

Alchemical Reference in *Antony and Cleopatra*

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Lepidus: Your serpent of Egypt is bred now of your mud by the operation of your sun: so is your crocodile.

(II.vii.26-7)

The phrase "the operation of your sun" is a distinctly alchemical term. It refers to the *opus alchymicum* as a whole and is first known to occur in one of the oldest and most famous alchemical documents, the *Emerald Table*: "What I have said concerning the operation of the Sun is finished."¹

The *Tabula Smaragdina* or *Emerald Table*, ascribed to Hermes Trismegistus or the Egyptian Thoth, was not only one of the most important sources of medieval alchemy, but continued to be considered as the basis of all alchemical law by alchemists right through to the seventeenth century. The earliest known version was discovered by E. J. Holmyard in an eighth-century Arabic text, and it was translated into Latin around the time of the thirteenth century. The first English translation appears as a part of Roger Bacon's *The Mirror of Alchimy* (London 1597). The contents of the influential *Table* occur repeatedly in both Renaissance and seventeenth-century alchemical treatises, including John Dee's *Monas Hieroglyphica* (1564: reprinted in 1591 and included in the alchemical anthology *Theatrum Chemicum* in 1602), the *De Alchemia* (1541—*Table* included in full), George Ripley's *The Compound of Alchymie* (1591), William Bloomfield's *Bloomfield's Blossoms*, Thomas Norton's *Ordinal of Alchemy* (1477), and Michael Maier's *Atalanta Fugiens* (1617).² In *Euphrates or The Waters of the East*, the seventeenth-century English alchemist Thomas Vaughan refers to the *opus* as "the operation of the sun."³

In alchemy, the "Sun" or *Sol*, "Gold", and the Red Tincture, Stone or Elixir, were all synonyms.⁴ Sometimes "Gold" could refer simply to the result of the transmutation, while the "Sun" could refer to the operation of the "hot and dry" masculine principle of the work.⁵ But, in general, these terms were interchangeable so that the "Sun" or Philosophical Gold could be used to designate the transforming Stone or Tincture itself, as well as

- 1 Cited in John Read, *Through Alchemy to Chemistry*, London 1957, p. 24.
- 2 John Dee, *Monas Hieroglyphica*, 1564, trans. J. W. Hamilton-Jones, New York 1975, p. 18; George Ripley, "The Compound of Alchymie" in Elias Ashmole ed., *Theatrum Chemicum Britannicum*, 1652, New York and London 1967, pp. 138, 152; William Bloomfield, "Bloomfield's Blossoms" in Ashmole, *ibid.*, p. 319; Thomas Norton, *Ordinal of Alchemy*, 1477, Early English Text Society, London 1975; Michael Maier, *Atalanta Fugiens*, ed. De Jong, Leiden 1969, p. 53.
- 3 *The Works of Thomas Vaughan*, ed. A. E. Waite, New York 1968, p. 404. "Operation" was the common term which referred to the processes in the alchemical work such as calcination, separation, sublimation etc. (cf. Ripley, p. 165). Of the five other times that the word "operation" occurs in Shakespeare's plays, two refer to the chemical action of alcohol on the body (*Romeo and Juliet*, III.i.8; *Henry IV*, IV.3.94); two refer to the "mysteries" of the action or influence of the macrocosm on the microcosm (*King Lear*, I.i.110; *Troilus and Cressida*, III.iii.203); and one uses the word in the sense of "working" or "having efficacy" (*Antony and Cleopatra*, IV.xv.26).
- 4 Cf. Edward Kelly, "The Stone of the Philosophers" in *The Alchemical Writings of Edward Kelly*, ed. A. E. Waite, New York 1973, pp. 38-41; Ripley, p. 116; Arthur Dee, *Fasciculus Chemicus* trans. James Hasolle, London 1650, p. 8.
- 5 i.e. as opposed to the "moist and cold" feminine principle, the "Moon" or *Luna*; cf. Kelly, p. 38.

the product of the transmutation. It is for this reason that the *opus* was known as the "operation of the sun". Since alchemy was well known to Shakespeare and contemporary playwrights, the terms the alchemists used would have been familiar to them. Both George Ripley and Edward Kelly are mentioned in Ben Jonson's *The Alchemist* (II.v.8; IV.i.90) and the alchemical imagery in *King Lear* has been explored in Charles Nicholl's *The Chemical Theatre*.

The "serpent", the "mud" (of the Nile), and the "crocodile" which Lepidus mentions, are also alchemical terms, and so they could be seen as something more than just allusions to Egypt. Both the mud and the water of the Nile possessed mystical properties according to the Philosophers. In some treatises the black mud of the Nile was seen as the *prima materia* or undifferentiated matter out of which the miraculous Stone was formed.⁶ In others the Philosophers' Stone was reported to be found in the mud of the "streamings of the Nile."⁷ One of the earliest Egyptian alchemists, Ostanes, is recorded to have said "Go to the waters of the Nile and there you will find a stone that has a spirit."⁸ In certain treatises, the Nile's earth and water stood for the Stone or "divine" mercurial water of transformation. Thomas Vaughan called the transforming Mercurial water (or Stone) "the original of Nilus."⁹

Another commonly used name for the transforming elixir of the Nile waters was the Mercurial "serpent".¹⁰ Edward Kelly calls the Mercurial water "the wanton serpent that conceives of its own seed."¹¹ The alchemists used the names of all "serpents" interchangeably, so that serpent, crocodile, dragon, worm, salamander, cockatrice, and basilisk were all more or less identical, signifying the different stages in the production of the mysterious transforming *arcantum*.¹²

Under the "Crocodile" entry in the "Serpent" category of Edward Topsell's *The Historie of Foure-Footed Beastes* (London 1607), we find that "The Egyptians vulgarly call the Crocodile of *Nilus*, Cockatrice . . ." and under "Cockatrice" it says "This [cockatrice] is generated like other serpents of the aerth, for as auncient *Hermes* writeth, it is both false and impossible that a cockatrice should be hatched of a cock's Egg. The same writer maketh mention of a Bazeliske [another name for cockatrice] ingendered in dung, whereby he meaneth the Elixir of Life, wherewithall the *Alchimistes* convert metals" (p. 128). The cockatrice or crocodile appears as a synonym for the Elixir which "converts" or transmutes metals

6 Cf. *Turba Philosophorum*, 1593, trans. A. E. Waite, New York 1973, p. 195. Even the word "alchemy" from the Arabic "al-kimiya", "is said to derive from the ancient Egyptian *kême*—a reference to the 'black earth' which was a designation of Egypt and which may also have been a symbol of the alchemists' *materia prima*." (Titus Burckhardt, *Alchemy*, Baltimore 1971, p. 16.)

7 C. G. Jung, *Mysterium Coniunctionis*, Princeton 1977, p. 450.

8 C. G. Jung, *Psychology and Alchemy*, London 1968, p. 295.

9 Vaughan, *Works*, p. 247.

10 For "serpent" as *aqua permanens* or "divine" water see Jung, *Mysterium Coniunctionis*, pp. 503-5. The alchemical references to the "serpent" are too numerous to list—cf. Jung, *Psychology and Alchemy*, pp. 23, 26, 166, 252, 381, 434, 449, 452, fig. 130.

11 Kelly, p. 24.

12 For "crocodile" as an alternative form of the Mercurial "serpent", v. C. G. Jung, *Alchemical Studies*, London 1967, pp. 79, 257; and C. G. Jung, *Aion*, Princeton 1979, p. 244.

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in contemporary treatises. In "The Compound of Alchymie", Ripley writes:

And Made by crafte a Stone Celestyal:
Of Nature so fyrye that we yt call
Our *Baselysk*, otherwyse our *Cokatryse*,
Our great *Elixir* most of pryse.¹³

And the Elizabethan alchemist William Bloomfield calls the "blessed Stone"

Our greate *Elixer* most high of price,
Our *Azot*, our *Basaliske*, our *Adrop*, and our *Cockatrice*.¹⁴

The Arden edition of *Antony and Cleopatra* glosses "bred . . . mud" in the lines spoken by Lepidus as an example of the doctrine of "abiogenesis or equivocal generation"¹⁵ and gives an instance of this from Ben Jonson's *The Alchemist* (II.iii.171). However, the editor omits to give the context of this example from Subtle's speech. Subtle is here using the theory of spontaneous generation to prove his theory of breeding or generating gold. The alchemical theory of breeding gold was based on the same assumptions as the theory of spontaneous generation. The alchemists believed that all metals strove within the mud or womb of the earth to become the ultimate metal, gold. It was thought that if the metals were left in the earth long enough they would eventually evolve or mature into gold. It was the alchemists' aim to hasten the "natural" process of generation or breeding of metals, so that instead of allowing them to come to maturation in the womb of the earth, they attempted the process of generation in the "Egg" of the alchemical vessel or *vas*. In *The Alchemist*, when Subtle speaks of bees, hornets and wasps being generated from dung, he is using this to support the theory that metals can be generated from "seeds" of "gold" and that he can

produce the species of each metal
More perfect thence, than nature doth in earth.
(II.iii.167-70)

In "The Compound of Alchymie" Ripley writes that "our *Naturall Fyre*" will ensure that "Our *Mercury*, or *Sulphur*, or *Tyncture* pure:/Our *Soule*, our *Stone*" will be "In the Erthe ingendered."¹⁶ When Ripley writes the "Erthe" he is referring to the "mud" of the alchemists' *prima materia* out of which the Stone is made. Similarly, Edward Kelly speaks of the generation of the mercurial "serpent" or the Philosophers' quicksilver:

It is the wanton serpent that conceives of its own seed and brings forth on the same day. With its poison it destroys all things. It is volatile, but the wise make it abide the fire, and then it transmutes as it has been transmuted, and tinges as it has been tinged, and coagulates as it has been coagulated. Therefore is the generation of quicksilver to be preferred before all minerals.¹⁷

And so when Lepidus speaks of the "serpent of Egypt" and the "crocodile" being bred in the mud by "the operation of your sun", he is using the enigmatic phrases of the alchemists and referring to the generation of gold

13 Ripley, p. 127.

14 Bloomfield, p. 312.

15 *Antony and Cleopatra*, ed. M. R. Ridley, Arden edition 1954, p. 90.

16 Ripley, p. 125.

17 Kelly, pp. 24-5. Cf. also Arthur Dee, p. 5: "In our Stone, there are the Sun and the Moon vive, and they can generate other Suns and other Moons;" and *Arcanum* in Arthur Dee, p. 239: "The Vessell of Nature which is also called the Vessel [sic] of Philosophy, is the Earth of the Stone, or the *Femella* or *Matrix*, whereinto the Seed of the Male is received, it putrefies, and is prepared for generation."

and the transforming "serpent" or Stone from the "mud" of the Nile or the *prima materia* by the heat of the "Sun".

The Arden edition quotes from Abbott's *Shakespearean Grammar* concerning the repeated use of the word "your" in these particular lines of Lepidus. "Though in this instance the *your* may seem literally justified, the repetition of it indicates a colloquial vulgarity which suits the character of Lepidus." But while Lepidus may be drunk and uncontrolled, he is not liable to slip into this kind of usage of the word "your". He is, after all, "the third part of the world" (II.vii.89)—the third part of the ruling triumvirate of Rome. It is far more likely that Lepidus is employing the alchemical usage of "your" here. The alchemists almost always referred to the metals, materials, forces, arcane substances and vessels used in their work as "Our Gold", "Our Mercury", "Our Vessel", "Our Sulphur", "Our Sun", "Our Serpent". As Bloomfield writes: "Our greate *Elixir* most high of price,/ Our *Azot*, our *Basaliske*, our *Adrop*, and our *Cockatrice*."¹⁸ "Our Sun" and "Our gold" was not the ordinary "vulgar" gold but "Philosophical" gold, an arcane substance known only to the initiate. This knowledge distinguished the Philosophers from the ignorant and uninitiated "Foolosophers" as Bloomfield called them.¹⁹

In *The Alchemist*, Surly, who takes a cynical view of Subtle's alchemy, parodies the alchemists' repetitive use of "Our", the repeated "your" ironically echoing the alchemists' favoured possessive, "our"²⁰:

What else are all your terms,
Whereon no one o' your writers 'grees with other?
Of your elixir, your *lac virginis*,
Your stone, your medicine, and your chryso sperm,
Your sal, your sulphur, and your mercury,
Your oil of height, your tree of life, your blood,
Your marcasite, your tutty, your magnesia,
Your toad, your crow, your dragon, and your panther,
Your sun, your moon, your firmament, your adrop,
Your lato, azoch, zernich, chibrit, heautarit,
And then your red man, and your white woman,
With all your broths, your menstrues, and materials . . .

(II.iii.182-93)

Similarly, Lepidus, an outsider to the "mysteries" of Egypt into which Antony has been initiated, does not say "our serpent" and "our mud" in his alchemical jibe at Antony, but "your serpent", "your mud", "your sun" and "your crocodile".

Much of the alchemical imagery is Egyptian because Alexandria was, and still is, generally considered to be the matrix in which Western alchemy first developed (c. 300 BC).²¹ John Stillman writes that "The earliest alchemical writers whose writings have been in part at least preserved to us were manifestly Alexandrian Greek-Egyptians."²² The Egyptians were thought to be the originators of the alchemical mysteries in Shakespeare's day. In *The Alchemist*, Subtle defends the obscurity of the alchemical enigmas with these words:

Was not all the knowledge
Of the Egyptians writ in mystic symbols?
(II.iii.203-4)

18 Bloomfield, p. 312.

19 *Ibid.*, p. 309.

20 Charles Nicholl, *The Chemical Theatre*, London 1980, p. 97.

21 F. Sherwood Taylor, *The Alchemists*, St Albans 1976, p. 30.

22 John Maxson Stillman, *The Story of Alchemy and Early Chemistry*, New York 1960, p. 143.

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The alchemical tradition has always recognized Hermes Trismegistus or the Egyptian Thoth as its founder, and as the author of the *Emerald Table* which contained the basic laws of alchemy.²³ One of the many myths that surrounded the discovery of the *Emerald Table* related that it was found in the tomb of Hermes Trismegistus by Alexander the Great, conqueror of Egypt and founder of Alexandria.²⁴ Most of the early Alexandrian treatises were written under pseudonyms such as Isis, Moses, Hermes, Ostones, and Cleopatra.²⁵

If Shakespeare wished to add specific local colour to the Alexandrian material in *Antony and Cleopatra*, then the inclusion of alchemical imagery would be entirely appropriate. The allusion to "gold" and alchemy in the play belongs exclusively to the domain of Cleopatra—"Egypt" herself. Cleopatra's reference to the gilding "tinct" and "med'cine" (I.v.36-7) has been glossed as alchemical terminology by Ridley in the Arden edition. In her nostalgic reminiscences of Antony, Cleopatra tells Charmian how he called her "serpent of old Nile" (I.v.25-6). Enobarbus' description of Cleopatra in her barge is couched in alchemical images (II.ii.191-4)—the burning vessel on the water, the "gold", "silver", "purple", and "perfume" in association with each other, all have alchemical meanings.²⁶ And when Antony returns from fighting Caesar, Cleopatra offers him "An armour all of gold" (IV.viii.27-8). The alchemical images in the play are identified with Cleopatra, Alexandria, and Egypt, reinforcing the sense of the exotic and the mysterious.

23 Burckhardt, p. 16.

24 Read, p. 22. Alexander the Great was well known to the alchemists through the *Secreta Secretorum* which purported to be a treatise revealing the secret alchemical teachings and written by Aristotle to his pupil Alexander the Great. Kaeppl writes that "it became one of the most widely read books of the Middle Ages, and, consequently has had considerable influence on all European literature." (Carl Kaeppl, *Off the Beaten Track in the Classics*, Melbourne 1936, p. 139). An English translation was made by John Lydgate c. 1450, and excerpts are included in Ashmole.

25 F. Sherwood Taylor, p. 31.

26 For "gold" and "silver" see Ripley, p. 116 and Arthur Dee, p. 8. For "purple" see Martin Ruland the Elder, *A Lexicon of Alchemy*, 1612, trans. A. E. Waite, London 1964, p. 64. For "perfume" see Ripley, p. 178, Thomas Norton p. 62. For "fiery" or "burning water", see Kelly, pp. 127-8, Ruland, p. 229, Ripley, p. 167.