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THE ALCHEMICAL *KAIROS*: ZOSIMOS OF PANOPOLIS AND TIMELY TINCTURES

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Of all practitioners, Zosimos of Panopolis (fl. 4th c. AD) provides the most thorough picture of ancient alchemy. Through his works, we can piece together a sophisticated art which was intensely interested in physical scientific practice, but which also acted as a mystical ritual, aiding its practitioner on a religious quest to spiritual salvation and *gnosis*.¹ Within Zosimos' corpus, there are three texts in particular which illustrate a profound religio-philosophical ethic; these are: *The Visions*; *On the Letter Omega*; and *Final Count*.² These texts encourage their respective readers to target their alchemical practice at the acquisition of a specific product: something which Zosimos refers to as *kairikai katabaphai* (timely tinctures).³ On a fundamental level, the relationship between *kairos* and *kairikai* seems to suggest that *kairoi* are an important aspect of ancient alchemical practice. The first part of this article explores the use of the term *kairos* in the recipes which Zosimos provides throughout his oeuvre; in this, I shall argue

¹ The alchemical interface between the material and the spiritual has been extensively studied with respect to the Zosimean corpus. See esp. Fraser 2007. For discussion of the imagery in Zosimos' texts, especially *The Visions*, which presents material transformation and spiritual transformation as identical processes, see Knipe 2011.

² The versions from which I shall be working are, respectively, Mertens 1995, Jackson 1978, and Berthelot 1888. All translations are my own.

³ The principal target of several of Zosimos' treatises is a certain Theosebeia. It is possible that Zosimos worked as a client-scholar for Theosebeia's household, teaching and offering entertainment through various theurgic and magical practices (see further, Dufault 2019).

that this term represents a divinely-inspired, calculable moment in time, without which alchemical success is almost impossible. The second part explores more specifically the use of the aforementioned phrase, *kairikai katabaphai* – the timely tinctures – in Zosimean alchemy: what is the exact meaning of the phrase, and how does it fit into Zosimos' wider cosmological views? As I hope to demonstrate, for Zosimos, the *kairos* is a critical moment, imbued with divine essence, the observation of which is integral to reliable alchemical transformations.

1. *The kairos and katarchic astrology in the Zosimean corpus*

The importance of the *kairos* in Zosimos' alchemical tradition is summed up rather aptly in his treatise *On the Choice of a Favourable Moment* – the very existence of which speaks to this kairotic significance. The work opens with an emphatic declaration of the necessity of determining the opportune moment: «ἀναγκαῖον καὶ περὶ καιρῶν ζητήσωμεν».⁴ It is a *necessary* first step in the alchemical process, an idea which is reiterated in the final line of this same exposition on *kairoi*. The work closes with what appears to be a criticism of other alchemists, who perhaps do not pay close enough attention to the opportune moment to begin a certain step in the alchemical process, or who are perhaps too loose with their definition of the opportune moment. Zosimos states that he has heard others claim that their alchemical goal can happen at any moment, but declares firmly that he hesitates to believe them: «ἤκουσα δέ τινων ὅτι ἐν παντὶ καιρῷ γίνεται ἡ ἡμῶν ἐργασία, καὶ ἀμφιβάλλω».⁵ The *kairos*, in other words, is such a fundamental part of the alchemical process that Zosimos deems it unlikely that an alchemical tincture could even materialise without proper appreciation and utilisation of propitious timing. In this belief, Zosimos seems to differ from some other ancient specialists whose practices involved investigation into kairotic times. Vettius Valens (*fl.* 2nd c. AD), a Hellenistic astrologer, in his discussion of the application of katarchic astrology in his own life, wrote that undertaking a certain venture at an astrologically

⁴ Zosimos, *On the Choice of a Favourable Moment* 1.1.

⁵ Zosimos, *On the Choice of a Favourable Moment* 4.26-27.

unpropitious time (an ἄκαιρον) might lead to pain and grief, or (perhaps most appropriate in an alchemical context) a delay in the success of that venture («ἄκαιρον [...] καταρξάμενός τινος ἐπιζήμιον καὶ ἐπίλυπον ἢ ὑπερθετικὴν ἔκβασιν κατελαβόμεν»).⁶ It seems, then, that Valens considers an endeavour more likely to succeed if undertaken at a propitious time, without excluding the notion that it could be successful, albeit more improbably and in a more delayed fashion, if undertaken at a non-propitious time. That is to say, in an alchemical context, that it is not the case that an alchemical experiment could not result in a tincture if undertaken at an ἄκαιρον moment; rather, the tincture's appearance might be postponed until a more favourable point in time. Zosimos, however, seems to express total disbelief that a tincture might be formed – that an alchemical procedure would prove successful at all – if the alchemist were to act at an ἄκαιρον moment, demonstrating the fact that, for Zosimos, the determination of the opportune time to begin experimentation was a vital stage in his process.

The importance of timeliness in alchemy is further demonstrated in the introduction to *The Visions* (*Authentic Memoirs* 10), as Zosimos states that his techniques work «under the influence of the moon and of the measure of time» («σεληνιαζομένης τῆς φύσεως τῷ μέτρῳ τῷ χρονικῷ») and that his own practice «is underpinned by the waxing and waning» of the moon («ὑποβάλλεται καὶ τὴν λήξιν καὶ τὴν αὔξησιν»).⁷ Zosimean alchemy, in other words, seems to work in strict timely accordance with the natural rhythmic patterns of the cosmos. There is a certain harmony to the practice – a fact which Zosimos himself acknowledges, asserting that alchemical transmutation operates «according to the rigour of harmony» («κατὰ σύστασιν ἁρμονίας»).⁸ To this end, it is no surprise that several of the recipes which Zosimos pens in the more technical works of his corpus include precise times (*kairoi*) to action different stages of the alchemical process in

⁶ Vettius Valens, *Anthologies* 5 3.20-22.

⁷ Zosimos, *The Visions* 10.12-15. NB that this section of *The Visions* 10 has diverging manuscript traditions: the only differences in the quoted lines, however, are that the A, M', and B manuscripts read ὑποβάλλει at 10.14. This does not seem to affect my argument.

⁸ Zosimos, *The Visions* 10.31.

accordance with the movement of celestial bodies. As shall be explored, the cyclical predictability of planetary movement has many interesting repercussions on the identification of *kairoi*. Throughout the remainder of Zosimos' text on propitious timing for alchemy, he discusses the opportune moment for a host of different experiments and tinctures, but seems to draw particular attention to the golden colouring of copper and sulphur, for which he says that the opportune moment is the summer, because the sun has a favourable nature for certain operations (in this case, concerning aurefaction) («καιρός γὰρ ὁ θερινός, ὅτε ὁ ἥλιος φύσιν ἔχει πρὸς τὸ πρᾶγμα»)⁹ A similar idea is presented in the treatise *On Virtue and Interpretation*, in which Zosimos discusses the effects which the moon has on *lunarised* magnesia:

καὶ γὰρ σεληνιαζεται ἡ φύσις τῆς μαγνησίας σεληνοειδῆς ὅλη γινομένη, καὶ κατὰ καιρὸν τῆς ἀπορίας ἐκφυσᾶται...

The nature of *lunarised* magnesia is wholly affected by the moon, and develops at an opportune moment, which is the waning of the moon [...].¹⁰

It is clear that Zosimos observes certain sympathetic parallels and an influential relationship between celestial bodies and the matter with which he is working, such that his experimentation must be done at the opportune time in accordance with planetary movement. A final example which further demonstrates this complex relationship between timeliness, the movement of celestial bodies, and alchemical success can be found in a treatise *On Quicklime*, in which Zosimos provides a recipe for a substance which he refers to as the «ungiven gift from God» («ἀδότητον καὶ θεοδώρητον»)¹¹ Zosimos instructs his reader to take alabaster, cook it intermittently with lime and vinegar, and to leave the resulting substance exposed to the sun and dew for forty days, at the appointed time («καὶ ἕασον ἡμέρας τεσσαράκοντα ἐν ἡλίῳ καὶ δρόσῳ

⁹ Zosimos, *On the Choice of a Favourable Moment* 2.5-6.

¹⁰ Zosimos, *On Virtue and Interpretation* 9.16-18.

¹¹ Zosimos, *On Quicklime* 1.16-17.

τῆ ἐμπροθέσμῳ»¹² Whilst there is no explicit mention of *kairos*, the notion of harmony with the cycles of natural phenomena and the use of ἐμπρόθεσμος continue to stress the importance of timeliness in Zosimean alchemy, particularly with reference to timeliness in accordance with celestial bodies. Tapping into these natural cycles, before methodically and harmoniously employing them to imitate the transformations which nature itself is able to bring about, is a key theoretical and philosophical basis for Zosimos' practice.¹³

These notions are clearly dependent upon the theoretical framework of cosmic sympathy, which posits a metaphysical connection between celestial bodies and earthly matter, such that the positions and movements of planets have an impact on events and experiences on Earth. More than this, however, it is no coincidence that operations concerning gold were thought to rely upon the sun to determine their *kairos*, and that operations concerning a *lunarised* substance were thought to rely upon the moon, as in the first and second examples above. This particular type of cosmic sympathy is particularly pertinent to Zosimos' corpus since the connection between certain celestial bodies and certain metals finds deep roots in the Greco-Egyptian alchemical corpus, as well as in the philosophical circles with which Zosimos would have been familiar. As Proclus, a Neoplatonic philosopher who likely lived about a century after Zosimos, explains in his *Commentary on Plato's Timaeus*, there was a longstanding belief that metals were created on planets by the celestial powers which governed them, and that there is therefore a sympathetic relationship between one metal and its corresponding planetary power («τὸ μὲν εἰς τήνδε, τὸ δὲ εἰς ἄλλην δύναμιν ἀναέμπουσιν»¹⁴ As

¹² Zosimos, *Authentic Memoirs* 13.11-12. This interpretation of τῆ ἐμπροθέσμῳ is based upon Berthelot 1888, who translates as: «à l'époque fixée». Cf. Mertens 1995, who translates as «qui se manifeste pendant ce délai». This interpretation, however, also evokes a sense of alchemy working in accordance with natural temporal rhythms.

¹³ See Dufault 2015, esp. 242-244; Viano 2015, 322-325.

¹⁴ Proclus, *Commentary on Plato's Timaeus* 1.14. The same idea is recognised as being related to Mithraic doctrine by Origen (*Against Celsus* 6.22) – Mithraism is a mystery to which Zosimos attributes a degree of alchemical authority (*Authentic Memoirs* 13.21-2). Whilst Proclus states that he himself does not agree with this theory (believing that the planetary gods would not divide metals between themselves, and that all metals are the offspring of them all («πάντων γάρ ἐστιν ἕκγονα», 1.14), the

Proclus discusses, there are connections between: gold and the sun; silver and the moon; lead and Saturn; and iron and Mars.¹⁵ Cosmic sympathy is also mentioned in a body of Egyptian religio-mystical treatises with which Zosimos was certainly familiar, to the extent that he treats it as something of an authority on several esoteric areas: the philosophical *Hermetica*. One particular text, the *Kore Kosmou*, involves Isis teaching her son, Horus, about the nature of God and the special role in the cosmos which humanity has because of their ability to acquire esoteric knowledge. This treatise includes a discussion of the teachings of Hermes Trismegistos, about astrology and the relationship between earthly sacred procedures and the heavens:

ο἗τοι, παρ' Ἑρμοῦ μαθόντες ὡς τὰ κάτω συμπαθεῖν τοῖς ἄνω ὑπὸ τοῦ δημιουργοῦ διατάγη, τὰς προσκαθέτους τοῖς ἐν οὐρανῷ μυστηρίοις ἱεροποιίας ἀνέστησαν ἐν γῆ.

These men, having learned from Hermes that things on Earth are sympathetically aligned by the Demiurge to things above, set up sacred procedures which are vertically connected to the mysteries of the heavens.¹⁶

It is unclear what exactly is meant by «sacred procedures» («ἱεροποιία»), but we might reasonably assume that this refers to theurgic ritual practices aimed at divine revelation; this is a category into which alchemy, at least as far as Zosimos understands it, as a practice which synthesises natural philosophy with spiritual mysticism, must fall.¹⁷ A

fact that Zosimos, in the explored examples, associates the kairotic moments for experiments involving certain metals with the planets associated with those metals seems to suggest that he does indeed believe in planetary correspondence. See also Zosimos' *The True Book of Sophe the Egyptian* (1.13), in which he draws a link between gold being king on Earth, just as the sun is king in heaven («βασιλεὺς... ἐπὶ γῆς, ὡς ὁ ἥλιος ἐν οὐρανῷ»), displaying some notion of a mystical association between them.

¹⁵ Although they are not discussed by Proclus, there are also longstanding alchemical links between tin and Jupiter, copper and Venus, and quicksilver and Mercury.

¹⁶ *Kore Kosmou* 68.

¹⁷ The extent to which alchemy could be considered a theurgic rite will be presented at the end of the present section. This is discussed in a speculative epilogue in

text, then, which Zosimos deems authoritative seems to declare that there is a sympathetic alignment between celestial bodies and alchemical practice.¹⁸ A clear example of this planetary correspondence in practice occurs in Zosimos' aforementioned claim that the summer, when the sun is at its 'strongest', is the most opportune moment for aurefaction – this is an application of the theoretical *sympatheia* between the sun and gold.

Owing to the fact that planetary movement is so regular and predictable, this cosmic sympathetic relationship between a certain celestial body and a certain metal's kairotic moment means that *kairos* becomes a foreseeable, calculable point in time. Recall Zosimos' description of the effects which the waning of the moon has on *lunarised* magnesia. Although the substance in question is not silver, a sympathetic relationship was still believed to have existed with the moon because of the magnesia's nature of being *σεληνοειδής* (*lunarised* / looking like the moon).¹⁹ This correspondence leads Zosimos to understand that magnesia would be influenced by the movement, position, and appearance of the lunar body in its waning phase; given that this period of waning can be accurately and reliably predicted as occurring during every other cycle of fifteen days, or thereabouts, so too can the *kairos* for experiments involving magnesia be projected ahead of time. In addition to their being predictable, a parallel nuance of these alchemical *kairoi* from the Zosimean corpus – the summer, when the moon wanes, and after a forty-day period – is that they are periodic. It is not the case that the alchemist must wait for a specific moment which is never to return; rather, the alchemist must wait for a precise moment which can be predicted and which *will* return – Zosimos does not mention a specific summer, nor a specific period of lunar waning, nor a specific

Stolzenberg 1999, but the association is in need of further research and a more comprehensive exploration.

¹⁸ See also *Isis to Horus* 1 on the importance of *kairoi* (briefly discussed by Festugière 1944, 256, n. 3).

¹⁹ One might also speculate an association between magnesia and the moon based on magnetism; periclase is magnetic, while the moon has magnetic associations because of its influence over the tides.

forty-day period.²⁰ This seems to be a crucial part of the involvement of temporal instruction in what are presumably supposed to be taken as timeless recipes for reproducible tinctures. In other words, several opportune, kairotic moments for a certain alchemical operation can be calculated ahead of time.

The practice of determining a *kairos* through the observation and interpretation of planetary movement, under the theoretical basis of celestial *sympatheia*, is evidently connected with the practice of katarthic astrology. This practice, it should be noted, is rather dissimilar to the fatalistic horoscopes with which people might be more familiar today; nevertheless, it was an important part of the ancient astrological umbrella. Katarthic astrology, also known as electional astrology, was a divinatory practice which involved using planetary movements to predict the most opportune time (the *katarche*) to begin a venture, such as alchemical experimentation.²¹ If one considers the aforementioned examples of alchemical *kairoi*, it may not be immediately obvious that the summer, a period of lunar waning, and a period of forty days are indeed astrological observations – there is seemingly no involvement of horoscopy, *horologoi*, or the astrological charts which characterise the practice in the modern imagination. These examples, however, still operate based on a simplified study of the movements and positions of celestial bodies understood to have a sympathetic influence on matters in the natural world; in other words, they are indeed still natural astrological observations. Katarthic astrology and the influence of astrology on Zosimos' practice (as well as the placement of astrology within his own conception of cosmological reality) will be discussed in greater detail in the next section of this article; for now, it will suffice to say that some ancient practitioners seem to have attributed a sense of religiosity to the astrological determination of *katarchai*, suggesting that Zosimos' *kairos* may also be a moment coloured with religious significance –

²⁰ Though we might reasonably assume that certain factors – the heat of the summer or visibility of the waning moon – were thought to have had an influence on the potency of the sympathy, and therefore the alchemical change.

²¹ See Hübner 2003 and (esp.) Gordon 2013, 102-108 for the technicalities and techniques involved in katarthic astrological practice (based on several Arabic passages, but also including some sections of the *CCAG*).

not unsurprising, given the intimate parallels between technique and spirituality which are evident in Zosimean thought.²² Iamblichus, a contemporary of Zosimos, in his treatise *On Egyptian Mysteries*, writes that the gods passed down certain procedures to humans, and that the knowledge which these procedures provide through correct divinatory praxis has a divine character («καὶ περὶ πάσας ἐκ θεῶν παραδοθείσας ἀνθρώποις ἐπιστήμας [...] τὸ θεῖον ἦθος τῆς γνώσεως»).²³ In this way, the revelations gained from sacred divination («τῆς ἱερᾶς μαντείας») – the *kairos* gained from the astrological interpretation of celestial bodies – is explicitly said to be divinely inspired.²⁴ Iamblichus' Neoplatonic attachment of divine sanction to katarchic astrology and the interpretation of the *kairos* has precedent in the Platonic tradition. In his *Laws*, Plato attempts to disprove the notion that all human affairs are simply a matter of chance, and that there is no specific moment when an action ought to take place; as Plato says, God controls all, and fortune and *kairos* work with God over all human matters («θεὸς μὲν πάντα καὶ μετὰ θεοῦ τύχη καὶ καιρὸς τὰνθρώπινα διακυβερνῶσι ζύμπαντα»).²⁵ It seems, then, that determination of the kairoic moment, through proper astrological practice, was considered in the Neoplatonic circles which so heavily influenced Zosimos to be a divinely-inspired revelation, celestial bodies being the point of connection between the divine realm and the human. This divine role which the *kairos* seems to have had in ancient esoteric circles is never explicitly mentioned by Zosimos; he does, however, consider that the *kairos* is a vital part of the alchemical process, which he in turn considers to be a divinely-inspired praxis.²⁶

I would like to conclude this section by drawing a speculative parallel. Beyond astrology, the sacred nature of the *kairos* is an

²² See Becker 2008, 6 and Greenbaum 2021, 116 for the ancient belief in the divine sanction for katarchic astrology.

²³ Iamblichus, *De Mysteriis* 9.4. Iamblichus does not explicitly mention katarchic astrology, but, as Lawrence 2021, 276 notes, the determining of *katarchai* «may be the most apparent use of astrology in theurgic rites».

²⁴ Iamblichus, *De Mysteriis* 9.5.

²⁵ Plato, *Laws*, VI, 709b.

²⁶ For wider associations between alchemy and divine inspiration, with particular reference to ancient Gnostic circles and a fascinating motif in the *Gospel of Philip* of God as the ultimate alchemist, see Painchaud & Charron 2001.

emphasised characteristic in another area of the ancient religious world: theurgy.²⁷ Theurgy is defined as a set of ritual practices which invoke supernatural forces, often with the ultimate aim of mystical revelation or spiritual *henosis*. This seems to be congruent with Zosimos' view of alchemy: in his *Final Count*, he assures Theosebeia that, having achieved the alchemical *magnum opus*, she ought to spit on matter in an ultimate display of Gnostic revelation and rush up to the celestial realms to reside with other spiritual beings, her own kind («τὸ γένος τὸ σόν»).²⁸ Zosimos, then, appears to regard alchemy as a physical practice aimed at both material purification and spiritual ascent. Whilst a more comprehensive study is required to fully demonstrate that Zosimos considered alchemy a form of Gnostic theurgy, it would be worth briefly examining the relationship between *kairos* and theurgy in Zosimos' milieu – an examination which, I believe, uncovers an interesting area of comparison.²⁹ The role which the *kairos* played in other forms of ancient theurgy has been thoroughly covered in the scholarship on late antique religio-philosophical trends; I wish simply to draw attention to the kairotic ideas of Iamblichus, for whom theurgic orthopraxis is of great interest.³⁰ In his treatise *On Egyptian Mysteries*, Iamblichus discusses an Egyptian claim that ascent to higher realms can be achieved through theurgy, and that this practice is nothing more than study of the *kairos*:

[...] ἀλλὰ καὶ διὰ τῆς ἱερατικῆς θεουργίας ἀναβαίνειν ἐπὶ τὰ ὑψηλότερα καὶ καθολικώτερα καὶ τῆς εἰμαρμένης ὑπερκείμενα παραγγέλλουσι πρὸς τὸν θεὸν καὶ δημιουργόν, μήτε ὕλην προσποιουμένους μήτε ἄλλο τι προσπαραλαμβάνοντας ἢ μόνον καιροῦ παρατήρησιν.

[...] but they recommend ascent, through sacred theurgy, to higher, more universal realms, which are superior to Fate, to God and the Demiurge without making use of matter nor employing

²⁷ See esp. Addey 2021.

²⁸ Zosimos, *Final Count* 8.16. See Fraser 2007.

²⁹ This is discussed further in Stolzenberg 1999, 29-31 and Grimes 2018, 218-228.

³⁰ See Addey 2014, 211.

any method other than careful observation of the opportune moment.³¹

For Iamblichus, the calculation and observation of the opportune moment is so sacred, so religiously charged, that it is clearly a crucial part of one's attempt at spiritual ascent. Zosimos' conception of spiritual ascent clearly requires more than the simple study of *kairoi*; for him, the *kairos* is a vital element of a wider praxis of metallurgical and spiritual purification. If, however, we are to speculate that Zosimos viewed alchemy in theurgic terms, we might reasonably assume that he held in high regard many of the aspects of theurgy which his contemporary held, including timeliness. Indeed, as this section has hoped to demonstrate, determination of the *kairos* was a fundamental part of Zosimos' alchemical practice, just as it was fundamental to a host of theurgic rites. For Zosimos, the *kairos* was a divinely-inspired, yet predictable and periodic, point at which the cosmos perfectly harmonised for the completion of a particular experiment.³² It is a hugely significant part of his alchemical technique, without which the desired tincture is unlikely to materialise.

2. *Kairikai katabaphai: a matter of alchemical and astrological orthopraxis*

Whilst the term *kairos* appears in the Zosimean corpus fourteen times, the term *kairikos* ('in time with *kairos*') appears twenty-four times. The reason for this frequency is the aforementioned phrase which Zosimos repeatedly employs for the alchemical tinctures which occur after successful experimentation: *kairikai katabaphai*. That this fundamental term involves a cognate of *kairos* suggests the importance which Zosimos assigns to timeliness in his experimentation – the concept could not be more baked into alchemical success. To understand the exact nuances of Zosimos' use of this phrase, it is necessary to first

³¹ Iamblichus, *De Mysteriis* 8.4. See also 7.1, 8.5, and 8.6 for further discussion of the *kairos* at which certain theurgic rites should be undertaken.

³² On cosmic harmony in Zosimos' corpus, see Dufault 2015.

explore Zosimos' own religious views in order to establish the celestial and cosmological hierarchies which he believed would influence his practice, on both a material and a spiritual level.

Although Gnosticism is subject to much controversy about its status as a useful religious classification, I find it fair to refer to Zosimos as a Gnostic, in so far as he doubtlessly displays basic Gnostic tendencies: dualism; an importance placed on *gnosis* as a means of salvation; observance of a basic Gnostic cosmology etc.³³ In no other section of Zosimos' corpus are these tendencies more pronounced than in the account he offers of the creation (or at least the materialisation) of mankind:

ὄτε ἦν Φῶς ἐν τῷ παραδείσῳ διαπνεόμενος, ὑπὸ τῆς εἰμαρμένης ἔπεισαν αὐτὸν ὡς ἄκακον καὶ ἀνενέργητον ἐνδύσασθαι τὸν παρ ' αὐτῶν Ἀδάμ, τὸν ἐκ τῆς εἰμαρμένης, τὸν ἐκ τῶν τεσσάρων στοιχείων. ὁ δὲ διὰ τὸ ἄκακον οὐκ ἀπεστράφη · οἱ δὲ ἐκαυχῶντο ὡς δεδουλαγωγημένου αὐτοῦ.

When Phos was gliding in the breeze in paradise,³⁴ they [the daemons], on the order of Fate, persuaded him, since he was pure and without toil, to clothe himself with their Adam, which came from Fate, and which was composed of the four elements. And Phos-Adam, owing to his purity, did not refuse; and they [the daemons] gloated that he had been enslaved.³⁵

In Zosimos' worldview, there is a hierarchy of celestial agents. Although there does not seem to be one definitive Gnostic cosmology, a general pecking order of the powers relevant to the present investigation can be reliably constructed: God – the Monad, considered to be beyond comprehension and beyond the material universe; the Demiurge –

³³ See further Grimes 2018, 164. An enumeration of Zosimos' views which align with general Gnostic tendencies can be found in Mertens 2002, 172-174.

³⁴ That is to say, being carried by the wind, since Phos at this stage is a πνευματικός ἄνθρωπος. For this play on *pneuma* meaning all of breath, wind, and spirit, see Jackson 1978, 50.

³⁵ Zosimos, *On the Letter Omega* 11.1-6. For a Gnostic exposition of this myth, see Rinotas 2021, 6-9. A near identical account is told in the Gnostic *Apocryphon of John*.

the ignorant or evil creator of the physical world, over which he may retain control; the Chronocrators – the rulers of time, associated with the planets and astrological cycles; the Archons – lower-level celestial beings, associated with Fate, who bridge the gap between the sensible world and the divine; the daemons – the earthly attendants who fulfil the will of the Archons; and humans.³⁶ In short, for Zosimos, the sensible world of physical reality is dominated by the Archons and daemons who malevolently trapped humanity in the material world. That daemons had great influence over mankind seems to have been a core belief in the ancient esoteric circles with which Zosimos was involved. In the *Corpus Hermeticum*, it is made clear that just as the daemons are dependent on the spheres (of the Archons), so too are humans dependent on the daemons («τούτων δὲ τῶν σφαιρῶν ἤρτηνται οἱ δαίμονες, τῶν δὲ δαιμόνων οἱ ἄνθρωποι»³⁷). These celestial figures were believed to oscillate between benevolence and malevolence; though, as Zosimos' Phos-Adam myth highlights, their proclivity for evil could have disastrous consequences for unsuspecting humans.³⁸ It is for this reason that Zosimos claims that men who associate themselves too much with daemons and materiality (i.e. his rival alchemists) are not acceptable to either God or men of philosophy («ἀλλ' οἱ τοιοῦτοι οὐκ ἀποδεκτοὶ οὔτε παρὰ θεῶ οὔτε φιλοσόφοις ἀνθρώποις»³⁹).

These daemoniac figures, so Zosimos believed, were also inextricably linked to the practice of astrology. Whilst the daemons had no direct influence over planetary movement or the fate of an individual or enterprise, they were considered the terrestrial instruments of the Archons and Chronocrators who did have control over these things; in other words, they enforced onto mankind outcomes which could be positive or negative, according to the changing times and the consequences attached to such times by their celestial superiors.⁴⁰

³⁶ See Jonas 1958, 42-44. See also, Fraser 2004, 131.

³⁷ *Corpus Hermeticum* 16.17.

³⁸ Zosimos, *On the Letter Omega* 2.

³⁹ Zosimos, *On the Letter Omega* 3.1-2.

⁴⁰ Zosimos, *On the Letter Omega* 2. This has been extensively discussed in previous scholarship: see, Festugière 1944, 264, n. 10; Jackson 1978, 42, n. 9; and Stolzenberg 1999, 5-8.

If an Archon or Chronocrator decided upon favourable astrological conditions (a *kairos*), the daemon would be beneficent, an alchemist's experiment would succeed, and a tincture would be formed; if, on the other hand, an Archon or Chronocrator decided upon unfavourable astrological conditions, the daemon would be maleficent, and the alchemist's experiment would fail.

The influence of these temperamental daemonic forces over alchemical practice clearly did not sit comfortably with Zosimos. Their unpredictability made for unreliable experimentation, and their being lesser celestial figures than God himself meant that attempts to appease them for favour naturally resulted in a distortion of proper religious practice. In his treatise *On the Letter Omega*, Zosimos criticises his rival alchemists for their overreliance on daemonic support and the undue faith which they afforded them:

[...] καὶ οὐδεὶς λόγος αὐτοὺς ἀποδεικτικὸς ἔπεισεν ὅτι ἀλήθειά ἐστιν εἰ μὴ ὁ ἴδιος αὐτῶν δαίμων, κατὰ τοὺς χρόνους τῆς αὐτῶν εἰμαρμένης μεταβληθεὶς, παραλαβόντος αὐτοὺς κακοποιῶ δέ, εἶπεν. καὶ τῆς τέχνης καὶ τῆς εὐδαιμονίας αὐτῶν πάσης κωλυθείσης, καὶ ἐφ' ἑκάτερα τραπέντων τῶν αὐτῶν τύχη ῥημάτων, μόλις ἐκ τῶν ἐναργῶν τῆς εἰμαρμένης αὐτῶν ἀποδείξεων ὠμολόγησαν εἶναι τι καὶ μετ' ἐκείνων ὧν πρότερον ἐφρόνου.

[...] and no proof-affording argument persuades them that these things are true, not unless their own daemon proves it, when that daemon is changed according to the changing times of Fate, and a maleficent one associates themselves with them. And so, with their craft and all of their success being hindered, *and with their recipes turning from success to failure by chance*, because of this clear evidence from fate, they unwillingly confess that this is the case, even for the recipes which they originally regarded highly.⁴¹

Zosimos' rivals, as the highlighted portion of the text in particular accentuates, blindly rely on daemons for good favour in their alchemical procedures; their experiments succeed or fail based on chance alone

⁴¹ Zosimos, *On the Letter Omega* 2.6-14. Emphasis is my own.

(τύχη). As he continues in the next two sections of this text, these people are mindless («ἄνοιας»); they imagine nothing beyond the material and, although they are followers of Fate («εἰμαρμένη ἀκολουθοῦντες»), they do not even understand Fate, who leads them justly («μηδὲν τῶν ἀσωμάτων φανταζομένους, μήτε αὐτὴν τὴν εἰμαρμένην τὴν αὐτοῦς ἄγουσαν δικαίως»)⁴² Fate is presented as a force for good; Fate will eventually bring about a kairotic moment when the tinctures will succeed, but Zosimos bemoans the fact that his rivals mindlessly do not pay her proper attention.⁴³ They do not practice astrology and they do not attempt to observe the *kairos*, but will perform an experiment at any time («ἐν παντὶ καιρῷ»), and simply encourage their daemon to give them aid with prayers and nourishing sacrifices.⁴⁴ His rivals attempt to create *kairikai katabaphai*, but do not care to determine what *kairikai* might actually mean, hence their unreliable successes. It seems to me that Zosimos observes two fundamental flaws in his rivals' alchemical practices: firstly, on a technical level, they do not wait for the opportune moment, but rely solely and ignorantly on Fate and chance; and secondly, on a spiritual level, their attempts to placate and satiate daemonic forces mean that they pay less attention to God himself, and effectively worship the celestial beings who trapped mankind away from the heavens. Zosimos does, however, provide solutions. He offers Theosebeia advice on astrological, alchemical, and spiritual orthopraxis, so that she too might reliably achieve successful tinctures, unlike his rivals who operate carelessly; this advice is: to perform certain theurgic rituals and prayers to ensure proper religious conduct; and to turn her practice to the production of a different type of tincture, one which operates totally independently of daemonic influence, but which is still dependent upon the *kairos*. In this way, Zosimos' guidance for proper

⁴² Zosimos, *On the Letter Omega* 3.7, 4.3-4.

⁴³ Later in this same treatise, Zosimos claims that philosophers should be a class above Fate («φιλοσόφων γένος ἀνώτερον τῆς εἰμαρμένης») (*On the Letter Omega* 5). Zosimos' anti-fatalistic stance here can be reconciled with his belief in astrology and with the significance which he attaches to the *kairos*. Zosimos' astrological practice is purely for reasons of divine providence. His aims are not a deterministic prophecy of the future per se, but some kind of sacred revelation about the kairotic *katarche* for his experimentation.

⁴⁴ Zosimos, *On the Choice of a Favourable Moment* 4.26.

practice is dualistic – for him, orthopraxis is a mixture of the spiritual *and* the technical.

As he relates to Theosebeia, Zosimos encourages an internal ritual of contemplation and calmness to bring the divine to her:

καθεζομένη δὲ τῷ σώματι, καθέζου καὶ τοῖς πάθεσιν, ἐπιθυμία, ἡδονῆ, θυμῷ, λύπη [...] καὶ οὕτως αὐτήν διευθύνουσα προσκαλέσῃ πρὸς ἑαυτήν τὸ θεῖον

Being calm in your body, calm yourself also as to your emotions, desire, pleasure, anger, and anguish [...] and, in this way, being calm, you will call the divine to yourself.⁴⁵

This instruction is echoed in *On the Letter Omega*, in which Zosimos declares that a true philosopher must go on a spiritual, contemplative journey to understand themselves («πορεύεσθαι δὲ διὰ μόνου τοῦ ζητεῖν ἑαυτὸν») and that this will allow them to know God («θεὸν ἐπιγνόντα»)⁴⁶ This insistence that the Monadic God receive attention directly through mystical contemplation and prayer reaffirms Zosimos' concerns that his rivals are committing a religious *faux-pas* by sacrificing and devoting themselves to the daemons, lesser celestial beings.⁴⁷ Zosimos is certainly not alone in this worry. Several other late antique philosophers and religious figures shared in this anxiety over false religious practice leading to the accidental prioritisation of daemons over superior celestial figures. In his *City of God*, St Augustine condemns pagan theurgists and users of magic alike, stating that they perform fallacious rites to daemons who imitate greater angels («*ritibus fallacibus daemonum obstricti sub nominibus angelorum*»)⁴⁸ That daemons will be worshipped in lieu of God himself is a present anxiety. Also recall Iamblichus' concern that improper astrological practice would result in divinely-inspired knowledge being mixed with the material («πολλῷ τῷ θνητῷ καὶ πολλάκις ἀνακεραυνόμενα»), such that

⁴⁵ Zosimos, *Final Count* 8.4-7.

⁴⁶ Zosimos, *On the Letter Omega* 7.8-9.

⁴⁷ See Fraser 2007, 43.

⁴⁸ Augustine, *City of God* 10.9.

the sacred nature of that knowledge would be lessened («τὸ θεῖον ἦθος τῆς γνώσεως ἀπεργάζονται»)⁴⁹ Whilst this example does not explicitly involve the improper religious practice of outwardly worshipping daemons, it does involve the ignorant and improper religious practice of mixing the divine with the terrestrial (a mirroring of God’s position above daemons in a celestial hierarchy), such that *gnosis*, a core of Zosimos’ practice, is at best tainted, and at worst lost.⁵⁰ Zosimos’ concern, therefore, is not without parallel.

In the same breath as Zosimos instructs Theosebeia to direct her religious focus toward God himself, he also encourages her to perform apotropaic sacrifices to ward off unwanted daemonic influence:

πρόσφερε θυσίας τοῖς [...] μὴ τὰς θρεπτικὰς αὐτῶν, καὶ προσηνεῖς, ἀλλὰ τὰς ἀποθρεπτικὰς αὐτῶν, καὶ ἀναιρετικὰς.

Offer sacrifices to them [the daemons], not ones which are suitable, nor nourishing and pleasing to them, but ones which drive them away and destroy them.⁵¹

Zosimos’ advice is simple; if the daemons are prone to interfering with and negatively influencing the outcome of an experiment, repel them so that a tincture can be formed without their meddling! This does, however, require a type of alchemical transformation which works totally without their (sometimes favourable) influence: that is Zosimos’ second piece of advice, the natural tinctures.

The differences between the tinctures which require daemonic support and the tinctures which operate independently of daemons, as well as an aetiology for these distinctions, is given in the treatise *Final Count*. As Zosimos explains, the daemons are responsible for the

⁴⁹ Iamblichus, *On Egyptian Mysteries* 9.4.

⁵⁰ Lopes da Silveira 2020, 153-154 highlights Zosimos’ emphasis that a huge part of his issue with his peers’ practice is that it is fundamentally rooted in corporeality, mirroring Iamblichus’ worry that the divine will become too intertwined with the material. This echoes the *Book of Enoch*, in which fallen angels gift humans sciences, including ‘colouring tinctures’, in return for sexual favours (see Fraser 2004, 127).

⁵¹ Zosimos, *Final Count* 8.8-10.

replacement of natural tinctures (*physikai kairikai katabaphai*) with unnatural tinctures (*aphysikai kairikai katabaphai*):⁵²

ἵνα μὴ διώκωνται παρὰ τῶν ἀνθρώπων, ἀλλὰ λιτανεύονται καὶ παρακαλῶνται, οἰκονομοῦνται διὰ θυσιῶν [...] ἔκρυψαν πάντα τὰ φυσικὰ καὶ αὐτόματα, οὐ μόνον φθονοῦντες αὐτοῖς, ἀλλὰ καὶ περὶ τῆς ἑαυτῶν ζωῆς φροντίζοντες, ἵνα μὴ μαστίζωνται ἐκδιωκόμενοι καὶ λιμῶ τιμωρῶνται, θυσίας μὴ λαμβάνοντες, ἐποίησαν οὕτως· ἔκρυψαν τὴν φυσικὴν καὶ εἰσηγήσαντο τὴν ἑαυτῶν ἀφύσικον.

So that they might not be chased away by mankind, but rather receive praise, be called upon, and be treated with sacrifices [...] they hid all of the natural and automatic tinctures, not only because they were envious of men, but also because they were wary over their lives, lest they be whipped, driven away, and be honoured with nothing but hunger, receiving no sacrifices. They did the following: they hid the natural tinctures and brought unnatural tinctures to mankind.⁵³

Zosimos, then, presents an account in which celestial daemons, in a fit of jealousy and greed, hid the *physikai kairikai katabaphai* – which are more reliable and which work without their influence – and offered to the alchemists of the time *aphysikai kairikai katabaphai* – the unreliable tinctures which work only with their approval, but which could also be ruined by their interference. As he urges Theosebeia to apply proper theurgic practice in contemplation and sacrifice, Zosimos states that the end goal of his given technique is indeed these natural tinctures: «ἐπιτεύξη τῶν γνησίων καὶ φυσικῶν καιρικῶν».⁵⁴ This does, however, raise a vital question: how can the natural tinctures prove successful without the involvement of daemons, the celestial beings who, though temperamental, are still the ones to bring success to earthly techniques?

⁵² See Dufault 2022, 200 for the association between the unnatural tinctures and Egyptian temple traditions, and the association between the natural tinctures and an independent set of recipes.

⁵³ Zosimos, *Final Count* 7.3-8.

⁵⁴ Zosimos, *Final Count* 8.12-13.

The term *physikai* may hold a clue. In an essay about the importance and sacred ramifications of philosophical contemplation, Philo of Alexandria proposes the analogy of a seed to explain his interpretation of the nature of *physis*. As he writes, God imbues a seed with the capacity for autonomous growth into fruit, and it is this divine essence which allows for it to grow independently («αἰ ἀρχαὶ θεοῦ, οὕτως καὶ τὰ τέλη θεοῦ... φυτοῦ μὲν ἀρχὴ σπέρμα, τέλος δ' ὁ καρπός»).⁵⁵ Indeed, as Zosimos himself writes, the natural tinctures are automatic (αὐτόματα), as they do not require daemonic aid to materialise. They have within them a divinely-inspired core which supersedes the influence of daemons. In spite of this, it seems that the natural tinctures do still need an alchemist to facilitate their growth – just as Philo's seed must be planted before it can grow of its own accord, in line with its own divine nature. As the term *physikai kairikai katabaphai* suggests, there is still an opportune moment when this human action might take place.⁵⁶ It is possible, then, that Zosimos viewed the *kairos* as a divinely-inspired moment *above* daemonic influence. In other words, daemonic influence has no effect on these specific tinctures, as long as the moment is propitious, the term *kairikai* suggesting that this would be a necessary condition for alchemical success. This, however, is somewhat speculative; unfortunately, Zosimos simply does not provide enough detail on the nature of processes involved in the production of natural tinctures.⁵⁷ What is more clear, however, is what Zosimos believes will be the effects of achieving natural tinctures. As he writes, having achieved the tinctures, Theosebeia will have become perfect (τελειωθεῖσαν – a term replete with initiatory significance), and will run down to Poimenendra («καταδραμοῦσα ἐπὶ τὸν Ποιμένανδρα [sic]») – the Hermetic version of Zosimos' Phos-Adam myth of the fall of man, possibly implying

⁵⁵ Philo, *Who Is the Heir of Divine Things?* 121. See further, Zachhuber 2020.

⁵⁶ Cf. Stolzenberg 1999, 17. Stolzenberg argues that the use of *kairikai* is part of a general appellation for tinctures (*kairikai katabaphai*) and does not necessarily imply that natural tinctures are reliant upon propitious times. The above quote of *Final Count* 8.12-13 (n. 52), however, refers to them as *physikai* and *kairikai*, with the term *katabaphai* being simply implied – if *kairikai* were simply part of an appellation, it would surely not be used in lieu of *katabaphai*.

⁵⁷ Grimes speculates that the astrological practice may have been based on traditional astrological methods involving *horologi* (Grimes 2018, 166, n. 39).

that Theosebeia will revert to times before the entrapment of soul and become a spirit herself), before she ultimately joins her own race as a celestial being («ἀνάδραμε ἐπὶ τὸ γένος τὸ σόν»).⁵⁸ The message is clear: technical perfection – the creation of natural, timely tinctures – leads to spiritual perfection. Once again, the physical and the metaphysical, with alchemy as their point of intersection, are perfectly complementary.

Although it is not clear what exactly constituted Zosimos' proposed daemon-dodging methods, Stolzenberg does point to an analogy from the end of *On the Letter Omega* which may be able to provide a small amount of insight here. Zosimos speaks of a man who, having broken a bone, and having failed to find a bone-setting priest to fix it, goes instead to learned physicians:

ὁ ἄνθρωπος μηχανικῶς καὶ ζῆ χρόνον τινὰ, τὴν ὑγίαν
πορισάμενος· καὶ οὐδέηπου ἐφίεται ἄνθρωπος ἀποθανεῖν διὰ τὸ
μὴ εὐρηκέναι ἱερέα ὀστοδέτην.

The man is resourcefully healed and lives a while longer, having regained his health; and in no way does he resign himself to death because he could not find a bone-setting priest.⁵⁹

As Zosimos writes, just as a man would not resign himself to a short lifetime with a broken bone because he could not find a healing priest to fix it, but would rather see a learned physician, so too should an alchemist not let themselves fall into poverty after failed experiments, but should rather attempt the techniques which Zosimos has proposed. That is to say, Zosimos' rivals should attempt the new (natural) techniques which he sets forth, and which will prove reliable, rather than stubbornly persist with their own (unnatural) techniques which are unreliable. Stolzenberg convincingly argues that, in addition to proper religious (and, I argue, astrological) conduct, Zosimos encourages the operation of a different branch of experimental techniques to bring about natural tinctures.⁶⁰ These techniques, it seems likely, were recorded in

⁵⁸ Zosimos, *Final Count* 8. See Fraser 2007, 43.

⁵⁹ Zosimos, *On the Letter Omega* 12.8-10. See further, Stolzenberg 1999, 13-15.

⁶⁰ Stolzenberg 1999, 13-15.

Zosimos' now lost book *On Furnaces and Appliances* (περὶ καμίνων καὶ ὀργάνων), and that the diagrams in this book were foolishly ignored by his rivals, just as the man with a broken bone would be foolish to ignore the illustrated books («βίβλους κατὰ ζωγράφους γραμμικὰς σκιαστὰς ἐχούσας») of physicians, without which he would needlessly bring about his own death.⁶¹ It, therefore, seems likely that all we will ever know about the exact stages of Zosimos' natural operations is that they were recorded in illustrations, hinting at their being intensely occupied with practice and technique, not just spiritual orthopraxy. Whatever the natural methods in question might involve, one thing is evident: as a comparison of the phrases *physikai kairikai katabaphai* and *aphysikai kairikai katabaphai* suggests, the only commonality, the only mainstay of alchemical operation for Zosimos, is the observation of the *kairos*.

3. Conclusion

Unlike the terms *chronos* or *aion*, for example, which both convey a quantitative interpretation of time, *kairos* has a qualitative character. It is the specific moment at which a specific action, perhaps a specific stage in an alchemical process, *ought* to be performed.⁶² The importance of the kairoic moment throughout the Zosimean corpus is evident – it is such an integral part of the production of efficacious tinctures that it is part of the appellation which Zosimos uses to refer to them, while he also states explicitly his hesitation to believe that successful operations can occur at an unpropitious point in time. He understood the astrological observation of the *kairos* as a vital moment in alchemical practice – a moment with a veritable divine essence, and a moment without which experiments would surely fail. Beyond this, this investigation has also led to some other interesting nuances surrounding the Zosimean *kairos*: the cosmic sympathetic relationship between celestial bodies and metallurgical practice has the result that the *kairos* for the manipulation of a certain metal can be reliably predicted because of the regularity of the associated planet's cycles and

⁶¹ Zosimos, *On the Letter Omega* 12.6.

⁶² Smith 1969, 1.

movements; this cyclical nature of planetary movement also means that the Zosimean *kairos* is periodic – timeless recipes can involve specific moments because those moments will happen several times, at regular, calculable intervals. Overall, Zosimos’ practice seems to have been a complex nexus involving spiritual contemplation, apotropaic sacrifices, and alchemical technique, and the calculation and manipulation of the divinely-inspired *kairos* was at the heart of these processes.

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Keywords

alchemy; religion; *kairos*

Abstract

For Zosimos the alchemist (c.4th C. AD), it seems that the whole of alchemy depended upon the *kairos* – the opportune moment, determined via katarchic astrology, when an experiment would succeed. In fact, Zosimos refers to alchemical transformations as *kairikai katabaphai* – colour changes achieved at the *kairos* – and states that they are «subject to lunar influence and the passing of time» (*The Visions* 10.12). This paper explores Zosimos' understanding of *kairos* and its importance in his alchemical practice. Firstly, a general overview is presented of Zosimos' use of the term and the nuances which can be gleaned from his own work and the work of those in his intellectual milieu; the second half of this paper focuses more specifically on the term *kairikai katabaphai* to examine what role exactly *kairos* may have had in Zosimos' wider religio-philosophical beliefs and his understanding of the mechanics behind alchemical change. Ultimately, this paper concludes that alchemists seem to have regarded the *kairos* as having many fascinating aspects: it is a divinely-inspired, precisely calculable, repeating, transformative moment, without which alchemical success is almost impossible. Zosimos' practice involves a complicated amalgamation of prayer, sacrifice, calculation, and technique; as this paper hopes to demonstrate, a true appreciation of the *kairos* is at the heart of all of this.

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