes Laertius lists as spurious by common consent], inter omnes liberales artes et scientias conteplationes, praecipua maximeqz divinam esse scientiam numeradi. Quaerens item cur homo animal sapientissimum. Respodet quia numerare novit. Cuius sententiae et aristoteles meminit in problematis. Scribet Abumasar verb_ fuisse Avensoar, Babylonij, e_ omnia nosse, qui noverat numerare" etc. (Apology, prefixed to *Conclusiones Nongentae*, 1532, p. 14; the B.M. copy has a number of notes in a hand resembling Dee's, making various cross references to Bacon, Alkindi, etc., this passage and some others are marked by a memorandum sign—a hand with a ruff—which Dee frequently used). The theme is taken up by other English sixteenth century writers. A striking instance is Humphrey Baker's *Well Spring of Sciences* (1562) (revised edition cited here, 1574) which has many close affinities with the *Ground of Artes* and Dee's *Preface*. Arithmetic, Baker claims, is a divine knowledge imprinted on the mind a priori, "For the skil hereof is well knowen immediatly to have flowed from the wisdome of God into the harte of man" at his creation (Aij^v); and, Baker argues, "unlesse by nature wee have some feelinge and vnderstandinge therein, we are no beeter the Beastes, and in this respecte worse, for that we retaine not that whereunto wee are as specially borne as naturally they doo, some to runninge, some to smellinge, some to hearinge, some to flying, and some to swimming. Take away Arithmetick, wherein differeth the sheppards fro the sheepe, or the horsekeeper fro the Asse? Surely but onely in shape and figure, which as the learned affirme is a very slender cause of difference." (Aij^v) The connection between the use of this criterion and Renaissance neo-Platonism is brought out clearly by Elyot in his dialogue *Of the Knowledge whiche maketh a wise Man* (1533) where, in the person of Plato, he expounds an ontology which is almost identically the same as that which Dee lays down as the basis for his argument in the *Preface*: "of all that which bereth the name of a thyng/there be two kyndes, one hath no bodye & is ever stedfast and permanent/the other hath a body, but is ever moveable & vncertain; The first, bicause it may be vnderstade only/It is called intelligible. The second bicause it may be felt by senses is called sensible....Moreover of that which is called Intelligible there is the

fyrst & the seconde. In the fyrste is that portion of diunitie, whiche is in man, wherby he is made to the image and similitude of god. In the other be nombres and figures. Of this beastes have no parte, neyther of the fyrste nor yet of the seconde....[for] though an ape or other like beaste/seem in takyng of thinges to obserue an ordre as it were in nombrynge/yet if it be well considered/It shall appere that it is by an imagination ingendred of custome, and not by nombrynge." (p. 32^r-v=79-80).

(22) Dee also develops similar claims in the *Preface*, on the authority of Aristotle. The reference is to the Nicomachean Ethics, particularly V, 3, 1 to V, 8, 5, where Aristotle finds that since "Justice" involves "the equal," and "proportionate" (V, 3, 8: "Justice is therefore a sort of proportion, for proportion is not a property of numeral quantities only, but of quantity in general, proportion being equality of ration and involving four terms at least") he can best express himself on this subject in mathematical *metaphors*, but thereafter proceeds in fact to explore both the abstract concept of Justice and its social applications, *through* detailed examination of a variety of arithmetical and geometrical rations, using numbers and diagrams.

(23) G.A. (1582 ed.) Ded. to Ed. VI, A7^r-A8^r.

(24) Ashmole MS 242 f. 160^v-156^r (this item is reversed compared with the others in the volume) is a rough draft of a treatise on fractions by Dee explaining the basic operations that may be performed with them; it is not identical except in outline with the presentation in G.A. nor is it in dialogue form, but perhaps represents Dee's notes for his additions. But the extent of Dee's augmentation has not been clearly determined. The B.M. possesses no edition of the *Ground of Artes* between those of 1543 and 1561, the difference between which are the basis for these remarks. That there was a new edition, embodying alterations produced in Recorde's lifetime, and by himself, is apparent from the fact that the 1543 edition contained an epistle "To Master Richard Whalley" only, before the first dialogue (which in 1561 has been entitled "To the loving Reader") but a much longer prefatory epistle addressed to *Edward VI* was in existence from Recorde's hands not printed 1561, but found in 1581 ed. A.3^v-A8^v. Thus although Dee's additions must chiefly belong to the second part of the work (not in the 1543 ed.), the extent of them cannot be known from this data. This part consists of an extended treatment of fractions, of the rules of Alligation and Falsehood, and arithmetical treatment of the provisions of various statutes. A doggerel quatrain now placed on the title page—subsequently removed—seems to be in Dee's vein; he had a weakness for indulging in such effusions, and provides a typical specimen of his efforts in this genre:

"All youth and Elde that reasons Love
Within your breasts will plant to trade,
Of Numbers might, the endless store
First understand, then farther wade."

A third part not in dialogue form in editions after 1561, is also Dee's, for though Mellis (1582) treats this as Recorde's work, the text points out where it departs from Recorde's methods (e.g., Ch. 3, Ooij^v). This covers weights and measures, rule of three, and specifically commercial uses of maths, in buying, selling, interest, currency exchange, measures of volume, weight, etc.

(25) Dee himself keeps in the background—with the possible exception of a passage in which the master breaks forth in a complaint against his "Envious Detractors," only to be encouraged in his course of study by the Scholar, "I beseeche you to stayer nothinge for their perverse behaviour"—the "Master" remains Recorde's creation, probably Recorde himself (G.A. 1561, pt. 2, *Rule of Fellowship*).

(26) E.g., that of measuring ground. The Assize of Bread and Ale (12th C.—an assize of Henry II to be worked out by inverse proportion) for which Dee corrects the computations of the contemporary statute book, gives a new table for its application based on "an anci_t copie 200 yeare old which I have" which he says is more accurate than the version in general use. He then

propounds questions to the scholar, on it such as "When the price of a quarter of wheat is 2s. the farthing whyte loaf shall way 68s. then I demande what shall such a lofe way when the quarter of weate is sold for 3s." (G. of A. 1561, f.Ui^v et seq.)

(27) G.A. 1561 Q.vi^v.

(28) He adds a note to editions after 1570 (G.A. 1582 Yyvi^v) "J.D. to the earnest arithmetician" exhorting them to proceed to Geometry which has lately been made available in English and for which Recorde's work is a sufficient preparation, for this science, Dee wrote,

"Of late hath turnde his Greekish face
By English filth, which aye will last,
The famous Greeke of Platos lore
Euclide I meane Geometer
So true, so playne, so faught with store,
(As in our speach) is yet nowhere."

(29) Feb. 16, 1563. C.S.P. Eliz. vol. 27, item 63. Printed N.Q. 5th ser. XI, 1879, pp. 401-402, 422-423, ed. F. Bailey; also in Philobiblon Soc. *Hist. Misc. I*, 1854, Item 18 ed. R.W. Grey.

(30) Cooper, *Athenae Cantab.*, Vol. II, p. 499, states that Dee was in Venice in 1563, where he met Thomas Ravenna (author of *De Vita Hominis ultra 120 annos protrahenda*—a subject in which Dee displays some interest, and which is made much of in the little work of Bacon's he annotated). No evidence is given for this assertion, though in immediately succeeding years Dee was in receipt of letters and books from Italian scholars. (Dee claims acquaintance with a Ranconentus—a possible basis for Cooper's statement—but explicitly states that he knew this person, who is in any case not the same man as Tommasso Rangorii or Philologus, while at the university of Paris in 1550: C.R. Ch. 2, p. 8.) The fact of such a visit is proved however, by the B.M. copy—556, b, 20—of Jacopo Silvertre's *Opus Novum*, Rome, 1526 (called in Dee's booklist "Opusculum decifris, de ratione occulte scribendi") which is inscribed on the title page "Joannes Dee 1563: Junij 1- Venetijs."

(31) *Vita*, p. 19.

(32) Headed "de Canero Curando"; Dee's transcript is Ashmole MS 1788, f.134 et seq; written from Vienna, directed "Nobilitate, Doctrina variarumqz et abstrusarum verum peritia Excellentissimo viro Domino D. Joanni Dee Londiniensi Amico & familiari meo plurimum delecto."

(33) Who is one of the five Christian Emperors Dee declared had invited him to enter their service (C.R. Ch. 2, p. 8) and whom Dee addresses in his preface as a personage with whom he is already acquainted, though his only direct mention of a visit to the Empire there is to the effect that he spent some time in Presbourg, Sept. 1563.

(34) Mentioned C.R. Ch. 3, p. 10, dated 28 May, 1563 (preceding quotation from letter to Cecil as printed Bailey vide n. 28). It has sometimes been claimed that Dee's visits to the continent were of a secret political nature: e.g. by R. Hooke, or Lilly, who asserts "to be serious, he was Queen Elizabeth's Intelligencer and had a salary for his maintenance from the secretaries of state" (*Life and Times*, p. 100; cp. Davenport, *Dictionary of Biography*, 1831, p. 219; Brunat, *Nouv. Biog. Gén.*, 1855, p. 348 etc.). While there exist certain minor reports of a later date, by Dee, on counter-reformation activities on the continent, and of preparations by Jesuits for penetrating into England, these seem to be isolated cases where Dee has accidentally come across information that he thinks may be of interest to the authorities at home (vide infra, Ch. 9, n. 201). There is no evidence that Dee ever did, or was expected to do, anything more in this respect, when abroad, than the usual patriotic private traveller of the time, who had personal contacts with members of the

government. Nevertheless, John Bailey, reprinting his letter to Burleigh of 1563 (N.Q. 5th Ser. XI, 1879) comments (p. 401) "It is pretty evident that his missions had public aims in view."

Dee's negotiations with foreign printers however seem an ample reason in themselves for this present journey. Difficulties in publishing specialised or esoteric works of the type he composed, in England, perhaps also account to some extent for the small body of his published works and the appearance of the *Monas* and later *de Superficierum Divisionibus* abroad. In the preface to the G.R.M. Dee complains of the many hundred pounds it would cost him to bring out his proposed sequel—even though in English—to that work; while Archbishop Parker wrote to Burleigh Dec. 13, 1572 of George Day (who issued the G.R.M. and *English Euclid*) "and loth he and other printers be to printe any lattin booke, because they will not heare bee uttred, and for that Books printed in Englande be in suspition abroad." (Quoted in notice of Day in *Gentleman's Magazine*, C11, pt. 2, p. 418.) In the next generation Fludd's Latin writings were published in Frankfurt, Oppenheim and Gouda, and his explanation of this perhaps throws some light on Dee's difficulties: "I sent my writings beyond the seas because our homeborn printers demanded of me five hundred pounds to print the first volume, and to find the cuts in copper, but beyond the seas it was printed at no cost of mine, and as I could wish; and I had sixteen copies sent me over, with forty pounds in gold, as an unexpected gratuity for it." (Quoted D'Israeli, *Amenities of Literature*, Vol. III, p. 240.)

(35) Johannes Trithemius, 1462-1516, made Abbot of Spanheim at age of 22 under patronage of Emperor Maximilian, friend of Agrippa and Reuchlin. Like Dee he was a man of unquestioned piety and extensive learning, built up a vast library, and had some interest in mechanical effects (Letter to Carmelite Arnoldus Boetus). He was popularly accused of necromancy—he certainly compiled a catalogue of magical works—said to have devils in his service, to have raised the spirits of ancient heroes for the Emperor, to be supplied with food fetched in or out of season by his spiritual attendants etc. (On this side of him see Peuckert, *Pansophie*, p. 31 et seq). But he seems to have regarded "magic" merely as an effect though also an intrinsic part of the mystical religiosity he expounded, in which the mind ascends to effect a union with God; his philosophy he states is in its aim and methods primarily celestial not earthly; Thorndyke (cp. cit. vol. VI, 438-439) quotes a letter to de Ganay, "Study generates knowledge; knowledge bears love; love likeness; likeness communion; communion virtue; virtue dignity; dignity power; and power performs the miracle. This is the unique path to the goal of magic perfection, divine as well as natural, from which all superstitions and diabolical wizardry is totally separated and confounded." Similarly he gave mystical expositions of alchemical processes, in terms of the virtues of the numbers 1, 2, and 7.

The *Steganographia* though it had its defenders, enjoyed generally a somewhat sinister reputation. Thus we find the self-deluded quack and necromancer Simon Forman copying it out from MS (*Diary*, ed. cit. anno 1600) and it was often characterised as "a treatise stuffed with names of *Devils*, and full of invocations, and as very pernicious condemned chiefly by Charles Boville a learned and eminent Divine, who makes it worse than that of Agrippa or any other author." (Naudaeus, *Apologie*, p. 237. Bodin cites this same description of Boville's as authoritative and with complete approval, *Refutation des opinions de Jean Wier*, p. 405). Though sometimes mentioned as having been printed in 1606 at Frankfurt, and *seems* to be largely an account of the names and powers of various angels and spirits (arranged in hierarchies under 12 "Emperors" who are related to the chief winds and points of the compass) and their correct invocations, by which (unspecified) magical feats may be performed. It states that it bases itself (as a method of discovering angelic names etc.) on the Cabalah, and opens an endless field for uncontrolled speculations of this kind, for "Est in haec scientia chaos infinites altitudinis, qz nemo perfecti coprehendere potest: quia quant_ liber in hac arte doctus et expertus fueris; semper tamen minus apprehendisti, q illud est, quod nescio." (Prefatio lib. 1). He insists that though magical the art is neither diabolical nor unorthodox "Nihil in hac arte nostra haberi frivolum: nihil Evangelicae traditioni aut Catholicae fidei contrarium: nihil omnino tradi superstitiosum" (Pref. lib. 2. 2, p. 95), and that the practitioner if he hopes for success must be pure, virtuous and a skilful mathematician: "Quicunque ad huius artis nostrae occultae scientiam accedere desiderat: quicunque operari per eam mirabilia et multis commodosa periculis optat imprimis oportet eum ornatum esse virtutibus et conscientiae mundaе, ac voluntatis bonae, ad Deum ad seipsum et ad proximum: ne sit incliatus ad nocendum aliculi, neque commercia turpitudinis, quaerat. Deinde, necesse est ut sit bonis artibus

literarium aliquatulem imbutus, et maxime in scientia astrorum, ut sciat generalis motus, cursus, discursus, mutationes, ordines, naturas, situs, ortus, occasus, et effectas stellar_, signorum et planetarum: quia sine istorum competent, scientia nemo potest ad huius artis profunda habere accessum." (lib. 2, cap. 25, p. 157.)

As in 1606 there was printed with it at Frankfurt a work called *Clavis Steganographia* in which Trithemius explained the workings of various codes and ciphers he had devised for conveying secret messages. It was sometimes argued that the *Steganographia* itself was more innocent than it appeared and was a work written in these forms. It is probably this aspect of it that makes Dee command its importance to the practically minded Cecil. Indeed, an interesting parallel to Dee's letter is one written 15th Jan., 1591 from Wotton to Lord Zouche (*Life and Letters of Sir Henry Wotton*, ed. Pearsall Smith, Vol. I, p. 253). Wotton writes from the continent, where he has been collecting books, transcribing MSS and visiting the Emperor's library; after mentioning a work of Sturmius he has despatched to Zouche, he continues "Your honour likewise receives included Johannes Trithemius his preface to his book of Steganography, which I have caused to be written out of a book in his Majesty's library. I came a little too late or had lighted on the work itself, which yet I despair not to help your Honour unto; it is a notable piece of work for a statesman, but an instrument for great ill, if the hand be not good that holds it, as the author disputes in his preface...if I chance to send it, you are wise (my Lord) to keep it secret: otherwise the bare having of the book is to call in our state many eyes about us to observe our actions, which is needless to tell you." Subsequent letters recount his various unsuccessful endeavours to procure the *Steganographia*, culminating in an attempt to bribe with 100 crowns the son of an owner of a copy, in order to have a sight of it (17 April, 1591, *Ibid*, Vol. 1, p. 265). A number of defences of the work appeared because of its supposed importance for a knowledge of codes and ciphers, for Ludwig Heinric in the dedication to his *Steganographie* (Ulm, 1682, f.A3^v) declares that for those dealing with affairs of state, than the study of steganography "post Politicam studium nullum utilius esse potest certe nullum jucundius."

Gustavius Selemus in *Cryptomenytices et cryptographicae libri IX in quibus et planissima Steganographie a Johanne Trithemio....admirandi ingenij viro, magice et aenigmatice olim conscriptae, Enodatio traditur*, 1624, attempts such an interpretation, defending "ingeniosissimus noster Abbas" declaring "Ludit enim sub nomine *Spirituum*, ad *Literas*, quibus occulte aliquid negocium, altere significatur" (p. 37). The value of Trithemius' works in this respect is, however, very small. Cardan, who had little love for mystics or cabbalists, and held an especially low opinion of Trithemius ("Fuit vir paulo ante nostram aetatem mendacior Agrippa, inanior Raymundo Lullio, Abbas Trithemius, qui totum librum satis grandem, hoc uno sole somnio impleuit, nec tamen expleuit. Et ut fidem fabulae faceret, finxit se necromantiae, cum potius stutitiae deberet, accusatu Impudens certe sychophanta, si quis unquam mortalium..." etc.) gives on this point a just estimation of his "stultissimi inventionem," and an account of its obvious defects and absurdities "cum vel si longissima oratione et absurda atq; suspecta brevissim_ exprimat sens_ veluti." (*De Rerum Varietate*, lib. XII, cap. 41, p. 803.)

However as the text of the work, whether in Latin or jargon does not yield fully to any of the keys he offers, as he speaks elsewhere of himself as a magician (epistle on *Veterum Sophorum Sigilli et imagines magicae*) as Naudaeus describes his letter to Boetus "wherein he specified many miraculous and extraordinary effects, whereof he yet discovered the wayes of performance in his treatise of Stenographie," (he claims at other times that they rely on purely "natural" means—Peuckert cites op. cit. p. 76 from his letter on the secret arts that may be learned from this work "his ego tibi respondeo, quod multis respondi: multis naturaliter esse possibiliae, quae nescientibus vires naturae impossibilia, vel etiam supernaturalia videntur") as in his apologia for the work (*In libros suos Stegnographie apologetica*, Wurzburg, 1548, Dee's copy with his notes is in the R.C.P.) the reason he gives for not publishing it is the great power for evil it would have if it fell into bad hands—from these reasons it would seem that it is probably to be accepted at its face value. This is the case certainly with the imitation in Ashmole's hand (*Trithemius redivivus*, Sloane MS 3824, f. 121 et seq, in which mingle genuine incantations with some pretended cryptography—largely, it would seem, as a somewhat transparent disguise). That Dee recognised it largely in this way, there can be no doubt, though he defends Trithemius in the *Preface* (Aij^v) as one misunderstood and rashly slandered—like himself—by the ignorant (he was also influenced

by Trithemius' other writings, such as the *De Septem Secundeus*—of which Eliphaz Levi writes—*Dogme et Rituel de la Haute Magie*, Paris, 1861, p. 327: "C'est une clef de toutes les propheties anciennes et nouvelles et un moyen mathématique historique et facile, de surpasser Isaie et Jeremie dans la prevision de tous les grands événements a venir. L'Auteur esquisse à grands traits la philosophie de l'histoire et partage l'existence du monde entra les sept génies de la cabale" and *de Octo Quaestionum* (Vide infra Ch. IX).

(36) C.R. Ch. 3, p. 10, Godwin in his *Lives of the Necromancer*, with the incredulity of a determined rationalism, finds it impossible to believe that anyone could ever have taken seriously such nonsense as he finds the *Monas* to be, and so concludes that Elizabeth's study of it with Dee, and her promise to put its precepts into practice (that she would "et discere et facere") is only an instance of the Queen's sense of humour.

(37) Though perhaps not in this case, as with the aphorisms, of plagiarism. Though a correspondent of Ashmole's retailing gossip about Dee (Ashmole MS 1446 f. 237^v) writes "In my time in Oxford he was accused to have stolen the booke he owned called Monas Hyeroglyfica out of all Soules Colledge in Oxford out of ye Librarye there."

(38) In the Paris ed. of 1618 appears in the opening list of authorities employed "Johannes Deae Londinensis."

(39) Boehme used it in the *Clavis*, extracting from it, by the same type of analysis as Dee "the seven formes of spirits" mentioned in Revelations, and "an explanation of the seven Properties of Nature" (i.e., Desire, Attraction, Perception, Fire, Light, Understanding and Ground or Substrate) (*The Clavis or Key; or an Exposition of some Principle Matters and Words in the writings of Jacob Behmen*, London, 1647, written 1624). Johann Christophorus Steeb, *Coelum sephiroiticum* (1679) (illustration repr. Peuckert op. cit. p. 1) uses it to represent a scheme of the universe. The open half circle at the top stemming from "Sephivot Creationis et Providentia Dei," representing the "Mundus Archetypus Intelligibiles," and containing the ninefold heavenly hierarchy and Hebrew angelic names. The Circle below being the celestial world, with the ten spheres, nine muses, nine celestial forces, seven colours, seven savours and seven figures. The cross below being, as in Dee, the pure elements, and the two lower half circles "Mundus terrestris," governing the table of Hermes, where, divided with seven types in each, according to the governing planet, the nine levels, from minerals to Man, of the earthly order are displayed. A 17th or 18th century owner of the Welcome Lib. copy of the *Monas* has bound in his own Cabalistic exposition of a number of its sections, applying its "Numerology" to transmutation, and giving a rather forced interpretation along Paracelsian lines (+ is said to be Dee's sign for the Sulphur Principle)—finding in the propositions of the whole figure, "the alchemical squareing of the circle according to the Rosicrucian philosophers." An MS of part of it is also to be found in the Pinelli collection (Rivolta, *Catalogo dei Codici Pinelliani*, Milan, 1933, p. 183, MS 173 "S.97. sup. Olim R. Item 10, f. 268^r-271^v Monas Hieroglyphica....Mathematice, Magice, Cabalistiche, Anagogiceque explicata." From the incipit & explicit given this copy would seem to omit the letter to Maximilian and open with Theorem 1 finishing at the end of Theorem 19.

Two translations—though no translation can lighten the deep obscurity of the text—have recently appeared; at Paris in 1925 (in "Les Classiques de l'occulte" series) by Grillot de Givry and at London in 1947 by I.W. Hamilton-Jones (which omits the lengthy prefatory letter). Mr. Hamilton-Jones claims to be an adept in the subjects of which Dee treats here ("we have laboured in these Sciences for thirty-five years, and the Masters have not been so niggardly as to keep back our Wages" p. 6) and professes a great admiration for Dee's work ("If comment were needed it would be this: he certainly knew his subject" p. 5), unfortunately his expository notes do not provide much elucidation for the general reader, for they are addressed to "Initiates only," and preserve the same cryptic idiom as the *Monas* itself in order to avoid the "dangerous" and "forbidden" course—in respect of this art—of revealing any of its secrets to any who are not already in possession of them. De Givry notes also (op. cit. translators note, unnumbered page) that there appeared in nos. 8, 9 and 12 of *Initiation*, 1893 "Une sorte de paraphrase de la Monade

Hieroglyphique signée Philopates, que ne mérite le nom de traduction." The most recent "use" of Dee's hieroglyph would seem to be that of C.W. Olliver, in his *Analysis of Magic and Witchcraft*, London, 1928, who however does not mention Dee and seems unaware that the Hieroglyph originated with him in the mid-sixteenth century, but treats it as if it were more archaic. It is reproduced on a plate (No. 2, p. 37) entitled "Various early symbols illustrating their development" the lower half of which is given up to the Monas and Dee's own diagrammatic analysis of it. Olliver comments (p. 38) that as religious systems evolved and astronomy was imported from Chaldea, magical symbols became more elaborate "till we find the remarkable complex symbol illustrated, one of the most complete of its kind, an analysis of which will show us the meaning and origin of many obscure symbols" and he proceeds to a lengthy exploration of its arcane treasures. One can perhaps only comment that the fact that Dee's symbol should be found so apt for their own purposes by modern "adepts" unacquainted with his commentary, is at least a tribute to the power and felicity of Dee's invention in this field.

(40) Vide supra, Ch. 5, pp. 501-502.

(41)