

Introduction

Writing nearly seventy years ago about the then-emerging academic interest in alchemy stimulated by Marcellin Berthelot's translation and editing of ancient Graeco-Egyptian texts, Arthur John Hopkins drew attention to certain problems in the study of alchemy that remain largely unresolved today: "A comprehensive explanation [is] still lacking," Hopkins noted, "such a theory as would coordinate the whole and make clear to the modern mind what was the purpose and underlying conception of the alchemist."¹ Subsequent years have witnessed growing interest, research, and scholarly activity devoted to alchemy, hermeticism, and related fields, none more than at the present time with its steady flow of new editions of primary texts, new critical books and articles, and the appearance of new journals and specialized conferences and colloquia devoted to these subjects. Furthermore, a visit to virtually any bookshop reveals that there continues to be a large – and steadily increasing – popular and semi-popular market for these diverse materials.

Two related characteristics mark the academic, research-oriented side of this burgeoning enterprise: its interdisciplinary nature and its tendency to reassess and reinterpret, often radically, the authors, works, and ideas that are its focus, often with the result of discovering a high level of alchemical and hermetic interest where previously it had not been suspected or at least readily admitted. This is seen, for example, in the continuing reevaluation of the role of alchemy in the scientific thought of Robert Boyle and Isaac Newton, which has demonstrated conclusively that, much more than an early or casual interest, alchemy was at the heart of the thought and method of each of these pioneers of modern science.² That such major reappraisals are occurring among historians of science is particularly telling since earlier generations had often refused to consider alchemy as a worthy subject of study because it seemed to represent all that was contrary to the modern, progressive, "rationalistic" spirit of modern science.

But the revolution in attitude toward the study of alchemy extends far beyond the history of science. Scholars representing many other fields and disciplines – literature, philosophy, history, art history, the history of medicine, religion, and psychology – are discovering that alchemy, as it is now broadly understood, contains vital points of contact

¹ *Alchemy: Child of Greek Philosophy* (Morningside Heights, NY: Columbia University Press, 1934), 3–4. Hopkins was referring to Berthelot's *Collection des anciens alchimistes grecs*, 3 vols. (Paris: Georges Steinheil, 1887–88).

² See Lawrence Principe, *The Aspiring Adept: Robert Boyle and his Alchemical Quest* (Princeton: Princeton University Press, 1998); and Betty Jo Teeter Dobbs, *The Foundations of Newton's Alchemy or "The Hunting of the Greene Lyon"* (Cambridge: Cambridge University Press, 1975), and *The Janus faces of genius: The role of alchemy in Newton's Thought* (Cambridge: Cambridge University Press, 1991).

2 INTRODUCTION

with their own disciplines. Students of literature have become aware of the vast number of images and allusions drawn from alchemy that appear in literary works of the Middle Ages, Renaissance, and beyond. Students of philosophy and religion have found significant links between alchemy and Gnosticism,³ Neoplatonism, and Rosicrucianism, just as art historians have discovered that artists from Bosch and Brueghel to the Surrealists have derived ideas and visual cues from alchemy. The extraordinarily rich visual and iconographic tradition reflected in alchemical manuscripts and early printed books, including emblem books, is providing a storehouse of interesting materials for study. Finally, for the historian of medicine, the emergence of interest in iatrochemistry – to cite only one example – and the related seventeenth-century controversy between followers of Galen and Paracelsus, has demonstrated how close is the relationship between alchemy and medical theory and practice. While not all of these interdisciplinary connections are discoveries of the late twentieth century – Jung's *Psychologie und Alchemie* was first published in 1944 – nonetheless, the cumulative effect of such links, both quantitatively and qualitatively, is such that alchemy has now emerged as the subject of interdisciplinary study *par excellence*.⁴

During the sixteenth and seventeenth centuries, the reading and study of expensive and often inaccessible alchemical treatises written over a long period of time and by authors of many different nations and languages was greatly facilitated through publication of anthologies which gathered together large numbers of such tracts for study and comparison. These were the successors to similar collections of materials in manuscript. Among the popular printed collections are *De Alchemia* published at Nuremberg by Petreium in 1541, which includes selections by Roger Bacon and Richard of England along with those of Geber, Hermes, and Hortulanus. The *Veræ Alchemiæ Artisquæ Metallicæ* of Guglielmo Gratarolo (Basel, 1561) added tracts by Arnald of Villanova, Raymond Lull, Albertus Magnus, John of Rupescissa and many others. Early in the seventeenth century, Lazarus Zetzner, a printer of Strasburg, produced the monumental *Theatrum Chemicum*; the most comprehensive anthology yet published, it included four volumes in the first edition, added a fifth in 1622, and a sixth in the edition of 1659–61. More localized was Elias Ashmole's popular anthology of English alchemical poetry, the *Theatrum Chemicum Britannicum* (1652); and in 1678 the famous *Musaeum Hermeticum reformatum et amplificatum*, containing

³ For a recent, succinct account of similarities and – more important – differences between Hermetism and Gnosticism, see Roelof van den Broek, "Gnosticism and Hermetism in Antiquity: Two Roads to Salvation," in *Gnosis and Hermeticism from Antiquity to Modern Times*, ed. Roelof van den Broek and Wouter J. Hanegraaff (Albany: State University of New York Press, 1998), 1–20.

⁴ The following references are highly selective, intended only as representative of studies of alchemy's interdisciplinary connections, and should be supplemented with additional citations from the headnotes to individual selections and the Bibliography, which incorporates a wide range of works for further reading. For literary connections, see Lyndy Abraham, *Marvell and Alchemy* (Aldershot, Hants.: Scolar Press, 1990), and my *Darke Hieroglyphicks: Alchemy in English Literature from Chaucer to the Restoration* (Lexington, KY: University Press of Kentucky, 1996); in art history, representative titles would include Jacques van Lennep, *Art & Alchimie* (Brussels: Éditions Meddens, 1971) and Laurinda S. Dixon, *Alchemical Imagery in Bosch's Garden of Delights* (Ann Arbor, MI: UMI Research Press, 1980); and in emblem studies, Alison Adams and Stanton J. Linden, eds., *Emblems and Alchemy*, Glasgow Emblem Studies, vol. 3 (Glasgow: University of Glasgow, 1998); for iatrochemical controversy and the influence of Paracelsus, see Allen G. Debus, *The Chemical Philosophy: Paracelsian Science and Medicine in the Sixteenth and Seventeenth Centuries*, 2 vols. (New York: Science History Publications, 1977); and *The English Paracelsians* (New York: Franklin Watts, 1966). For a useful, comprehensive introduction, see Allison Coudert, *Alchemy: The Philosopher's Stone* (London: Wildwood House, 1980).

twenty-one treatises, was reissued in Frankfurt as an expansion of a nine-treatise first edition that had appeared in 1625.⁵

The results of these ambitious publication ventures, combined with the printing of single treatises and collected editions of individual authors, and the still-flourishing manuscript tradition, were more than sufficient to sustain interest in and knowledge of alchemy and assure preservation and dissemination of many authors and treatises that might otherwise have been lost. Renaissance readers who possessed one of these anthologies could expect authoritative texts of a large number of the choicest “flowers” of alchemical writing. Authors included would likely represent nearly the entire history of alchemical writing as it was then conceived: from the legendary Hermes Trismegistus, contemporary of Moses, down to those of the present and recent past; the originating cultures from which these treatises derived would have included the ancient Graeco-Egyptian era (roughly the first seven centuries AD), the Islamic period extending from the mid-seventh to the thirteenth century, followed by the Latin culture of medieval and Renaissance Europe.⁶ In several instances, as with Ashmole’s *Theatrum Chemicum Britannicum*, the texts were accompanied by extensive prefatory material, annotations, illustrations and indices. In short, whatever the purposes and intentions of our early modern reader, careful study of one of these miniature alchemical libraries would, at a minimum, have provided a solid, wide-ranging introduction to the art.

With a similar aim and method, albeit a more modest scale, *The Alchemy Reader: From Hermes Trismegistus to Isaac Newton* is an anthology of primary source readings – about thirty in all – dating from ancient times to the early eighteenth century. Included are works from Classical antiquity, the Graeco-Egyptian and Islamic periods, and the European Middle Ages and Renaissance. (Roughly one half of the selections were written during the sixteenth and seventeenth centuries or were then edited or translated from earlier manuscripts or printed editions.) This book offers an introduction to alchemy through the words of some of the art’s most notable authorities, and because the number of works from which to make selections is enormous, few readers will perhaps be satisfied with all of the readings. Invariably, questions of inclusion (or exclusion) will arise that even the ablest defence may not justify. For example, the brief selections from Plato and Aristotle are included, not because they deal with alchemy per se – although many spurious alchemical treatises came to be fathered upon both philosophers – but because they set forth important background ideas (e.g., on prime matter, the transformation of the elements, and the formation of metals) that were long-lived and exerted considerable influence on subsequent alchemical theory.

Definitions and origins

While our knowledge of many aspects of alchemy has greatly advanced in the past fifty years, we still lack the “comprehensive explanation,” the totalizing theory that would

⁵ The 1678 collection (sometimes dated 1677) was edited and translated by A. E. Waite as *The Hermetic Museum, Restored and Enlarged*, 2 vols. (London: James Elliott and Co., 1893).

⁶ In matters of dates and periodization, I am following those found in the still useful introductory work by John Read, *Prelude to Chemistry* (London: G. Bell and Sons, 1936).

4 INTRODUCTION

“coordinate the whole and make clear to the modern mind what was the purpose and underlying conception of the alchemist,” that A. J. Hopkins sought early in the twentieth century.⁷ In fact, current scholarly concern is much more with the variety and diversity of conceptions of alchemy, the multiplicity of its definitions, the theoretical and practical malleability that makes alchemy useful and attractive to a broad interdisciplinary audience, and its origins in several ancient cultures. If Hopkins’s search for a “unitary” explanation has not been entirely abandoned, it is now much more common to see alchemy as pluralistic rather than singular, as “alchemies” rather than “alchemy.”⁸ This will also be my approach in the balance of this introduction, where brief discussion of background topics will, it is hoped, provide the uninitiated reader with a core of useful information with which to engage the texts and an awareness of the complexities inherent in the materials and various approaches to them. In particular, readers are encouraged to pursue the further readings cited in the notes to this Introduction, the headnotes to individual selections, and in the bibliography. Background topics of special importance at the outset include basic definitions, types, and emphases of alchemy, brief consideration of places of origin, certain of its dominant principles and theories, and characterization of its written and pictorial traditions.

The Mirrour of Alchimy, a widely disseminated treatise long attributed to Roger Bacon, presents a useful instance of the problematical nature of defining alchemy. Chapter One “Of the Definitions of Alchimy” reads in its entirety:

In many ancient Bookes there are found many definitions of this Art, the intentions whereof we must consider in this Chapter. For *Hermes* saith of this Science: *Alchimy* is a Corporal Science simply composed of one and by one, naturally conjoyning things more precious, by knowledge and effect, and converting them by a naturall commixtion into a better kind. A certain other saith: *Alchimy* is a Science, teaching how to transforme any kind of mettall into another: and that by a proper medicine, as it appeareth by many Philosophers Bookes. *Alchimy* therefore is a science teaching how to make and compound a certain medicine, which is called *Elixir*, the which when it is cast upon mettals or imperfect bodies, doth fully perfect them in the verie projection.⁹

For the author of this tract and his authorities, alchemy is both “art” and “science” and involves the conversion of inferior metals into those of a “better kind” through the operation of a “proper medicine” or *Elixir*. No less important is the *method* by which this process is acquired: knowledge of alchemy – largely dependent on tradition and authority, despite frequent protestations to the contrary – is obtained through study of “Philosophers Bookes,” which were inevitably – again despite protestations – hermetic in their insistence

⁷ See note 1.

⁸ See, for example, Robert M. Schuler, “Some Spiritual Alchemies of Seventeenth-Century England,” *Journal of the History of Ideas* 41 (April–June 1980): 293–318.

⁹ Quoted from my edition of *The Mirror of Alchimy Composed by the Thrice-Famous and Learned Fryer, Roger Bachon* (New York and London: Garland Publishing, 1992), 3. This treatise bears the title of the small but influential collection of tracts in which it appears in both manuscript and printed versions. The collection was first printed in English in 1597, a version based directly on a French edition of 1557, which was, in turn, derived from the Latin edition printed in the aforementioned Latin collection, *De Alchemia* (Nuremberg, 1541).

on concealing, rather than revealing, plain truths. The author of this tract thus sets forth the primary meaning of *exoteric* alchemy as the “Corporal Science” concerned with the “perfecting” or physical transmutation of “mettals or imperfect bodies.” Behind this definition is alchemy’s centuries-old association with metallurgy, goldsmithery, glass-making, and the dyeing and tinting of metals.

For a definition that sees alchemy in very different terms, I turn to one that appeared less than ten years after publication of the English version of the *Mirror* (1597). Thomas Tymme, writing in *The Practise of Chymicall, and Hermetical Physicke* (1605), his translation of a work by Joseph Quersitanus, states:

For *Halchymie* tradeth not alone with transmutation of metals (as ignorant vulgars thinke: which error hath made them distaste that noble Science) but shee hath also a chyrurgical hand in the anatomizing of every mesenteriall veine of whole nature: Gods created handmaid, to conceive and bring forth his Creatures.¹⁰

For Tymme, “Divine *Halchymie*” has powerful theological, philosophical, and epistemological resonances, which distinguish it from exoteric alchemy’s preoccupation with metallic transmutation. Drawing on familiar tropes, Tymme describes God’s creation of the world and its end, the Last Judgment (“that great & generall refining day”), as alchemical processes. For mankind in the present, it is a means of gaining knowledge and understanding of nature, visible creation, and God; in these *esoteric* aspects it deserves to be regarded as “Gods created handmaid.” Although these two passages represent sharply opposing conceptions of alchemy, in point of fact, their differences were often muted even within the same author, treatise, or era: alchemy could at once display both exoteric and esoteric tendencies as the process for perfecting base metals was applied to the sinfully corrupt soul and psyche of man.

In discussing the origins of alchemy, historians generally review the various claims to primacy of Egypt, China, and India, examining the documents for evidence of exoteric or esoteric interests or of closely related bodies of knowledge. I will do little more than summarize some of this evidence and refer the reader to writings of the specialists. In discussing alchemical interests in ancient Egypt, John Read, for example, points to the early existence of highly developed craft traditions that relied on some knowledge of chemistry, such as metallurgy, gold-smithing (as early as 3000 BC), glass-making, and dyeing and tinting. For Read, linguistic evidence also suggests that the word “alchemy” itself may have had Egyptian origins: “Egypt, or Khem, the country of dark soil, the Hebrew ‘Land of Ham’, has often been pictured as the motherland of chemistry; so that later this ‘art of the dark country’ became known to Islam as *al Khem*, and through Islam to the Western world as *alchemy*.” Also pointing toward alchemy’s Egyptian origin is the centrality of Hermes Trismegistus (the “thrice-great”) in its written tradition; the Greek counterpart of the Egyptian moon god Thoth (also identified with Athothis

¹⁰ From Tymme’s dedication to Sir Charles Blunt, Earle of Devonshire, of Joseph Quersitanus, *The Practise of Chymicall, and Hermetical Physicke* . . . Translated by Thomas Tymme, Minister (London, 1605). His defence concludes: “This [alchemical] Phylosophy . . . is not of that kind which tendeth to vanity and deceit, but rather to profit and to edification, inducing first the knowledge of God, & secondly the way to find out true medicine in his creatures.”

6 INTRODUCTION

or Imhotep), Hermes, the Roman Mercury, has an extremely rich and diverse role in alchemical theory and practice.¹¹ The best known of the works attributed to this legendary founder and patron saint of alchemy is the *Emerald Table* (*Tabula Smaragdina*) included in this collection. As the result of these ancient connections and traditions, the way was prepared for new alchemical interests that flourished in the Graeco-Egyptian culture of the Alexandrian age (fourth century BC to the seventh century AD), to which I will turn shortly.

The standard work on ancient Chinese alchemy, as with perhaps all aspects of early Chinese science, has been written by Joseph Needham, who begins his study with explanation of its three, Taoist-inspired primary emphases: (1) the search for “macrobiotic” plants, i.e., those that, when specially prepared, can extend human life beyond the normal limits of old age, even to immortality; (2) the discovery of chemical and metallurgical processes both for making *imitation* gold, often with the intention to deceive (“aurifiction”), and for artificial production – from other substances – of what the alchemists regarded as *real* gold, as good as, if not better than, gold from the mines (“aurifaction”); and (3) the search for mineral, i.e., non-organic, elixirs and curatives. Needham concludes that in China, “Taoism, medicine and alchemy were always intimately connected, not only theoretically but in practising individuals time after time.”¹²

Chinese alchemy has been termed “older . . . than that of any other part of the world,” and one of its texts, the *Chou I Tshan Thung Chhi* (Book of the Kinship of the Three) of 142 AD, is regarded as the “first book on alchemy in Chinese (and, indeed, in any other) history.”¹³ That it was practiced before the Christian era is evidenced by a number of datable texts and the fact that an injunction prohibiting counterfeiting gold and threatening offenders with dire punishment was issued in 144 BC.¹⁴ While Chinese alchemy shares a number of characteristics with Western alchemy – its basis in a theory of the elements, correspondences between macrocosm and microcosm, its aurifictive and aurifactive aims, and its insistence on the moral purity of the practitioner – there are also important differences. The theory of elements in which it is grounded includes five elements, rather than the four familiar in the West: wood, fire, earth, metal and water. Through the powerful influence of Taoism, Chinese alchemy’s mystical tendencies emphasizing spiritual perfection, the desire for longevity, and the hope for immortality came to overshadow the search for the key to metallic transmutation. Closely related is a final important feature of Chinese alchemical theory: its doctrine of two opposing principles, the *Yin* and the *Yang*, which is thought to have originated about the sixth century BC: “*Yin* was feminine, negative, heavy and earthy; while *Yang* was masculine, positive, light, and fiery. *Yang* donates and *Yin* receives, . . . By their interaction, the two contraries were held to give rise to the five elements constituting the material of the world.”¹⁵ *Yang* was associated with the sun, *Yin* with the moon.

¹¹ *Prelude to Chemistry*, 4–5. For fuller treatment, see Jack Lindsay, *The Origins of Alchemy in Graeco-Roman Egypt* (London: Frederick Muller, 1970), chap. 2.

¹² Joseph Needham, *Science and Civilisation in China*, vol. 5 *Chemistry and Chemical Technology*, Pt. 2 *Spagyric Discovery and Invention: Magisteries of Gold and Immortality* (Cambridge: Cambridge University Press, 1974), 14–15. For a brief account, see E. J. Holmyard, *Alchemy* (Harmondsworth, Middlesex: Penguin, 1957), 31–40.

¹³ Needham, *Science and Civilisation in China*, vol. 2, *History of Scientific Thought*, 241, 441.

¹⁴ See especially Needham’s discussion of Ko Hung’s book *Pao Phu Tzu* (c. 320 BC), in *Science and Civilisation in China*, 5,2: 62–71; also Holmyard, *Alchemy*, 31.

¹⁵ Read, *Prelude to Chemistry*, 20.

In their sexual and planetary differentiations as well as qualitative meanings, these principles have close counterparts in the sulphur-mercury theory of Western alchemy.

An important link between Chinese alchemy and that practiced in ancient India is suggested by the fact that the term for the Hindu medical tradition, *ayurveda*, means the “science of longevity.” The concept of health implied therein is holistic, including psychological and spiritual as well as physical well being. Although his focus is primarily on medieval, tantric alchemy, David Gordon White has provided a larger historical outline of Indian alchemy (*rasayana*, or the science of rejuvenation) comprised of an early period (third to tenth centuries AD), in which gold-making was predominant; the period of tantric alchemy (tenth to thirteenth centuries), when emphasis was placed on “production of an elixir of immortal life with which to realize the supreme goals of bodily immortality, supernatural powers and a state of being identical to that of the supreme god Siva”; followed by a period of iatrochemical emphasis (the fourteenth through the twentieth centuries), in which mercurial and mineral formulations were prepared for medicinal use.¹⁶ Thus, the exoteric and esoteric emphases previously seen in the cultures of Egypt and China were present in India as well; indeed, early Indian alchemical interest appears to have arisen out of exchanges with China and its Taoist tradition, which flourished between the third and eighth centuries AD. Within Indian tantric alchemy alone, lasting into the fourteenth century, there is emphasis on both transmutation and spiritual perfectibility and immortality: “on the bodily transformation of the living practitioner into a perfected immortal, a Siddha, Vidyādhara, or a ‘second Siva.’”¹⁷ But in addition to its esoteric strains, tantric alchemy also included teachings regarding metals that closely parallel several important principles of Western alchemy: the idea that metals were living substances, that natural gold was the end result of long “gestation” within earth’s womb; and, adopting the metaphor of human and divine sexual differentiation and conjunction, that sulphur and mercury were the “reproductive fluids” from which metals arose.¹⁸

Greatly simplified, these are three views of alchemy’s origin and early development. It should not be assumed, however, that its rise in either the East or the West occurred in a state of independence and isolation from the other, for just as alchemical knowledge was freely exchanged between China and India, it may also have passed between East and West by way of Egypt and Mesopotamia. John Read has stated that despite many uncertainties concerning the beginnings of alchemy, “there is no doubt that the incipient art was influenced during the Alexandrian age (4th century BC to 7th century AD) by the application of Greek philosophy to the technique of the Egyptian and other ancient cultures.”¹⁹

Theory, rather than practice, is said to be the ancient Greeks’ chief contribution to alchemy’s development in the West. In addition to the theory of the *four elements* – earth, water, air, and fire – deriving from Empedocles, Plato, and Aristotle, and their *interconvertibility*,

¹⁶ David Gordon White, “The Ocean of Mercury: An Eleventh-Century Alchemical Text,” in *Religions of India in Practice*, ed. Donald S. Lopez, Jr. (Princeton: Princeton University Press, 1995), 281. See also White’s *The Alchemical Body: Siddha Traditions in Medieval India* (Chicago: University of Chicago Press, 1996).

¹⁷ White, *Alchemical Body*, 52–3, 62; White states, “The picture that emerges from this period is one of an ongoing exchange between India and China regarding matters alchemical, matters in which China, even if it appears always to have been ahead of India in innovations throughout this period, nonetheless looked to India for inspiration,” 63.

¹⁸ White, *Alchemical Body*, 189–93. ¹⁹ Read, *Prelude to Chemistry*, 8.

8 INTRODUCTION

articulated most influentially in Plato's *Timaeus*, Hopkins posited several additional "psychic influences" that mark alchemy's Greek inheritance. From them, alchemy derived its *hylozoistic* conception of the universe, the idea that external nature is alive and sentient. It also relied on a close and harmonious relationship between *macrocosm* and *microcosm*, both the universe and the little world of man being directed by the same powers and principles. Additionally, the alchemists drew from the Greeks their belief in *astrological influences* as keys to success in transmutation.²⁰ In the larger scheme, this extraordinarily complex network of correspondences that characterized the alchemists' cosmology survived into the seventeenth century, as seen in the wonderfully detailed engravings of Robert Fludd's *Utriusque cosmi... historia* (1617, 1619), or the "Mundus Elementaris" diagram appearing in the *Musaeum hermeticum reformatum et amplificatum*, published in Frankfurt in 1678 (fig. 1).

Largely through the efforts of Arabian scholars and translators working between the seventh and tenth centuries when the power of Islam was at its height, much that was most important in Greek philosophical and scientific thought was preserved, translated, expanded, and transmitted to the Latin Middle Ages and then on to the Renaissance. Alchemy proved to be of great interest to Moslem scholars, and the Greek writings that they were instrumental in preserving provided the basis for many of their own subsequent advances. In addition to the genuine philosophical works of Plato and Aristotle, dozens – possibly hundreds – of spurious works, many of them alchemical, were attributed to them by later writers seeking prestige and notoriety resulting from association with these venerable ancients. Among the specifically alchemical writers of the pre-Christian era was Bolos Democritus, known also as Pseudo-Democritus or Bolos of Mendes, a Greek living in Egypt around 200 BC when Alexandria was enjoying its height as a center of learning. Works such as his *Physica et Mystica* were extremely popular in antiquity, rivalling those of Aristotle on topics related to natural history. Combining fact and much that was magical and supernatural, Bolos's works appear to be unsystematic collections based on earlier sources (including works of Democritus, the atomist of the fifth century BC), and also recall the recipes for making gems, purple dyes, silver and gold, of the artisanal traditions of Mesopotamia and Egypt. Bolos is set apart from these early craftsmen, however, because of his interest in transmutation: his belief that the nature of metals could be fundamentally altered and that these alterations were indicated by changes in the colors of the materials during the process.²¹

Both the change and the continuity of alchemical interests among the later Greeks is evidenced by writings that pass under the name of Zosimos of Panopolis (*ca.* 300 AD) and, later, Stephanos of Alexandria, who lived during the seventh century. Chief among Zosimos's works is a twenty-eight book encyclopedia addressed to his "spiritual sister," Theosebeia, which contains material that is both original and drawn eclectically from Platonic, Gnostic, and Judaic traditions.²² Intent on setting forth alchemy's spiritual aspects,

²⁰ Hopkins, *Alchemy: Child of Greek Philosophy*, 28.

²¹ On Bolos, see Charles C. Gillispie, ed., *Dictionary of Scientific Biography* (New York: Charles Scribner's Sons, 1970), s.v. "Bolos of Mendes," by Jerry Stannard, and also Lindsay, *The Origins of Alchemy in Graeco-Roman Egypt*, chaps. 5 and 6.

²² On Zosimos, see *DSB*, s.v. "Zosimos of Panopolis," by M. Plessner, who notes that "it is not clear which texts can rightly be attributed to Zosimos. And the incomprehensibility of many of the writings makes textual criticism all the more difficult." See also Lindsay, *The Origins of Alchemy in Graeco-Roman Egypt*, chaps. 15 and 16, which include translated passages from Zosimos and commentary on them.

Zosimos's works often take the form of arcane allegorical visions or utilize highly cryptic symbols that appear to set forth instructions for the alchemical work, such as the famous Formula of the Crab.²³ In these respects, Zosimos employs the stylistic characteristics that, throughout its history, give alchemical discourse its easily recognizable stamp. Also representative of later tradition, as Plessner notes, is his expressed veneration for the great alchemical authorities of earlier times: Hermes, Agathodaemon, Zoroaster, Democritus, Ostanes, and Maria the Jewess; in fact, he alludes specifically to the *Corpus Hermeticum*, I and IV.²⁴

Thus, during the more than four hundred years separating Bolos and Zosimos, important changes occurred in the way alchemy was conceived, practiced, and written about. During this time it appears to have been transformed from what was essentially a metallurgical craft to a secret and mysterious hermetic art. According to E. J. Holmyard,

We now find [in the writings of Zosimos] a bewildering confusion of Egyptian magic, Greek philosophy, Gnosticism, Neo-platonism, Babylonian astrology, Christian theology, and pagan mythology, together with the enigmatical and allusive language that makes the interpretation of alchemical literature so difficult and so uncertain . . . In order to give some show of authority to their nebulous doctrines, alchemists busied themselves in composing treatises that they then attributed to any philosopher or celebrity of earlier times whom their whim led them to select. Thus works on alchemy were ascribed to Hermes, Plato, Moses, Miriam his sister, Theophrastus, Ostanes, Cleopatra, and Isis . . . Legends and myths were given alchemical interpretations: the golden fleece . . . was claimed to have been a manuscript on parchment, teaching the manner of making gold by alchemical art, and even the "Song of Solomon" was supposed to be an alchemical treatise couched in veiled language.²⁵

This eclecticism of style and content typifies alchemical discourse throughout its history.

Hermes Trismegistus and the *Hermetica*

In this section of the introduction devoted to the origins and early development of alchemy, it remains to give brief attention to the figure of Hermes Trismegistus and the rise of the *Corpus Hermeticum*, the early collections of alchemical tracts attributed to him. The eclecticism that, for Holmyard, characterizes the writings of Zosimos and his milieu applies as well to Hermes Trismegistus (Hermes the Thrice-Great), the Graeco-Egyptian god – or priest, or divine man, according to which authority one reads – who is alchemy's founder and chief patron, authority, inspiration, and guide. Hermes Trismegistus was a product of broad cultural synthesis, evolving from the fusion of two complex divinities, the Egyptian Thoth and the Greek Hermes, who were perceived to have much in common: their association with the moon, with medicine and magic, and the realm of the dead, to which

²³ See Read, *Prelude to Chemistry*, 40, where the Formula of the Crab is reproduced.

²⁴ See the excellent study by Garth Fowden, *The Egyptian Hermes: A Historical Approach to the Late Pagan Mind* (Cambridge: Cambridge University Press, 1986), 8.

²⁵ Holmyard, *Alchemy*, 25–6.

10 INTRODUCTION

they escorted the souls of the departed.²⁶ But in the Graeco-Egyptian (and later Roman) world of the first few centuries AD, Hermes Trismegistus burst forth from this familiar mythological model and assumed powers that were both greater and darker. In the Greek magical papyri, in Fowden's words, we see

the new syncretistic Hermes as a cosmic power, creator of heaven and earth and almighty world-ruler. Presiding over fate and justice, he is also lord of the night, and of death and its mysterious aftermath . . . He knows 'all that is hidden under the heavenly vault, and beneath the earth', and is accordingly much revered as a sender of oracles.²⁷

Symptomatic of the complexity of this composite divinity, as may be seen in the *Asclepius*, is the eventual appearance of a second, younger Hermes, grandson to the original Egyptian Hermes Thoth; he was the son of Agathos Daimon and the father of Tat. Within the somewhat bifurcated culture of Alexandrian Egypt, the older figure represented an earlier, distinctly Egyptian divinity and authorship; the later Hermes Trismegistus, without losing his "native" aspects, embodied a more humanized dimension associated with the Greek side of Egyptian culture. It was this younger Hermes who, in some quarters, was believed to have translated the sacred works of his grandfather into Greek. To add further to the confusion, controversy also arose as to whether Hermes Trismegistus originally was of a divine or human nature, when he lived, and whether he had prophesied the coming of Christianity.²⁸

As one might expect of so ancient, omniscient, and ambiguous a figure, writings attributed to Hermes Trismegistus were numerous and diverse. In his treatise on the *Mysteries of Egypt* (c. 300 AD), the Neoplatonist Iamblichus reports, for example, that "Hermes has put everything together in his twenty thousand books (as Seleucus listed them) or thirty-six thousand five hundred and fifty-five (as Manetho tells it)."²⁹ The actual number is, of course, far less; according to the latest editor and translator of the *Hermetica*, some two dozen very early works attributed to Hermes or his immediate circle have survived.³⁰ It is common practice to classify these works into two groups: first, the "technical" *Hermetica*, consisting of writings on magic (much of it on papyri), the occult properties of stones, astrology and astrological medicine, and alchemy, which generally "describe techniques

²⁶ On the complex nature of the Egyptian Thoth, see Fowden, *The Egyptian Hermes*, esp. 18–31, who notes that "so important were the moon's phases in determining the rhythms of Egyptian national life, that Thoth came to be regarded as the origin both of cosmic order and of religious and civil institutions. He presided over almost every aspect of the temple cults, law and the civil year, and in particular over the sacred rituals, texts and formulae, and the magic arts that were so closely related . . . By extension he came to be regarded as the lord of knowledge, language and all science – even as Understanding or Reason personified" (22).

²⁷ *The Egyptian Hermes*, 25.

²⁸ See *The Egyptian Hermes*, 22–31, and Frances Yates's controversial classic, *Giordano Bruno and the Hermetic Tradition* (Chicago: University of Chicago Press, 1964), chap. 1. On the conception of the younger Hermes as translator, into Greek, of the original sacred hieroglyphics of his grandfather, Thoth, see also Brian P. Copenhaver, trans. and ed., *Hermetica: The Greek "Corpus Hermeticum" and the Latin "Asclepius" in a New English Translation* (Cambridge: Cambridge University Press, 1992), xv–xvi. All subsequent references to and quotations from the *Hermetica* are from this edition.

²⁹ Quoted in Copenhaver, *Hermetica*, xvi. ³⁰ Copenhaver, *Hermetica*, xvi.