

7 Reading for the philosophers' stone

In 1584 John Dee, the astrologer and mathematician, and Edward Kelley, the alchemist, alleged forger and necromancer, arrived at the court of Rudolf II in Prague. They brought with them a red powder, which Kelley used to demonstrate the transmutation of base metals into gold. He gave some of the powder to one 'Count Sellich', a privy councillor to Rudolf II, who gave it to the prior of an Augustinian convent, who gave it to Wenzel Seyler. Seyler was an alchemist at the court of Leopold I in the 1670s, and, like Kelley, he used the powder to demonstrate alchemical transmutation. Robert Boyle, the gentleman philosopher and a 'founder of modern science', recorded these details along with other eye-witness accounts of Seyler's transmutations as evidence for the existence of the philosophers' stone.¹

According to Daniel Georg Morhof, the German historian who met Boyle in 1670, Boyle had pursued the history of the red powder further than his extant notes record. Boyle had interviewed one of Kelley's relatives, and was told that Kelley, who had been working as a scrivener in London, fled from a warrant for arrest for forgery to an inn in Wales where the innkeeper sold him an ancient book and an ivory box full of red powder for one pound sterling.² In the early 1650s Elias Ashmole, the astrologer and antiquary, recorded a different story in which Kelley and Dee together had found the powder in the ruined tomb of a bishop in Glastonbury.³ Ashmole later recorded that Kelley and Dee had received a black powder from an Italian while they were in Prague, noting that he had heard this account from William Backhouse, his alchemical master, who had heard the story from someone who had been told it by Kelley himself.⁴ In neither version did Ashmole mention the ancient book. Two years later, in 1654, Sir Thomas Browne wrote to Ashmole with another account. Browne described some powder and a book which were found together 'in some old Place', and noted that Arthur Dee, John Dee's son, had told him this.⁵

In John Dee's notes we find yet another version of the story. In March 1583 Edward Kelley and one Mr John Husey came to see Dee with a scroll, a book and some red powder that they had unearthed at Northwick Hill, near Blockley in the Cotswolds. They

had found these items 'by the direction and leading of some such a spiritual Creature', who then told them to return to Dee for an exposition of the meaning of the scroll, which was written in strange characters. The scroll contained the names of ten places where the Danes had buried treasure in England, the powder was a form of the philosophers' stone, and the book was written by the tenth-century archbishop of Canterbury, St Dunstan, and contained the secrets of the philosophers' stone.⁶ Over the next three or four years Dee would receive twenty-eight volumes of angelic dictates and numerous other magical items.

While the versions of this story differ about the location and the presence of the book and the scroll, they all focus on the powder. In accounts of transmutations, known as transmutation histories, the philosophers' stone, usually in a powdered form, played a central role. The working of the powder proved the existence of the stone. Ransacking tombs for the red powder was one approach to verifying the existence of the stone; but in order to learn how to make it and how to use it, the alchemist needed to unlock the texts which contained these secrets. Study, along with prayer, were essential activities for anyone who wished to conduct successful alchemical experiments (see Figure 7.1).

Alchemy was the art of combining a series of ingredients at the correct times and temperatures. The result was the philosophers' stone, a substance which could transmute base metals into gold, and prolong life. Alchemical secrets were conventionally passed from master to pupil orally; they were also written down in a range of genres, in verse and in prose, in allegories and emblems. Some alchemists, such as George Ripley, and later Robert Boyle and George Starkey (alias Eirenaeus Philalethes) devoted their writings to ingeniously encrypted expositions of alchemical procedures. An alternative view, adopted in many of the writings of Paracelsus and his followers, focused instead on the philosophy of alchemy and used hermetic and gnostic concepts to explain alchemy as analogous to creation, and disease as a corruption of the body to which man had been susceptible since the Fall. In this context the pursuit of the philosophers' stone was a pursuit of the secrets of creation, and a quest to return to the Edenic state of purity and health.⁷

By the second half of the sixteenth century, numerous alchemical manuscripts were in circulation in England both in Latin and the vernacular. Some of these were ancient, some medieval, others more recent; some were genuine, other spurious. Towards the end of the century alchemical books began to be translated into the vernacular, but most of the corpus would have had to be read either in Latin books or manuscripts or in translation in manuscripts. A surge of publications began in the 1650s which would climax with the efforts of the publisher William Cooper in the 1680s.



Figure 7.1 An emblem from Heinrich Khunrath's *Amphitheatrum sapientiae aeternae* (Hanover, 1609) in which the alchemist's combined pursuits of manual labour and meditative prayer and study are represented. (Reproduced by permission of the Syndics of Cambridge University Library)

Alchemical texts became more accessible, but print did not triumph.⁸ A combination of the reluctance of English printers before the 1650s to publish alchemical texts, and the secretive nature of alchemy resulted in an enduring culture in which manuscripts were sought after and read alongside printed books. What an alchemist could read depended on when and where he lived, and how educated and wealthy he was. It might have been a printed book or a tattered manuscript. He might have bought it or borrowed it from a friend. Whatever form the text took, it might have borne the name of an ancient alchemist, a pseudonym, or no name at all. It might have recorded when and where it was written, or it

might have been an unanchored fragment. It might have described the magical powers of the stone, or how to transmute copper into gold. An alchemist needed to know how to decipher the obscure tropes or mystical ventures of a text, and also how to assess its authority.

This essay will explore some of the ways in which alchemical texts were read in early-modern England by charting the history of the book which Kelley brought to Dee – the Book of Dunstan. Or rather, since Dee is the last known person to have seen this book, we will trace its legacy. This will lead us through the readings and writings of Elias Ashmole and Isaac Newton, and to a corpus of manuscripts which constitute an English tradition which I call hermetic alchemy. These texts describe the alchemist's quest as the pursuit of a substance which, through revelation, frees man from the corruption of the Fall, restoring his health, and enabling him to commune with angels. For some people this knowledge was sought by reading alchemical texts, written or printed; for others an ancient alchemical manuscript, such as the Book of Dunstan, might itself act as a vehicle for divine inspiration.

Elias Ashmole and 'a Booke which E.G.A.I made much use of'

Elias Ashmole's *Theatrum chemicum Britannicum* (1652) contains the seminal works of a tradition of English alchemical poetry (a planned volume of prose was not completed), and marks the beginning of a period in which substantial numbers of alchemical texts would be printed in English. Ashmole's antiquarian pursuits, in addition, resulted in the preservation of thousands of pages of alchemical manuscripts. In the prolegomena to *Theatrum chemicum Britannicum*, Ashmole signalled the importance of the Book of Dunstan in his account of the types of the philosophers' stone. Conventionally, there were three species of the stone. The mineral stone could be used to transmute base metals into gold, usually through a process called projection; the vegetable stone had the power to improve plants and animals and to make them grow; the animal stone was often called the elixir of life and healed man's body. Ashmole described a variation of this scheme in which the animal stone was re-named the angelic stone and a magical stone was added. The angelic stone contained the secret of eternal life and enabled man to see and to converse with angels. It could not be seen, but was identifiable by its sweet aroma and flavour, and was accordingly called the food of angels. The magical or prospective stone provided the power to see the past and the future, near and far, indeed the whole world all at once, and to understand the language of creatures. Ashmole attributed this four-part scheme to 'S. Dunstans Worke De Occulta Philosophia'.⁹

An alchemical treatise attributed to Dunstan had circulated since at least the fifteenth century. This treatise is devoted to the vegetable stone, and is related to the writings of George Ripley, the fifteenth-century alchemist whose numerous writings circulated widely in England and abroad. While the treatise mentions the elixir of life, its emphasis is on a series of procedures for producing the vegetable stone. It is referred to variously as *Liber Dunstani* and 'A treatis of the most excelent Mr Dunstan Bishop of Canterburie, a true philosopher, concerninge the philosophers stone'; it is never called '*De Occulta Philosophia*', and does not mention anything resembling the angelic or magical stones.

When Ashmole cited Dunstan's '*De Occulta Philosophia*', he parenthetically noted that this was 'a Booke which E.G.A.I. made much use of'. This alludes to a work by Edwardus Generosus Anglicus Innominatus, 'The Epitome of the Treasure of Health' (see Figure 7.2).¹⁰ This treatise is dated 1562, two decades before Edward Kelley found the Book of Dunstan. Either the book which Edwardus read and the book which Kelley unearthed were one and the same, or they were copies of the same text, or they contained the same information in a different form. One possibility is that the dating of Edwardus' manuscript is false, and that it was written around the time that Kelley found the Book of Dunstan. Another possibility is that, for instance, Kelley fabricated the Book of Dunstan, and wrote the Epitome in order to authenticate and promote Dunstan's secrets.¹¹ This is conjecture. Even if this, or a similar scenario, could be documented, it would not change how Ashmole and other early-modern readers judged these texts.

Ashmole was not looking for the Book of Dunstan. In the two accounts of how Dee and Kelley found the powder, described above, Ashmole does not mention a book, let alone the Book of Dunstan. In Dee's diary for 1583, which Ashmole owned during the 1650s, there is no mention of the book or scroll. Ashmole did not have access to Dee's angelic conversations, in which the powder is accompanied by the scroll and the book, until he acquired one of Dee's angelic notebooks in 1672 (see Figure 7.3).¹² Even after this date, Ashmole left no signs of having associated the Book of Dunstan possessed by Dee and Kelley with the work described in the Epitome, and it remains unclear why Ashmole referred to Dunstan's work as '*De Occulta Philosophia*'. For Ashmole, that the Epitome was dated 1562, two decades before the Book of Dunstan was unearthed, was not a problem. Nor, it seems, was relying on the Epitome for an account of Dunstan's ideas.

The Epitome falls roughly into three sections. The first section discusses the alchemical regimen, that is the sequence of processes of heating and cooling materials, and draws on authors such as Ripley and his contemporary, Thomas Norton. The final section

ED. S.
EN. S.
AN. G.
L. S.

IV.
I.

*The Epitome of the Treasure
of all wells written by Edwardus
Generosus Anglicus innotinatus,
qui vixit Anno Dni 1562.*

Although I know my frame to bee too weak to
till soe fertile and spacious a plot of ground as
this is, yett now I have taken in hand to doo, yett
for the good will I doe beare unto fruitfull soyle, my
hand my plow, yett shone and sultry sheare, shall
never cease to toyle all alonge the pennes bee great,
till by often following the field, I have rooted out
both weeds and grass, and sowed therein good
seed, as well to feed my dearest friends, as my
selfe: to whom I doe sende now this small
pamphlett, with I may say, justly call the
Treasure of all wells.

Yo: Edwards al: innotinatus.

Our Medicine ought to bee chosen out of those
bodies in the world, as is contained; because St. Hieronim
saith the Impurification of bodies is only the last of
for it is in. Valant. Maria Prophetissa saith that
our element is in all bodies; not that it is in all bodies
are not necessary for our work alone; our Stone
beinge forth fruit till he be brought to nought,
that is into runninge. Or Yo: Edwards to
begin in a perfect body with their being dissolved
and regeared according to art, then that which
was hidden is now made manifest with which it is
resolved it is turned into one and therefore all the
first, that 2. things be considered under the word
That honourable Lady George Ripley doth tell
you truly that our Maistery doth consist in 12
gates, or ports, That is Calcimacoz, Solucon,
Speracon.

Figure 7.2 Ashmole's copy of 'The Epitome of the Treasure of Health' (Ashm. 1419, fol. 57). Note that this copy has a singular variation in its title, 'The Epitome of the Treasure of all wells', meaning Wales, which Ashmole twice corrected to read 'Wealth'. (Reproduced by permission of the Bodleian Library, Oxford)

discusses the creation of the world and of Adam, the nature of the soul, and the analogies between these and alchemical processes in hermetic terms. The middle section is devoted to the types of the stone, and contains the exposition of Dunstan's four-part scheme as noted by Ashmole. After an account of how to make what he describes as a particularly invaluable stone, Edwardus notes that he has heard about another sort. This is Dunstan's angelic stone. Edwardus then describes Dunstan's definitions of the magical, vegetable and mineral stones, and notes that the angelic stone was possessed by Hermes and the magical stone by Moses. Then he returns to his own experiments, and describes the properties of the golden and silver stones; these, he implies, were related to Dunstan's magical stone. They were derived from one substance but had

or else it shall be bestowed, it yet to be required of
 Secret are the determination and unsearchable purposes, Whereunto
 the most mischievous death, with windings, and secrets unto the
 and needeth application of hardy things. Many temptations
 shall yeare him in willome of his commandment. But it is
 said, if thou be with him. God will deale mercifully
 with you. This is sufficient.
 Let once more of this be, we do not begin it shall be
 satisfied.
 A. What if he is sent to Nether, and with the other some taken
 prison, to goe to the other place noted in the stand
 and then with the rest of those ten places. To rest of
 the roll, the last hundredth part, and the end thereof
 in the whole. None to come, being those, and the
 rest of the persons practice for sundry the promises, to be
 found. Or he who will you have him order his coming.
 As the first herein, so shall it be to be kept to pass.
 A. As concerning the first herein, Captain Albert the Duke
 who so much deprecate my acquaintance, and otherwise, he
 I live my self, to have in depth, being my country, home, and
 I, my own mind, and so.
 Remember, it is said, that the Prince of Bechar's shall not
 interest, much less work by confusion. He that dwells
 in the, is able to wonder, and that give the sufficient deliverance
 worldly, in worldly occupation. For or to here, the blessing
 of God here, such thing is perished.
 A. As concerning the same, for what else, answered by me, in
 the last part, between the table. Himself, who is all this
 the place, and not himself. He Action, but the Ad. For
 the place. But I insist this after the manner of mine.
 It is sufficient.
 A. The 4th shall see for comprehending the 1st after Scales.
 He next doth they to be.
 V. According to the size of the narrowest proportion
 and so as the house of the table, he is 1, and he is
 EK. He permits to be in the upper, but I perceive in depth
 behind him.
 A. And all these things of this layer Action to be noted and
 your name of Uriel.
 VRIEL. I am VRIEL, which all things will inspire until the Action
 be finished.
 I teach. Be Marshall, Bank fall, and more in him, and for
 in whose name you find just regner much, both in sadness
 More than my message, I may not. And it is done.
 A. H.

Figure 7.3 A page from one of Dee's notebooks recording his angelic conversations, 'Liber Mysteriorum' (Sloane 3188, fol. 103v). (Reproduced by permission of the British Library)

opposite properties, the former hot, the latter cold. While such an account of the different types of the stone is atypical, in what follows this treatise becomes highly unusual.

Edwardus recounted how he made the silver stone, which produced a most remarkable light. He took it to bed with him as a reading-light, and to illuminate under the covers so that he might catch fleas. But he soon began to feel chronically cold, and the fleas began to die. Eventually he realised that the stone was the cause of this: it benumbed the whole body, congealed all of the vital fluids, and eventually would have killed him. Luckily, he had remembered something which St Dunstan had written, and following his recipe, prepared a remedy. This was the golden stone, in the form of a red oil, and it had its own perils. He had put it in a tower with lots of windows in order to dry the luting on the glass before continuing with the experiment, and went to dine with a neighbour. But the location of the sun, and the conjunction of the planets, were such that the tower 'was to all likelihood of a light bright burneing red flame of [fire] as not only itt seemed ^ soe ^ to all the neighbours, dwellers & country thereabouts, whereby they came running and wondring to the tower by the way crying [fire], [fire], [fire] as if they had binn madde'. Edwardus ran home, insisted that he go into the tower alone, and discovered that the apparent fire was the red glow of the oil. It had become so hot that the leading in the windows of the tower had melted. He removed the container from the window, burning his hands, and had to explain to the local justice how he had quenched the (apparent) fire so quickly, and without water.¹³

Ashmole did not believe everything he read. He warned the reader of his translation of Arthur Dee's *Fasciculus chemicus* (1650) that not everything that was written about the philosophers' stone was true: no one publicly professed its existence and no one had seen it.¹⁴ He divided the authors of alchemical texts into four types. The first type 'lay down the whole Mystery *faithfully* and *plainly*; giving you a *Clew*, as well as shewing you a *Labyrinth*'. The second type wrote to demonstrate their expertise, not to instruct. The third type 'out of *Ignorance* or *Mistake*, have delivered blind and unbottomed *Fictions*'. And lastly, the 'worst sort of all, are those, who through *Envy* have scattered abroad their unfaithful *recipes* and false *glosses*'.¹⁵ The first two sorts were to be trusted, and the difference between them and the second two sorts was experience. Two years later, in the prolegomena to *Theatrum chemicum Britannicum*, Ashmole likewise warned the reader that many philosophers had written 'what their *Fancies*, not their *Hands* had wrought'; that is they had written before they had seen transmutation. These works had been of great harm to students who were 'at first not able to distinguish, who have written upon their undeceivable *Experience*, who not'. It is unclear whether Ashmole had

himself seen projection; he thought he knew enough to distinguish between true and false texts, but had failed to set himself 'effectually upon the Manual practice'.¹⁶ Instead of writing an alchemical treatise of his own, he furthered the course of the art by publishing the texts of others.

If Ashmole could not verify alchemical experiments, how did he distinguish between true and false treatises? His editorial practices reveal three criteria for judging the veracity of a text. Firstly, Ashmole assessed the processes which it described. For instance, he included extracts from a treatise by John Gower, a contemporary of Chaucer's, in *Theatrum chemicum Britannicum*, and in the annotations described him as 'placed in the *Register* of our *Hermetique Philosophers*', noting 'In this litle *Fragment* it appears he fully understood the Secret, for he gives you a faithfull account of the *Properties* of the *Minerall*, *Vegitable*, and *Animall Stones*, and affirms the *Art* to be true.'¹⁷ Even though Ashmole had not seen the stone, he knew in theory how to make it. The second and third criteria by which Ashmole evaluated a text were external. He included histories of how numerous authors, including Kelley and Dee, had acquired the secret in his annotations to *Theatrum chemicum Britannicum*. Ashmole also stressed the importance of the history of the text. In his annotations to George Ripley's 'Compound of Alchemy', for instance, Ashmole noted that it had been printed in 1591, and explained that he had relied on a manuscript that was written 'about the time Ripley lived' because 'in these Streames of *Learning* the more clearest and without the least of *Mixture* is to be found nearest the *Spring-head*'.¹⁸ Throughout his collection of manuscripts he underlined words and phrases to indicate textual variants. In his copy of *Theatrum chemicum Britannicum*, next to the text of Norton's 'Ordinal of Alchemy', Ashmole noted 'what words are scored under; I have thereby noted the severall readings, as they are in other Coppies; but they are not all to be trusted; for they are not soe true as ye Print'.¹⁹ This attention to bibliographical details is evident throughout the papers and books collected by Ashmole. Where possible he evaluated an alchemical tract according to the accuracy of its contents, the history of the text, and the circumstances of its composition.

Ashmole applied these bibliographical standards to the Epitome. In 1652 he compared his copy of the text with one ostensibly in the hand of Edwardus and noted variant words and phrases. He had an authentic text, but, it seems, did not know the identity of its author. Except for his citation of the account of Dunstan's types of the philosophers' stone, we do not know how he read this manuscript, except that he noted variants between two different versions; perhaps Ashmole's silence about the powers of Edwardus' golden and silver stones is evidence of his scepticism. Dunstan, in contrast

to Edwardus, was a renowned divine, legendary prophet and a notable alchemist, but Ashmole lacked the text written by him, let alone a manuscript dating from his lifetime.²⁰

An explanation for why Ashmole endorsed the ideas attributed to Dunstan and recounted by Edwardus does not lie in bibliography, but in the other texts which Ashmole read. The hundreds of alchemical books and manuscripts which he acquired, and how he read them, merit further study. It is possible to situate the ideas attributed to Dunstan within a tradition of hermetic alchemy current in England from the 1570s, and to ascertain Ashmole's exposure to texts containing such ideas. As already noted, the Dunstanian account of the philosophers' stone emphasised the prolongation of life, associated this with the ability to commune with angels, and added a magical stone by which men could increase their natural powers. These ideas were not new, but the combination and emphasis were. In the 1590s, for instance, Simon Forman, the astrologer physician, described a four-part stone which echoed the account in the *Epitome*, though he did not cite Dunstan. Forman's manuscripts document a tradition of alchemy which combined gnostic, hermetic and Paracelsian ideas with more conventional notions and stressed the powers of the philosophers' stone to free the body of the corruption that had ensued since the Fall of Adam and Eve.²¹

Further evidence of a tradition of hermetic alchemy is found in a number of treatises which are of unknown authorship and uncertain date, though most seem to have been written in the late sixteenth or early seventeenth centuries. For instance, a treatise entitled 'The Apocalypse or Revelacon of the Secret Spirit' focuses on the powers of the philosophers' stone to prolong life, and, like the *Epitome*, describes an invisible substance. In this case the secrets of nature are described as having 'neyther culler nor forme'.²² Although this treatise was printed in Latin with an Italian commentary in London in 1566, this, and the English manuscript versions of it, are extremely scarce.²³ Similarly, a treatise entitled 'The Ph[ilosoph]ers Physicke' which focuses solely on the medicinal virtues of the stone, seems to have survived in a single manuscript.²⁴ Other treatises which we might consider as part of this tradition of medical and spiritual alchemy had a relatively larger circulation. For instance, a treatise entitled 'Manna', or spiritual food, circulated in manuscript and was printed in 1680.²⁵ This describes the healing virtues and magical uses of the stone. Likewise, 'The Way to Bliss', a lengthy treatise which meditates on the state of man in hermetic terms and advocates the use of alchemy to prolong life and transmute base metals into gold, circulated in manuscript until it was published by Ashmole in 1658.²⁶ Although Ashmole did not acquire Forman's manuscripts until 1677, he

copied Manna and the Epitome into the same notebook in the early 1650s. Along with the Epitome, he referred to Manna in the prolegomena to *Theatrum chemicum Britannicum*, noting that the 'incomparable author' stated that the mineral stone could be used for more than making gold.²⁷ The Epitome and Manna were associated with each other, and with Dunstan's treatise on the vegetable stone, in a number of manuscript compilations.²⁸

Ashmole's prolegomena drew on and endorsed a tradition of hermetic alchemy. This tradition, however, is not explicit in the collection of poems which comprise the bulk of *Theatrum chemicum Britannicum*. In his annotations Ashmole provided the link between these alchemical texts and hermetic ideas about the prolongation of life and natural magic. For instance, he glossed a mention of the red stone in Norton's 'Ordinal of Alchemy' with a long description of the workings of physic. He drew on Paracelsian treatises such as Richard Bostocke's *The Difference Betwene the Auncient Phisicke ... and the Latter Phisicke* (1585) and Petrus Severinus' *Idea medicinae philosophicae* (1570).²⁹ Ashmole framed seminal English alchemical poems with an exposition of alchemical ideas conventionally attributed to Paracelsus and his followers; Ashmole, however, implied that this tradition derived from St Dunstan. For Ashmole, the Dunstanian scheme was part of the tradition of hermetic, revealed alchemy; a tradition rooted in tenth-century England. This history of a philosophers' stone which could be invisible and aromatic or magical was not confirmed by a red powder or an old book; it was documented in the Epitome and corroborated by a number of anonymous Elizabethan and Jacobean manuscripts.

Isaac Newton and 'The Epitome of the Treasure of Health'

Isaac Newton was not interested in Dee and Kelley. He did, however, possess one of the four other copies of the Epitome now extant. Newton's accumulation of alchemical works and composition of alchemical notes from the late 1660s through 1696 (and perhaps beyond) have been rehearsed by several scholars. Until recently Newton has been the locus of discussions about the place of alchemy in early-modern natural philosophy, and it is generally accepted that for Newton alchemy and physics, mediated by theology, were complementary projects in exploring the workings of the universe. While Newton's engagement with mystical, vitalistic and corpuscularian alchemical traditions has been studied, his reading of the corpus of texts from late sixteenth- and early seventeenth-century England has not been explored, except in Frances Yates' unfounded conjectures about the history of Rosicrucianism from Dee to Newton.³⁰ Despite, or perhaps because of, Yates' provoca-

tive conclusions, a historiographical rift remains in histories of alchemy in early-modern England. Studies of the period from the revival of alchemy in the 1570s through the 1650s emphasise Paracelsian doctrines of medical innovation and the political contexts in which such ideas thrived; studies of the second half of the seventeenth century focus on the procedures of transmutational alchemy and argue for the influences of alchemical theories of matter on physics and chemistry.

Newton began studying alchemy in the 1660s, and some time before April 1669 he included Dunstan's treatise on the vegetable stone in a list of works which he hoped to read.³¹ Between 1668 and 1675 Newton acquired two of the anonymous treatises noted above, 'The Apocalypse or Revelacon of the Secret Spirit' and 'The Ph[ilosoph]ers Physicke', though he seems not to have paid them much attention after 1680.³² Some time before 1675 Newton transcribed the *Epitome* and acquired a copy of *Manna*, and, like Ashmole, he noted variations between these manuscripts and others. He frequently cited these treatises in the alchemical notes which he compiled through the 1680s.

Newton left copious, if intractable, traces of how he read alchemical texts. Most famously, he 'dogeared', or turned down, the corners of pages, aiming the point at a word or passage he wished to note, and for the majority of texts he left no other traces of reading. He also occasionally noted references to other authors or interpretations in the margins; he compiled a commonplace book, the 'Index Chemicus'; he wrote treatments of specific subjects, such as the regimen, in attempts to reconcile information from different texts; and he kept records of experiments.³³ The mammoth task of exploring the complex interrelationships between these documents has not yet been undertaken. In addition, Newton's methods for reading and writing alchemical texts should be considered alongside his other scholarly pursuits. Bearing in mind these difficulties, there is some evidence for how he read the *Epitome*. He did not dogear or annotate his manuscript, but cited it in his alchemical notes.

The *Index Chemicus* consists of a list of alchemical headings followed by citations of relevant pages in texts, and occasionally a brief exposition. These notes, and Newton's changes to them during a series of at least four redraftings during the 1680s, reveal some of his reading habits.³⁴ In his citations of the *Epitome* throughout the various versions of the *Index*, Newton drew on its opening and concluding sections, which focus on the regimen and the hermetic exposition of alchemy, and he neglected the middle section which discusses the types of the stone and includes the exposition of Dunstan's ideas and Edwardus' own alchemical adventures. There is one exception. In what seems to be the earliest

version of the Index, under the heading for the mineral, vegetable and animal stones, Newton cited five items (see Figure 7.4).³⁵ The first is to the section of the Epitome describing Dunstan's four-part philosophers' stone. The third, fourth and fifth are to pages in *Theatrum chemicum Britannicum* in which the poems describe the three sorts of the stone.³⁶ The second reference notes 'El Ashm', is then obliterated by a drop of liquid which has dissolved the ink, and continues 'f. Theatr en ~~Dunstan~~. <E.Gen.>'. This appears to be a reference to Ashmole's account of Edwardus' account of Dunstan. Perhaps Newton replaced Dunstan with Edwardus because he thought Ashmole based his account on the Epitome, or perhaps he attributed the scheme to Edwardus. Either way Newton, unlike Ashmole, allowed Edwardus to supersede Dunstan.

When we consider this brief list of words in relation to the thousands of pages of alchemical material that Newton read, and the hundreds of pages that he wrote, his eclecticism comes to the fore. He read a number of texts which constitute an English tradition of hermetic alchemy, some of which he cited, others which he apparently dismissed. There is no evidence that he associated these treatises as part of an alchemical tradition. But then Newton's alchemical notes focus on procedures, procedures which seem not to have produced an invisible, aromatic substance. Newton's notes do not discuss the hermeneutics of alchemy. They nonetheless document the energies which he, like many alchemists, devoted to charting the true path through a labyrinth of obscure alchemical instructions. The goal was the correct procedure for making the philosophers' stone. What this pursuit meant to Newton might become clearer if we turn to his theological writings. Newton was trying to discover the true language of the Bible which had been corrupted over the centuries.³⁷ If for Newton reading alchemy was analogous to reading the Bible, then the encoded language of the alchemists had likewise to be rationalised. Perhaps for Newton alchemy, like theology, was evidence of revealed knowledge.

John Dee, Edward Kelley and the Book of Dunstan

Our pursuit of the Book of Dunstan has followed the path of the Epitome, and the reading of the ideas attributed to Dunstan therein. Ashmole edited texts; Newton compiled vast notebooks. Ashmole read alchemy nationalistically and historically, and Newton read it eclectically and rationally. Ashmole identified a tradition of hermetic alchemy; Newton did not make such a distinction. Despite their different approaches, for Ashmole and Newton alike, alchemical texts were receptacles of knowledge, albeit veiled in tropes and obsolete language.

Neither Ashmole nor Newton read the Book of Dunstan; John Dee did, or at least he tried to. When Kelley brought the scroll, the

Figure 7.5 The title-page of Dee's *Monas Hieroglyphica* (Antwerp, 1564), at the centre of which is his Monas. (Reproduced by permission of the Bodleian Library, Oxford)



Arthur Dee that the book contained 'nothing but Hieroglyphics, which Booke his Father bestowed much tyme upon', and added 'but I could not heare, that he could make it out'.⁴⁴ Hieroglyphics probably did not indicate a strange or antiquated script, but some sort of diagram, emblem or symbol, such as Dee's Monas, which represented the structure and genesis of the universe (see Figure 7.5). These images conveyed knowledge through divine language and inspiration.

The Book of Dunstan was found by the direction of an angel and could not be read without angelic inspiration: it was a vehicle to angelic wisdom. Its totemic status was perhaps reinforced when, a

Dee noted in his diary, in December 1587 Kelley reported to him that he had spilled a lamp and some wine, damaging several books. These included '40 leaves in quarto, entitled "extractiones Dunstani": which he had himself extracted and noted out of Dunstan his book. And the very book of Dunstan was but cast on the bed hard by, from the table.'⁴⁵ The Book of Dunstan was miraculously preserved, much as it had been miraculously restored the year before, while extracts from its text were not. The power of the alchemical book is similarly illustrated in stories about the red powder which specify that it was found with or lodged in books. These books were not vehicles of alchemical secrets to be decoded by the adept; they were testaments to the necessity of alchemical revelation. More than half a century after Kelley brought the scroll, powder and book to Dee, Ashmole expounded the tenets of an inspired alchemy while promoting a didactic alchemical literature. For Ashmole, reading alchemical texts was a matter of mastering the language of the alchemists, not invoking spirits; at the same time, the ends of alchemy were the achievement of the angelic and magical stones. Ashmole's publication of *Theatrum chemicum Britannicum* signifies not only the presence of alchemical books in the rise of didactic literature, but their demystification.

Coda

Whatever the power of the book as an object, a tradition of hermetic alchemy could have thrived; the notion of an invisible stone, however, contained an inherent paradox. From Dee to Newton the existence of the philosophers' stone was supported by eye-witness testimony. As Sir Thomas Browne reported to Ashmole, Arthur Dee had 'ocularly undeceavably & frequently beheld' the transmutation of tin into gold.⁴⁶ A stone that could not be seen could not be proved to exist, or not to exist. An anonymous letter dated 1660 described an angelic stone with powers akin to those of the angelic and magical stones attributed to Dunstan. This stone was the way to the Tree of Life and the Garden of Eden; it was 'an oraculous method or Instrument for the seeing opening & discovering of spirits in generall, & of such invisible Powers & Substances, as the Eye can no way see'. Those who wished to achieve this state, however, had to overcome the one thing that the stone lacked: 'The palpability, security, & irrefragable certainty conveyed to the minde by it, that this rich, glorious, & beautifull order it serves of all things that they see, is what it is & what it is discovered to be; and can be noe other.'⁴⁷ The historian of alchemy faces these same obstacles. We can see and read the alchemical books and manuscripts which have survived, but any history of missing texts, invisible substances, and the ethereal spirits which governed them is by definition uncertain.

Notes

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- 1 M. Hunter, 'Alchemy, magic and moralism in the thought of Robert Boyle', *British Journal for the History of Science*, 23 (1990): 387-410, esp. 401-6; L. Principe, *The Aspiring Adept: Robert Boyle and His Alchemical Quest* (Princeton, 1998), pp. 95-7.
- 2 Principe, *Aspiring Adept*, p. 196.
- 3 Elias Ashmole (ed.), *Theatrum chemicum Britannicum* (London, 1652), p. 481 (hereafter *TCB*).
- 4 C. H. Josten (ed.), *Elias Ashmole 1617-1692: His Autobiographical and Historical Notes, his Correspondence, and Other Contemporary Sources Relating to his Life and Work* (Oxford, 1966), vol. II, pp. 603-5.
- 5 Josten, *Ashmole*, vol. II, p. 662.
- 6 London, British Library, Sloane MS 3188, ff. 61, 63; 101v-3v.
- 7 For the history of the elixir in England see M. Pereira, 'Mater medicinarum: English physicians and the alchemical elixir in the fifteenth century', in R. French, J. Arrizabalaga, A. Cunningham and L. García-Ballester (eds.), *Medicine from the Black Death to the French Disease* (Aldershot, 1998), pp. 26-52.
- 8 For the circulation of literary texts in manuscript see D. Carlson, *English Humanist Books: Writers and Patrons, Manuscript and Print* (Toronto, 1993); H. Love, *Scribal Publication in Seventeenth-Century England* (Oxford and New York, 1993); A. Marotti, *Manuscript, Print, and the English Renaissance Lyric* (London, 1995); and H. R. Woudhuysen, *Sir Philip Sidney and the Circulation of Manuscripts* (Oxford, 1996).
- 9 Ashmole, *TCB*, sigs. A4v-B1v.
- 10 Oxford, Bodleian Library, Ashmole MS 1419, Item IV, ff. 57-82v. Other copies are Cambridge, King's College, Keynes MS 22, Glasgow, Glasgow University Library, Ferguson MS 199, Item IV, pp. 19-70; Sloane 2502, ff. 54-69v, 70-81v (two copies).
- 11 For the suggestion that Edwardus was Edward Dyer see W. Black, *A Descriptive, Analytical and Critical Catalogue of the Manuscripts Bequeathed Unto the University of Oxford by Elias Ashmole* (Oxford, 1845), col. 1144, and W. D. Macray, *Index to the Catalogue of the Manuscripts of Elias Ashmole* (Oxford, 1866), p. 51.
- 12 Sloane 3188, ff. 61, 63, 101v-103v; Josten, *Ashmole*, vol. III, pp. 1264-6.
- 13 Ashm. 1491, Item IV, f. 21.
- 14 Arthur Dee, *Fasciculus Chemicus: Or Chymical Collections*, trans. James Hasolle [Elias Ashmole] (London, 1650), sig. **8v.
- 15 Dee, *Fasciculus Chemicus*, sigs. **[1]v-**2.
- 16 Ashmole, *TCB*, sig. B2v.
- 17 Ashmole, *TCB*, p. 484.

- 18 Ashmole, *TCB*, p. 455.
- 19 Josten, *Ashmole*, vol. II, p. 600.
- 20 See for instance A. Clark (ed.), *'Brief Lives' . . . by John Aubrey* (Oxford, 1898), vol. I, pp. 242–3; R. Holinshed, *Chronicles* (London, 1587), vol. II, pp. 165–6.
- 21 Ashm. 1494, p. 623; L. Kassell, "The food of angels": Simon Forman's alchemical medicine', in A. Grafton and W. R. Newman (eds.), *The Occult Sciences in the Renaissance, Archimedes*, 3 (2000).
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- 24 Keynes 67, ff. 64–99v.
- 25 Keynes 33; Ferguson 9, Item II, ff. 14–24; Ferguson 199, Item V, pp. 72–8 (partial copy); Sloane 2194, Item 9, ff. 77–84v; Sloane 2222, ff. 128v–136; Sloane 2585, ff. 90–105; Ashm. 1419, Item III, ff. 45–56; John Frederick Houpreght (ed.), *Aurifontina Chymica: Or a Collection of Fourteen Small Treatises Concerning the First Matter of Philosophers* (London, 1680).
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- 28 Ashm. 1419; Ferguson 199; Ferguson 9.
- 29 Ashmole, *TCB*, pp. 448–9.
- 30 F. Yates, *The Rosicrucian Enlightenment* (Routledge, 1972).
- 31 K. Figala, J. Harrison and U. Petzold, 'De Scriptoribus Chemicus: sources for the establishment of Isaac Newton's (al)chemical library', in P. D. Harman and A. Shapiro (eds.), *The Investigation of Difficult Things: Essays on Newton and the History of the Exact Sciences* (Cambridge, 1992), pp. 135–79.
- 32 Keynes 67.
- 33 A catalogue which includes most of Newton's alchemical papers was drawn up by Sotheby's in 1936, and is reproduced as Appendix A in Dobbs, *The Foundations of Newton's Alchemy*. A full catalogue of Newton's theological, alchemical and Mint papers is being prepared by Robert Iliffe.
- 34 Keynes 30/1–5.
- 35 Keynes 30/2, f. [2v] (lapis).
- 36 Ashmole, *TCB*, pp. 370, 389, 411.
- 37 S. Mandelbrote, "'A duty of the greatest moment': Isaac Newton and the writing of biblical criticism", *British Journal for the History of Science*, 26 (1993): 281–302, esp. 292–8.
- 38 Sloane 3188, f. 90v.
- 39 Ashm. 1790, ff. 9v–11; E. Fenton (ed.), *The Diaries of John Dee* (Charlbury, 1998), pp. 188–91.
- 40 Sloane 3188, f. 63; Fenton, *Diaries*, p. 217.
- 41 Fenton, *Diaries*, p. 238.
- 42 R. J. W. Evans, *Rudolf II and His World* (Oxford, 1973), p. 226.
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- 44 Josten, *Ashmole*, vol. II, p. 662.

- 45 Fenton, *Diaries*, pp. 231–2.
- 46 Josten, *Ashmole*, vol. II, p. 755.
- 47 Sloane 648, f. 100. Principe identifies this as a hand often found in manuscripts circulating within the Hartlib circle: *Aspiring Adept*, p. 199.

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- The Alchemy Website and Virtual Library: <www.levity.com/alchemy>