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Chrysippus on Physical Elements

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My ultimate purpose here is to examine, discuss, and interpret a difficult excerpt in Stobaeus' 5th c. AD anthology. It alleges to report—uniquely, it appears—a distinction Chrysippus drew between three different applications of the term στοιχεῖον or element (i.e., physical element).¹ Stobaeus lists this passage as giving opinions specifically of Chrysippus “about the elements out of substance” (περὶ τῶν ἐκ τῆς οὐσίας στοιχείων), though in holding them he says Chrysippus was following Zeno, the leader of his sect.² Hermann Diels identified this selection as an excerpt (his fr. 21) from Arius Didymus' late first century BC *Epitome of Physical Doctrines*.³

¹ *Ioannis Stobaei Anthologij Libri Duo Priores*, ed. C. Wachsmuth (Berlin: Weidmann, 1884), Book I ch. 16^c, vol. I, pp. 129-30.

² The phrase ἐκ τῆς οὐσίας here is unexpected. Usually a substance is said to be, or come to be, ἐκ its elements (as in the official Stoic definition of an element, Diogenes Laertius 7.136, cited below p. 22 ???); the usage here seems to reverse the expected order of derivation. I take it that here we are to understand the preposition as expressing the fact that in considering a substance's elements we engage in an act of abstraction; substances present themselves as constructed wholes, and it is only by analysis “from” them that we arrived at a conception of their elements.

³ H. Diels, *Doxographi Graeci* (Berlin: De Gruyter, 1965; originally published 1879). The passage is included in H. von Arnim, *Stoicorum Veterum Fragmenta* (Leipzig: Teubner, 1903), vol. 2, as

I print a translation below, with the text in an Appendix, as it is given in von Arnim. The text is not without its problems, and I indicate in footnotes to the text which of the principal editors' textual interventions I accept and follow in my translation. Whether this text presents a single, continuous excerpt from Arius Didymus, or instead some compilation of Stobaeus (or an earlier anthologist whose work Stobaeus employed) from dispersed passages of Arius (or even of Arius and another source),⁴ I propose to treat it at face value, as giving a unified report on Chrysippus' cosmological-cosmogonical theory.⁵ The philosophically rich and interesting cosmological ideas that, as we will see, are brought to light by careful interpretation of the passage so construed, lend powerful support to this way of taking it.

Let me begin with a bare summary of the passage. Arius reports that Chrysippus endorsed, first, the use of the term “element” in application to the four traditional Greek basic materials, fire, air, water, and earth, which he takes to be the exclusive basis in the actual world of all other materials—compounds of all kinds—and for the material constitution of all material ob-

fragment 413; A.A. Long and D.N. Sedley, *The Hellenistic Philosophers* (Cambridge: Cambridge University Press, 1987), translate most of the passage as their text 47A.

⁴The passage does have some abrupt transitions, at λέγεσθαι (line 13), τριχῶς (14), and γονέναι (22) (for this numbering of the lines, see the Appendix). For a useful summary of what we know or can reasonably conjecture about Stobaeus' methods of composition, see D. E. Hahm, “The Ethical Doxography of Arius Didymus,” in W. Haase, ed., *Aufstieg und Niedergang der Römischen Welt*, vol. 36.4 (Berlin and New York: De Gruyter, 1990), at pp. 2938-2943.

⁵It is included as the last entry in the “chapter” (X Wachsmuth) headed as “On Principles and Elements of the All,” preceded by excerpts of a cosmological sort from cosmogonical poets, pre-Socratic philosophers, Plato, Aristotle, and Epicurus, among others.

jects. As Arius paraphrases or quotes Chrysippus himself to say, on this first usage of the term fire ranks alongside three other elements, all four of them elements equally and on a par. In a second usage, he says, there is only one element, which he again gives the same name of “fire” (πῦρ) to: in this second usage, fire is called an, or the, element par excellence (κατ’ ἐξοχήν) and self-sufficiently (αὐτοτελῶς). Having mentioned and discussed briefly in the first part of the excerpt apparently just these two usages (I will come back later to examine his discussion), Arius announces, as if resumptively (line 14), “So, according to Chrysippus, element is spoken of in three ways.” In concluding the excerpt we then see Arius indeed explicitly distinguishing three applications of the term “element.” The first two in the order of presentation here, at the end of the passage, at least appear to be, and I think in fact are, in reverse order, the two I have just briefly characterized: one according to which the four traditional elements are elements, plus another according to which only fire (or something called fire) is an element. Scholars have, however, not found the third application (κατὰ τρίτον λόγον λέγεται στοιχεῖον εἶναι ..., line 20), as explained by Arius, easy to grasp, and its relations to anything that has preceded in the excerpt are difficult to make out. One thing that Chrysippus’ (or Arius’) presentation seems to make clear, though, is that in this third usage, too, as in the second, there is only one element—which, however, is not specified.

In the only two significant discussions I have found of this passage both authors fail to see in it even any formulation of the third application.⁶ Josiah Gould thinks what we get instead

⁶*The Philosophy of Chrysippus*, by Josiah Gould, Leiden: Brill, 1970, pp. 119-120; M. Lapidge, “Ἀρχαί and Στοιχεῖα: A Problem in Stoic Cosmology,” *Phronesis* 18, 1973, 240-278. To these one should add H. Diels, *Elementum* (Leipzig: Teubner, 1899), 38-9. Diels says that what I am calling the third usage is in fact identical with the second: he condescendingly supposes that this

is a redescription of that “fire” which is the sole element according to the second usage, while Michael Lapidge contents himself with saying that “the third definition is missing from the text” (p. 271). Long and Sedley, who do seem to find in the text separate formulations of three usages, tell their readers in a note to their Greek text (vol. II, p. 278), that to each of the three usages listed at the end of the passage some separate section corresponds in the first part of the passage, where (on my reading of it, as outlined above) only two usages are mentioned and briefly discussed. As I will explain below (see the notes to my translation, pp. 26-31???), their assignments of corresponding passages do not in every case make good sense, and result, in effect, in double-counting. However, I believe they are right to this extent, that in explaining the first two applications in the first part of the passage (down to line 14) Arius has intended to prepare the basis for identifying also the ground for Chrysippus’ third application. In effect, even though, as I think, the first part of the passage only explicitly mentions two usages, Arius is justified in his apparently resumptive declaration in beginning the last part of the passage, “So, according to Chrysippus, element is spoken in three ways”: once we understand the third application, as he goes on to explain it, we can see that it has in fact been prepared for in what has preceded.

escaped Arius’ notice in this hasty compilation. Diels thinks that at the end of the excerpt, in lines 22-26 of my text (see Appendix), Arius provides in a little appendix three further “definitions” of an element (the mss. text is corrupt in at least two places). On my view (see below) this passage continues the exposition of my third usage, i.e. application. Diels’ speaking throughout of Chrysippean “definitions” has misled him. What is in question in the passage is uses, in the sense of applications, of the term; such “definitions” as may be found in lines 22-26 are provided by way of explication of the third application. (See fn. 36 below.)

Before I can come to closer grip with the problems (including some textual ones) posed by this extremely interesting text, I need to prepare the ground; most of the paper is taken up with these preparations. Specifically, I need to address two questions. First, I need to consider the distinction, in Stoic theory, between elements (in any and all applications of the term) and first principles (ἀρχαί). Secondly, I need to consider Chrysippus' theory (which, I will argue, differs from Zeno's by being greatly more philosophically sophisticated) of the processes or stages by which the substance of the world (taken as a whole) gets turned (or rather, turns itself) from its original condition (that is, its condition after having undergone ἐκπύρωσις or conflagration—so to speak, before the process of world-formation begins)⁷ into the condition it is in after the four material elements of fire, air, water, and earth have been generated (thus providing the complete material basis for the subsequent formation of the compound materials and the material objects that the world actually contains).

My argument will be that that substance, in that original condition, is what Chrysippus means to indicate in his third application of the term στοιχεῖον as the στοιχεῖον. This substance (as I will argue we can infer from our excerpt) is not anything that ought to be called “fire” (as in fact Zeno had called it, with typical lack of philosophical sophistication).⁸ Instead (as we know

⁷ “So to speak before”: not literally so, since on Stoic theory time is a dimension of change, and when ἐκπύρωσις has been completed all change has ceased and has not yet begun again. See Long and Sedley chapter 51. (I disagree with Long and Sedley when they infer, vol. I p. 311, from the fact that “god is continuously active during all states of the Stoic universe” that time continues even “after” the end of the world order and its re-beginning. Activity does not necessarily imply any change of or in anything.)

⁸But see n. 25 below.

from a passage of Philo shortly to be considered) it is called by Chrysippus a “flash” of light (αὐγή). The second application, then, I will argue—to something which does deserve to be called by the name of “fire”—relates to the first stage in the process by which, according to both Zeno and Chrysippus (and the Stoic school generally), this original substance turns itself so as, eventually, to reach the point at which the four material elements that exist in the actual world are finally formed. This substance that deserves the name of “fire,” and is the unique element according to Chrysippus’ second usage, is not, of course, the material element fire—not even the element fire in its purest instantiation, the fire which, according to the Stoics, the sun is made of. That, obviously, only comes into being at a later stage, in the formation of the physical elements making up everything in the actual world, of which it, in making up the sun, is the leading and controlling part. We can call it (one wishes Chrysippus had had such a linguistic device at his disposal) “proto-fire.” I will explain later how proto-fire, as a certain substance—a flaming, fiery mass—differs from ordinary fire, even the purest instance of it.⁹

Thus we get, as Chrysippus according to Arius Didymus promised, three ways of speaking of elements: one according to which the fire, air, water, and earth of the actual world are elements on a par with one another, a second according to which proto-fire is the unique element, and a third according to which the unique element is the originary substance, the “flash” of light, that is the only substance in existence when the world has been completely conflagrated (ἐκπυρωθέν), as Philo Judaeus puts it (see below at fn. 25).

⁹In offering this interpretation below, I am working out the views I advanced but only sketched in fn. 33 of “Stoic Autonomy,” in my book *Knowledge, Nature, and the Good* (Princeton: Princeton University Press, 2004), p. 221.

So that is a rapid summary of the interpretation of the content of this Stobaeus excerpt for which I will argue. I turn now to the preparations I need to make before examining the excerpt in detail. I should emphasize that in setting out the preparatory materials I am going to be guided by my decision to see how Chrysippus' cosmology and cosmogony look if we do take seriously and at face value what Arius reports about Chrysippus on elements in this passage. Let me begin, then, with the Stoic theory of first principles (ἀρχαί), as distinct from elements (στοιχεῖα). I will explain as I proceed the basis and the importance of the distinction between principles and elements, which, I believe, all the Stoics observed quite carefully.

It is well-known, I hope, by now that Zeno developed this theory of principles through a very close, critical reading of the Eleatic Visitor's discussion, with Theaetetus in Plato's *Sophist*, of a so-called battle between some philosophical "gods" and some unphilosophical "giants" over, as the Visitor puts it (246a1, 5), "that which is" (τὸ ὄν) or "being" (τὴν οὐσίαν). The Visitor wants to know what on earth τὸ ὄν or ἡ οὐσία is. What, in other words, can we say to make it clear to ourselves what that is, in virtue of which anything that is or has being, actually is, actually has being? The Visitor himself makes a suggestion about this (247d8-e1), as something the non-philosophical "giants," who think that body (σῶμα) and being are the same thing (246b1), should accept: namely, that that which is, or has being, is whatever has the capacity or power (δύναμις) either to act (ποιεῖν) or be acted upon (παθεῖν). Plato's giants, believing that body and being are the same thing, are what we can call corporealists. Now, the most fundamental philosophical commitment of Zeno and all subsequent Stoics is likewise to corporealism (indeed the Stoics are corporealists in a much more thorough-going way than Plato's giants turn out to

be).¹⁰ (It is a very great error, which introduces much obfuscation, to describe the Stoics, as many do, instead as “materialists,” as I will shortly explain.) Hence, as we can see from our reports of their doctrine of first principles (ἀρχαί), Zeno and all subsequent Stoics accept the Visitor’s proposal. As Diogenes Laertius reports their doctrine (7. 134), “they hold that there are two principles of the whole of things (τῶν ὅλων), that which acts and that which is acted on” (τὸ ποιοῦν καὶ τὸ πάσχον). For the Stoics, each of these is a body, i.e., each of them is (1) extended in three dimensions and (2) offers resistance, since that is what, for them, it is to be a body.¹¹

¹⁰The Visitor browbeats the giants (anyhow, the ones who are willing to argue and discuss matters at all, and don’t brutishly insist on their senses, in particular the sense of touch, as simply showing that being and body are the same) into admitting that there surely are souls, and that there are invisible and intangible qualities like virtues and vices too (246e9-247c2). As Theaetetus explains, the first of these admissions poses no problem for them: they can and do say that souls are bodies or bodily. But as to the second, Theaetetus thinks they are caught, being ashamed to say either that virtues and vices are not beings, or that they are bodies (b9-c2). The Visitor accepts this, but does remark that the brutish giants would not be ashamed to insist that if anything does have being, it must be something that can be “squeezed by hand.” Zeno and subsequent Stoics in effect followed that clue, maintaining that qualities are bodies; Chrysippus notoriously held that virtues and vices can be seen, anyhow by the perfected human being, a “wise” person. See Plutarch, *On Stoic Self-contradictions* 1042e-f.

¹¹For the corporeality of each of the principles, see Cicero, *Academica* 1.39, and Long and Sedley’s discussion vol. I, 374. See also Diogenes Laertius 7. 134 (reading with the mss. σώματα rather than editors’ ἀσωμάτους, which would make DL say they are incorporeal; I share Michael Frede’s reasons for saying that, even if maybe DL did write “incorporeal,” there can be no doubt

That they offer resistance means that they occupy space; they are physically there, taking up room (even if—see the next paragraph—another body can occupy the same space). They do

that in fact the Stoics held the principles to be bodies: see “La Théologie Stoïcienne” in Jean-Baptiste Gourinat, ed., *Les Stoïciens*, Paris: Vrin, 2005, 213-232, at pp. 215-16). For the Stoic definition of bodyhood translated in my text (τὸ τριχῆ διαστατὸν μετὰ ἀντιτυπίας) see Galen, *On Incorporeal Qualities* cited in *SVF* 2. 381, p. 127, 6-7 and Plotinus *Enneads* VI 1. 26. 21-3 (and compare Clement of Alexandria in *SVF* 2. 359, virtually quoting from Plato’s *Sophist*). This seems to carry over into the Stoics’ very different physical theory an idea from Epicurus, that being is differentiated from nothingness or emptiness by the mark that it offers resistance (see Lucretius, *De rerum natura* IV 419-444, cited by Long and Sedley as their 5B). But resistance for Epicurus means inability of any other being to pass through any given being (a mark that belongs in full force to atoms), which, given Stoic theory of through-and-through intermixture of bodies see below, at n. 14), it cannot mean for them. That is why, as I explain this Stoic definition in my main text, we need to understand it in some other way. Reasonable discomfort with the definition’s Epicurus apparent origins seems to have led some Stoics, such as Apollodorus in the 2nd c. BC—weirdly, as Plotinus’ objection in the passage cited makes clear—to define body simply as what is extended in three dimensions (see DL 7. 135). But that is obviously unacceptable, because it would apparently make geometrical solids bodies too. On my understanding, the addition of μετὰ ἀντιτυπίας is precisely intended to bar such a consequence. One should also recall, as Gábor Betegh has reminded me, that the cosmos, and indeed all of being (whether not under circumstances in which a cosmos even exists), is demarcated from a surrounding void, something that, exactly as for Epicurus, is physical nothingness and emptiness, neither offering resistance (in the Epicurean sense) nor (in the Stoic sense) being occupied by anything.

not, like a geometrical solid, merely extend through or provide limits to some range of space.¹² And each of the two principles is something that has being, is an ὄν—their being ὄντα is what is needed to make everything else, all that is constructed out of and by them, be ὄντα too.¹³

Each of these principles (as to their further identities I will say something in a moment) is a distinct body from the other. Though each is extended in three dimensions, and indeed extended in all the same space where the other is also extended, and each offers its “resistance” to the other (and only to it), they remain perfectly distinct each from the other, as two bodies. This is possible, the Stoics think, because the nature of body is such that two bodies can be in all the same places, through and through interblended in a “blend” of the two bodies. No matter into how small regions you might chop the blend up, both bodies will be present, both occupying the whole of that region. What shows that both bodies are there, everywhere there, is that the

¹²The Stoics hold (against Plato in the *Timaeus*) that the matter that god works on (which is their passive principle) has no character of its own (not even a trace-like one) that could impose any “necessities” that would limit god’s creative power (god is the active principle). God can make of matter literally anything he wants; he can endue any of it with any quality he likes. Only his own perfect rationality imposes any restrictions as to what he does endue any of it with. (See Frede, “La Théologie,” pp. 221-22.) So “resistance” as a defining mark of body must not be interpreted to imply that matter, as a body, forces or limits god in any way. Because both god and matter occupy the same space, however, and are not, like geometrical figures, simply spread through it, each has something it must confront and engage with in mutually occupying the same space. That—nothing more—is how we must interpret the notion of “resistance” here.

¹³For their both being ὄντα see Plutarch *On Common Notions* 1073e, ὄντος τὸ ποιεῖν τι καὶ πάσχειν.

distinctive presence of each can be detected in any region, however small it might be, through its effects.¹⁴ And in fact, according to the Stoics, these two bodies, the active principle and the passive or acted-on one, are completely blended with one another in the way just indicated. We see this when Diogenes continues in the same passage, “that which is acted on is quality-less substance (ἄπυριος οὐσία), i.e. matter, that which acts is reason in it, i.e. god.” Here we see, perhaps to our surprise, that although both principles are ὄντα, in Stoic terminology only one of the two, the passive principle, gets called οὐσία, being or substance. God or reason, although a distinct body from that other body, is in it (not the other way about—and it is never apart from it, either). What results from the combination of the two basic ὄντα, the principles, is a substance (οὐσία) because what undergoes formation in that combination, namely, quality-less substance, is itself “already” a substance.¹⁵ The combination yields a material substance because this quality-less substance is (also) matter. So this material substance is matter—but matter with god or reason in it. And crucially so, since reason, being in it, and indeed only by being in it (since nothing acts directly on anything from a distance), is what activates matter in every way that it does get activated, including all the ways that it gets qualified as the substance that it then is. Thus god is ὄν but not οὐσία; god is not (trans)formed when any substance comes to be, as the substance’s matter does undergo formation, in particular not in the “coming-to-be” of this first sub-

¹⁴On the Stoic theory of “blends” (κράσεις) see especially Alexander of Aphrodisias, *De Mixtione* chh 3-4 (excerpts from which are given in *SVF* 2. 473). Alexander is right to emphasize from the outset the application of this theory of blends on the cosmic scale: claims about water and wine when mixed, and other such phenomenal mixed stuffs, are trivialities of physical theory, compared with this absolutely fundamental application.

¹⁵See Calcidius *in Timaeum* 291, cited by Frede, “La Théologie,” p. 219, and Frede’s discussion.

stance, or rather in its fundamental constitution. This first substance, the only one there is when the world has been conflagrated, is not just a body, as the principles also are; it is a material body, a material substance. The two principles—reason and quality-less matter, i.e. prime matter—are always combined with one another and thereby constitute this eternal first material substance.

Thus this one substance, existing already at the very “beginning,” is constituted by those two other bodies that are the principles; it is constituted from reason’s being in and acting on prime matter. Hence wherever we find that one material substance we find each of the two bodies that are the principles: god or reason, with its essential, unlimited power of action, and quality-less substance or matter, with its essential, unlimited capacity to be acted upon. Moreover, the one material substance (the substance composed of matter with reason or god in it) is itself always and necessarily qualified in some way. How could it not be, having within it the active principle or reason? (Below, I will discuss in just what way it is qualified, simply insofar as it is this first substance—in advance, so to speak, of more particular ways in which it, or different expanses of it, become qualified in the course of the formation of the cosmos.) Yet, everywhere where that substance is, there, there is also quality-less substance, i.e. the passive principle. And reason too, of course. These are three bodies, all three occupying all of the same places: the one material substance, qualified however it may be by god or reason’s being in the matter that helps to make it up; plus quality-less substance or prime matter; plus reason. The one material substance (that material body) is constituted by those two other bodies, by the one body’s (god or reason’s) being in the other body (prime matter).¹⁶

¹⁶Michael Lapidge (and not he alone: see for example Robert B. Todd, “Monism and Immanence: The Foundations of Stoic Physics,” in John M. Rist, ed., *The Stoics*, Berkeley and Los Angeles:

Now, it is important to understand clearly that these latter two bodies (matter and god or reason), unlike the first, the one they constitute, are non-material bodies. Reason is a non-material body in the straightforward sense that, though triply extended and occupying space, and possessed essentially of powers of acting, it is no material thing. It is in matter, but there is no matter in it. Quality-less substance or matter is likewise triply extended and occupies space, but it differs from reason in that it is possessed essentially of powers to be acted upon. It is a body and is matter, to be sure, but it is not a material body. That is because, for the Stoics, all material bodies are made of matter as one, but only one, component. Reason is the other. Prime matter, which is what this matter is, does not itself have any matter as a component. Compound materials in the actual world, by contrast, are material bodies, precisely because they do have lower forms of material body in them, as what they are made out of; even each of the four elements is made out of some material body, as we shall see. This Stoic distinction between mere bodies (including the two principles)—by the Stoic definition, mere bodies are extended in three dimensions and offering resistance—and material bodies, which satisfy the further condition of having matter in them, is crucially important. It is the reason why the Stoics cannot correctly be

University of California Press, 1978, pp. 137-160, at pp. 139-140) shows a fundamental failure to understand the Stoic theory of principles when he insists in his otherwise illuminating article, “A Problem in Stoic Cosmology” (*Phronesis* 18, 1973, 241-243 et passim) that they are nothing more than “aspects,” “nominally distinct but essentially one,” of the one substance. As Long and Sedley correctly say, these are not mere “conceptually distinguishable aspects of a single body” (*Hellenistic Philosophers* I, 273); something that was only conceptually distinguishable (a λεκτόν) would be an incorporeal, and on Stoic theory that would mean that it lacked causal powers altogether.

called materialists, but ought instead, like Plato's giants, to be called corporealists. For the Stoics, there are bodies (namely, the two principles) that are not material bodies. Material bodies are, all of them without exception, constituted by the presence with one another of both principles, and by the effects of the one principle on the other.

Hence, in sum, the quality-less substance remains in full and actual existence, and remains quality-less, as an essential constituent actually present in the one originary material substance, to which it contributes its own essential function of the ability to be acted upon. Similarly the other principle, reason, also remains and remains active, equally as a constituent of that originary material substance, to which it contributes its own essential function of being able to act. Thus, the originary substance is (qua being infused by reason) able to act on itself (qua completely passive matter). The continued existence, and presence everywhere, of the active principle follows from the fact that each of the principles is a distinct body, however interblended with one another they may be. Here, one should notice that when the passive principle is called quality-less substance or matter it is, of course, as I have already noted, not being denied that it has some properties: it has the properties of extension in three dimensions, and of offering resistance, since those are the defining characteristics of bodies, as such. And it has whatever further character comes to it simply from having god's thought spread uniformly and undifferentiatedly everywhere through it (I return to this point below). What is denied to it is only any further qualification. And, in particular, of course, it is denied to have any colors or shapes or textures or consistencies or any other members of the traditional category of quality, not to mention that it lacks being so qualified as to constitute a plant or animal, with any of its various possible qualities. Thus Stoic prime matter differs quite notably from the prime matter that late Aristotelians attributed to Aristotle: that version of prime matter (a mistaken attribution to Aristotle, and in itself an incoherent idea) is of something that has no characteristics at all. Stoic

prime matter does have actual properties, it simply lacks qualities and other qualifications added onto that primitive base. God or reason, of course, adds all those additional qualities to whatever materials have them, through specific, differential thoughts about how those particular materials are to be; so prime matter necessarily lacks them. Understood the Stoics' way, prime matter is not an incoherent notion.

So much, then for the Stoic distinction between principles and elements. Principles are mere bodies, elements are always (in whatever specific usage) material bodies. They are material bodies from which other, more complex, material bodies come to be.

Let me now turn to my second question, which concerns Chrysippus' theory of the processes or stages by which the substance of the world turns itself out of its original condition to the point where the ordinarily recognized elements, fire, air, water, and earth, begin to be generated. First we need to think a bit more about this substance as it is before it "turns" in any way at all. Diogenes Laertius tells us (7. 137) that one way the Stoics (he does not specify which ones) used the term "world" (κόσμος) was in reference to "god himself, i.e. the uniquely qualified individual out of (ἐκ) all substance [i.e., all the bare matter that there is, taken as a whole], who is indestructible and ungenerated, being the craftsman of the world-ordering, at certain periods of time consuming all substance into himself and, in the other direction, generating it from himself."¹⁷ A bit earlier in his exposition of Stoic physical theory (7. 136), again without naming

¹⁷ See also Plutarch, *On Stoic Self-contradictions* 1052c, who cites specific works of Chrysippus for the doctrine of god's periodically consuming all substance (all matter) into himself.

specific Stoics, and so presumably meaning most or all of them, he has said about god or reason that¹⁸

being in the beginning all by himself, he turns (τρέπειν) all substance through air into water, and just as sperm (τὸ σπέρμα) is encompassed in generative matter (ἐν τῇ γονῇ), so he, being the seminal thinking or reason (σπερματικὸν λόγον) of the world, stays behind as such in the moisture, making matter well-suited for his purposes in the following stages of generation. Next he generates first the four elements, fire, water, air, and earth.¹⁹

¹⁸Here is the Greek text: κατ' ἀρχὰς μὲν οὖν καθ' αὐτὸν ὄντα τρέπειν τὴν πᾶσαν οὐσίαν δι' ἀέρος εἰς ὕδωρ· καὶ ὡσπερ ἐν τῇ γονῇ τὸ σπέρμα περιέχεται, οὕτω καὶ τοῦτον σπερματικὸν λόγον ὄντα τοῦ κόσμου, τοιόνδε ὑπολείπεσθαι ἐν τῷ ὑγρῷ, εὐεργὸν αὐτῷ ποιοῦντα τὴν ὕλην πρὸς τὴν τῶν ἐξῆς γένεσιν· εἶτα ἀπογεννᾶν πρῶτον τὰ τέσσαρα στοιχεῖα πῦρ, ὕδωρ, ἀέρα, γῆν.

¹⁹It is not clear what the γονή is that semen is said to be encompassed in. Long and Sedley seem right (II, 272) to reject Lapidge's suggestion ("Stoic Cosmology," in J.M. Rist, *The Stoics*, Berkeley and Los Angeles: University of California Press 1978, p. 166) that it means the womb. (Lapidge seems to have been guided too strongly by his idea that for Zeno the moisture here in question was conceived as a female principle, to match Zeus's male semen-injecting role; the womb, he imagines, is what semen gets injected into according to Zeno's presupposed theory of animal reproduction.) As Long and Sedley say, the use of this word for the womb is rare and, so understood, it does not correspond correctly to the moisture here referred to. Long and Sedley themselves, following David Hahn (*The Origins of Stoic Cosmology*, Columbus: Ohio State University Press, 1977, p. 60), render it by "seminal fluid," with many parallels in Aristotle's biological

works. But in that case it is awkward to translate σπέρμα here, as they no doubt correctly do, as “sperm”: at least, our word “sperm,” in its principal use, itself refers to the seminal fluid, not to something in it (and the parallels in Aristotle actually show that he often uses σπέρμα and γονή interchangeably—in accordance with this usage of ours). If one does translate γονή by “seminal fluid,” then one ought to render σπέρμα by “spermatozoa,” not sperm, or at least one should indicate clearly that one means “sperm” to be understood in that, its secondary meaning (*OED*). And in fact, Aristotle does sometimes speak of animal σπέρμα as something distinct from the γονή, i.e. the semen, that it or its power is found in. But I am not certain that Stoic reproductive theory would follow him in this. In any event, on Aristotle’s theory while the sperm is the agent in generation, the seminal fluid itself is not the material out of which the new animal is made; but the Stoics’ analogy here is from “sperm” in some reproductive fluid to Zeus in the primordial moisture as matter for him to work upon, generating the four elements out of it. Hence the analogy intended may rely upon a reproductive theory that postulates some moisture provided by the female animal in her womb as what the sperm enters and gets encompassed by. (But see Hahn’s discussion p. 61, relying on a heavily allegorized mythological account of Dio Chrysostom, *SVF* 2. 622, in which it seems that Zeus is in a seminal fluid of his own devising; see also his further discussion, pp. 68 ff.) Hence I opt for my less committal translation of γονή by “generative material.” This could be either some wet stuff provided by the female, or (with Long and Sedley) the semen itself as vehicle for spermatozoa. (I think it does not matter greatly precisely what reproductive theory is being presupposed in the analogy: it is clear enough what is being said, analogously, about Zeus as seminal thinking being within the moisture—a moisture that, of course, he creates from himself. That is the main thing of interest here.)

I discuss this passage further just below. First, though, what does it mean that in the beginning god is by himself, having consumed all substance into himself? It is presumably not intended that god or reason is the only body then in existence, having somehow consumed into itself all matter; i.e., it is presumably not intended that in the beginning reason has absorbed ἄπλοιοις οὐσίαις or prime matter into itself, i.e. into the non-material body that it is. As we have seen, the two principles are spoken of in correlation: god or reason is a body in another body, viz., prime matter. In that sense, commentators are right that for the Stoics reason or god, and matter, never exist in separation from one another; that reason or god is always spread through matter, even in these pre-cosmic circumstances.²⁰ What god's being by himself must mean is that at this beginning point all there is in existence is god or reason, pervading prime matter. That is to say, all qualified substance (not all substance, i.e. not prime matter itself) has been absorbed into god or reason. That, in turn, is to say that although he or it in his active nature retains and keeps on thinking to himself all the thoughts that in the actual world get put into effect in introducing all the qualifications of matter that constitute all the different sorts of substance that there actually are, he is not then using those thoughts to act in any differential way

²⁰It is important however not to confuse this truth about the Stoic system with the idea that, for them, god is always spread through (some) material body, for example through “artistic” or “crafting” or “designing fire” (πῦρ τεχνικόν) or through πνεῦμα (breath). God has “designing fire,” or else πνεῦμα, as his vehicle only within the cosmos, since designing fire is the element fire in its pure state, and πνεῦμα is a compound out of two material elements, fire and air. They therefore do not exist when the world has been completely conflagrated, at least on Chrysippus’ philosophically careful and consistent version of the theory. (For Chrysippus’ view, see lines 19-20 in my text in the Appendix.)

upon particular expanses of matter so as to endow substances with their particular characters; he is therefore not then affecting matter with any of those qualifications.

In what way, then, is reason affecting matter, as it must in some way be doing, by being in it, in constituting the originary substance? What is the character of the material substance that, as I have said, is composed by god's being present in prime matter at this pre-cosmic stage? Zeno seems not to have hesitated to declare roundly that this originary substance is fire. That was because of the fostering and creative power of heat coming from the sun in the actual world. The originary substance is the fostering and creative substance par excellence,²¹ so it must have seemed to Zeno, as it has seemed to most interpreters of Stoic cosmogony, that this substance is a huge creative, fostering, flaming, fire. When Stoics said (as we read in Aetius, *SVF* 2. 1027) that "god is a crafting fire (πῦρ τεχνικόν), proceeding methodically to the generation of the world, containing within it all the seminal thoughts in accordance with which the various different things come about," they were obviously speaking of that originary substance, and describing it as fire of the very same type (crafting, as opposed to consuming and destructive)²² that constitutes the sun and the stars, according to Stoic theory. But to describe it so is plainly inconsistent with the very theory of cosmic generation that this substance is being called on, in this very passage, to originate. Even πῦρ τεχνικόν is a version (the purest) of one of the four elements, and those, on the Stoic theory, are late-comers in the order of generation, as we have

²¹ See Aristocles apud Eusebius (*SVF* 1. 98), in saying that for Zeno fire is the στοιχεῖον of τὰ ὄντα. This application by Zeno of the term στοιχεῖον to the originary substance serves to justify Chrysippus in distinguishing the third of his usages of the term from the other two that he marks off from it in our Stobaeus passage.

²² Zeno distinguished these two types of fire; see Stobaeus in *SVF* 1. 120.

seen. If such statements are to be interpreted consistently with the Stoic theory of cosmogenesis, all references to “fire” in connection with the originary substance have to be understood proleptically, by anticipation of the material embodiment of god or reason within the cosmos, once formed. Within the cosmos god is πῦρ τεχνικόν, as one component of the divine “breath” or πνεῦμα that is god or reason’s immediate vehicle for controlling the world’s constitution and behavior.

Philo gives us clear and persuasive evidence that Chrysippus was well aware of the absurdity involved in claiming that the originary substance actually was a huge quantity of the element fire, even crafting fire, and it seems that before him Cleanthes was too. Philo tells us that “when conflagrated²³ ... it is necessary that the world changes either into flame (φλόξ) or into a flash of light (αὐγή): into flame as Cleanthes thought or into a flash as Chrysippus did.”²⁴ Now,

²³ The Greek here is τὸν κόσμον ἐκπυρωθέντα. This refers, as Philo’s discussion makes abundantly clear, to what is in existence when the world has been completely consumed in fire, i.e. when the successive process of first elemental earth, then water, then air being consumed by and converted into fire, has been completed. Philo is not referring to what the world is like while being conflagrated, but, as the aorist itself makes clear, what (so to speak) “it” is like once the process of conflagration has been completed. As Philo makes clear, and insists on in his polemic against the Stoics, they must and do accept that every fire needs fuel, so that once all the elemental earth, water and air have been consumed, the fire has to go out. It is with respect to that condition—as to what is in existence once the fire does go out, and conflagration is over with—that Philo is making this statement (and preparing his objections).

²⁴See Philo *On the Eternity of the World* (Περὶ ἀφθαρσίας κόσμου) section 90 (=SVF 1. 511, LS 46 M). One should, however, read the whole of the surrounding discussion (sects. 85-93). The

a flash, I take it, is the product of a fire (in this case, the fire through which god or reason, in the

author (presumably Philo, though his authorship has been disputed) begins (sect. 86) by postulating three forms that fire can take, that of or in a live coal (ἄνθραξ) plus Cleanthes' and Chrysippus' two candidates, flame and a flash of light. This analysis, implying that even a flash of light is a form of fire, might, but might not, also be Chrysippus': we have to bear in mind that the author's purpose in considering Stoic views is to refute them all. He has a preference either for the Aristotelian theory of the uncreatedness and indestructibility of the world or the Platonist view of its creation but non-destruction through the will of the creator to sustain it forever (see sects. 7-19). By insisting that even light is a form of fire, the author can attempt to refute the Stoic theory of conflagration-and-regeneration by pointing out that, since when the cosmos is completely conflagrated the fire of the conflagration has finally been extinguished, there is no fire, nothing fiery, left that could be the basis for regeneration, not even (he argues) light (sects. 85, 93). As I point out below (last three paragraphs of my main text), our Stobaeus passage very conspicuously does not report Chrysippus as equating with fire (of any form or at any stage) the flash of light that counts for him as the sole element according to his third usage. So in what follows I prefer to interpret Philo's insistence that a flash of light is one form of fire as polemically motivated. I suppose that Chrysippus himself did not so regard it (and reasonably so, as I will suggest). If, however, Chrysippus did authorize the classification of even the flash of light that remains after conflagration as a form of fire, the crucial point, for him (dismissed by Philo), will be that it is something one can legitimately call fire that however, uniquely, does not require for its continued existence any burning mass of anything (even though it required that for its coming to remain in existence as the sole substance, once the conflagration has been completed). See further n. 23 above.

process of conflagration, consumes into himself all qualified substance). But it is not, and arguably does not require, once it has been produced, a continuing fire, consuming something, to sustain it—as Cleanthes' candidate, a flame, definitely does. Just think of all those stars we see that, in fact, according to contemporary astronomical theory, are by now completely dead, though their light continues to reach us.²⁵ Thus, I take it, Chrysippus has a serious, and good, philosophical point in rejecting not only Zeno's loose talk of the originary substance as some huge quantity of the element fire (i.e., one of the ordinarily recognized four elements) in its purest form, but even Cleanthes' talk of a bare flame, in favor of the theory that it is a flash.

This flash is, therefore, the sole and complete character, according to Chrysippus, of the material substance that results from the bare presence of the active principle within the passive principle, before the cosmic cycle begins. When the world has been completely conflagrated god

²⁵ Obviously Chrysippus cannot be thinking of any such example. But even without a theory of light as something that is emitted by a source and travels in space, the basic idea that light may survive the extinction of its source is readily available to common sense, and to ancient Greek philosophers. Light seems clearly to be something, though caused by fire (its source, according to the Greeks), that has an independent existence. That is all Chrysippus need have been thinking, as he struggled to find a suitable way of describing the originary substance. Of course, he is not thinking of ordinary light (as we know it within the cosmos, about which he has theories of his own); that is presumably why he chose “flash” instead of “light” to express his view of what the originary substance is like. This “flash” has always lain at the base of everything in the world, but, after conflagration (as the last act, so to speak of the final cosmic fire), it gets released, to survive on its own. A flash is all the more something that can be conceived in independence from its source.

or reason affects prime matter in such a way as to produce and sustain this flash (and nothing else at all is then in existence). That flash is the originary substance, out of which then, by subsequent “turns” or “turnings” (τροπαί), new substances get produced—in a prescribed order, as we have seen (see DL 7. 136, quoted above p. 15??). The ultimate result of these turnings is that the world as it now actually exists, get (re-)constructed. As we will see shortly, when we come to a closer examination of the Stobaeus excerpt, this originary substance, this flash, counts as the sole element, according to the third of the three usages of the term στοιχεῖον that Arius Didymus tells us Chrysippus endorsed. It counts as an element, as opposed to a principle (ἀρχή), because it is something (a material substance) “out of which” (ἐξ οὗ) by subsequent turns “things that come to be, first come to be, and into which they are in the end reduced.” This is the definition of στοιχεῖον that Diogenes Laertius gives on the Stoics’ behalf, in 7. 136. By contrast, nothing that comes to be, comes to be out of the two principles—god or reason, and qualityless matter. The principles compose the originary substance, the flash, but this substance did not come to be out of them. Since the principles are eternal and ungenerated, and are always interblended, the originary substance itself is eternal and ungenerated too. Hence, the flash of the originary substance is the earliest thing in the account of generation that Chrysippus provides for us that deserves the name of “element,” since it is the earliest thing that fits the Stoic definition of “element,” just cited: it is something out of which and from which subsequent things that come to be first come to be, and into which they finally get reduced. God and qualityless matter do not fit this definition. Hence, they are not elements, but only, as in fact Stoic theory specifies them, principles (ἀρχαί).²⁶

²⁶This analysis shows that M. Lapidge was wrong to think that the Stoics were forced to abandon the distinction between ἀρχαί and στοιχεῖα when Chrysippus introduced πνεῦμα as a cosmic

What, then, in order, are the turns subsequently taken by this originary substance, and what new substances do they lead to? Diogenes Laertius gives us a complete-seeming capsule-account, but we have to piece it together from two brief passages, one in 7. 136, quoted above, the other, occurring a couple of pages later, in 7. 142. Each of these adds something important not included in the other. The passage in 136 tells us that at first god or reason was all alone, in the way that I have already explained. God then turned the entire substance (i.e. the originary flash) “through air into water.” The passage in 142 adds that this first series of turns was “from fire through air into moisture.”²⁷ (The variation from “into water” in 136 to “into moisture” in

force (“A Problem in Stoic Cosmology,” p. 277). Only the two principles ever counted for any Stoic as ἀρχαί, and nothing Chrysippus said about πνεῦμα (which wasn’t an element for him, only a compound out of two elements, fire and air) had any tendency to compromise this distinction.²⁷ Here is the Greek text of the passage in 7. 142 (as printed by Long and Sedley, 46 C, except that I accept with Wachsmuth the reading ἐξαερωθῆ, “turned into air,” the reading of one ms., instead of ἐξαραιωθῆ, “rarefied,” read by other mss.), followed by a translation.

γίνεσθαι δὲ τὸν κόσμον ὅταν ἐκ πυρὸς ἢ οὐσίας τραπῆ δι’ ἀέρος εἰς ὑγρόν, εἶτα τὸ παχυμερές αὐτοῦ συστὰν ἀποτελεσθῆ γῆ, τὸ δὲ λεπτομερές ἐξαερωθῆ, καὶ τοῦτ’ ἐπὶ πλείον λεπτυνθὲν πῦρ ἀπογεννήσῃ· εἶτα κατὰ μίξιν ἐκ τούτων φυτὰ τε καὶ ζῶα καὶ τὰ ἄλλα γένη.

“The world comes into being when the substance is turned out of fire through air into moisture; next the thick part of the moisture condenses and gets finished off as earth, while the thin part is made into air, and the latter when it is thinned even more generates fire. Next, by mixture out of these, plants and animals and the other natural kinds.”

One must compare with this the parallel passage in Stobaeus (see *SVF* 1. 102), alleged to be verbatim quotation from Zeno. The comparison supports my preferred reading of ἐξαερωθῆ,

142 is insignificant, I think,²⁸ but the addition in 142 of “from fire” is a significant addition, as we will see.) The passage at 136 then goes on to tell us that god “stays behind” in this moisture or water as the “seminal thinking of the world”; that is, he stays behind thinking his plans for the specific construction, first, of the four elements out of which everything in the actual world is made, and then (as 142 adds), by mixing these elements together in varying proportions, of “plants and animals and the other natural kinds.”²⁹ This work of construction begins (as 142

since without it DL will not be telling us directly, as *SVF* 1.102 does, that some of the moisture is rarefied into air.

τοιαύτην δὲ δεήσει εἶναι ἐν περιόδῳ τὴν τοῦ ὅλου διακόσμησιν ἐκ τῆς οὐσίας, ὅταν ἐκ πυρὸς τροπὴ εἰς ὕδωρ δι' ἀέρος γένηται, τὸ μὲν τι ὑφίστασθαι καὶ γῆν συνίστασθαι, [καὶ] ἐκ τοῦ λοιποῦ δὲ τὸ μὲν διαμένειν ὕδωρ, ἐκ δὲ τοῦ ἀτμιζομένου ἀέρα γίνεσθαι, ἐκ τινὸς δὲ τοῦ ἀέρος πῦρ ἐξάπτεσθαι... .

“Out of the substance there will have to be the following sort of periodic cosmic ordering of the whole, when a turning happens out of fire into water through air: one part sinks and constitutes earth, and out of the rest of it one part remains water while out of the vaporized part air comes to be, and from some of the air fire gets ignited”

Note that *SVF* 1.102 (claimed by Diels to come from Arius Didymus) says explicitly that some of the moisture remains as water, or remains and becomes water. DL leaves this unsaid, though it seems intended.

²⁸The passage in 136, having mentioned water as what substance is turned into, goes on to speak of it instead as “the moist,” τῷ ὑγρῷ.

²⁹In a passage reported by Plutarch (*Stoic Self-contradictions* 1053b, shortly after citing the passage discussed in fn. 40 below) from the first book of his *On Providence* Chrysippus describes

tells us) by his “turning” this moisture so that out of different parts of it, in separated areas, earth gets produced by condensation, while first air and then fire get produced by rarefaction out of other parts; the remaining parts of this moisture, which are neither condensed nor rarefied, thus give rise to the fourth element, water.

Thus we get two successive sets of “turnings.” First, the originary flash gets turned (or turns itself) from something called fire through something called air to something called moisture (in 142: or something called water, in 136). Then we get, out of that moisture by further turnings, the construction of the four material elements of the actual world. It is obvious that the fire, air, and water or moisture referred to in the first of these two sets of turnings cannot be any version of the four elements out of which the world and its contents are subsequently constructed. If they are called “fire,” “air,” and “water,” these designations must be meant with some other reference. They are, as one could say, and I suggested at the outset, proto-fire, proto-air, and proto-water, in that they are only somewhat like, in being fiery, airy, and watery respectively (see fn. 35 below), but lack the determinate structure of, the three actual material elements called fire, air, and water respectively. (Note that in the first set of turnings there is no proto-earth; anything even like earth only emerges when earth itself, the material element, gets generated from the moisture that is said to have the seminal thinking of god in it.)

On this account the originary substance, which is the first material form that god adopts, turns into something called fire (i.e., proto-fire), which is the second material form he/it takes. This proto-fire remains as the “seminal thinking” in the moisture out of which then he, as that proto-fire, constructs the four ordinary elements.

the situation when god is (proto-)fire before turning into this moisture as one in which he is his soul alone; when in the moisture he is that soul now in and possessing a body, viz. the moisture.

We are now ready to turn to the Stobaeus excerpt giving Chrysippus' account of three ways of speaking of elements (*SVF* 2. 413).³⁰ Here is a translation (parenthetical numerals mark beginnings of lines in the Greek text in the Appendix):³¹

From Chrysippus. About the elements out of substance,³² he declares himself more or less as follows, in keeping with the leader of his sect, Zeno—saying that there are four

³⁰ It is important to see that these are not three senses of the word “element” (στοιχεῖον). On each of the three ways of speaking, or usages, what gets counted as an element is conceived as fitting the very same definition: as we have seen (DL 7.136) an element is defined by the Stoics as that which a thing first comes to be, and into which it is ultimately reduced. What differentiates the three usages depends on what, on that usage, gets counted as the “first” material body from which all other things come to be. In one way of considering the process of coming to be, this first level can be identified as the four simple bodies (earth, air, fire and water); in another as the originary material body from which cosmogenesis begins; in yet another, as proto-fire, the very first stage in cosmogenesis. See my comments below in my main text for explications of how one can understand the three different frameworks for counting something as first or lowest material constituent of things.

³¹ In the Appendix, as noted, I provide von Arnim's text exactly as he prints it, with no departures. In the footnotes there I indicate exhaustively, and explain, which of his and other editors' emendations I do or do not accept, and which manuscript variants I follow, in departure from von Arnim. The text translated here is therefore not that of von Arnim printed in the Appendix (for the reader's convenience), but one that includes the departures indicated in my notes to his text.

elements, fire air water and earth, out of which everything is constructed, both animals and plants and the world as a whole and all the things contained in it, and into these they get dissolved. But that which is called an element par excellence is so called because the rest are constructed by change out of it as origin (ἐξ αὐτοῦ πρώτου) and all are dispersed and get dissolved into it in the end, while this one does not (6) admit of dispersal or reduction into any other. On this way of speaking, fire is called “element” self-sufficiently, since it is not <ranked> along with another.³³ But on the first way of speaking,³⁴ fire

³²In fact the elements Arius goes on to identify are “out of” substance only in the first two usages that Arius is about to set forth for us, not the third. Elements on each of the first two usages are made ultimately out of the originary substance by its turnings. Below we learn that this substance itself is called (the) element, in the third of the usages, and it, of course, is not “out of” substance. It is not “out of” anything at all, as I have explained, since though composed of god and prime matter, it does not come to be from them. The terminology of “of out substance” at the beginning of the passage evidently reflects the commonplace understanding of an element in application to material stuffs, whereas Chrysippus’ innovatory recognition of the originary substance as entitled also to the name of “element,” possessing a reasonable justification though it does, also expands our understanding of what the notion of elementhood encompasses.

³³Long and Sedley’s analysis (II, 278) makes this way of speaking (λόγος), which they correctly see is the one that has just been introduced and briefly discussed immediately before (in lines 4-6 of my text printed in the Appendix: “But that which is called an element par excellence ... dispersal or reduction into any other” in my translation), correspond to the first of the three usages listed in resumption by Arius in lines 14-22. But they seem to think that, in adding here the

specification of fire as what, on their understanding of this usage, counts for Stoics as “the” element, Chrysippus was introducing his third usage. At any rate, following helpful discussion with Ricardo Salles, that is now how I understand their annotated translation (their textual notes in vol. II do not provide a suitable context for explaining how they intended Chrysippus to be understood, and their interpretative comment in vol. I is not clear on this point). For them, then, the “second usage”(according to the initial order, which is the first in resumption) is a general characterization (a second “account”), or sort of definition, of “element,” as “whatever the other ordinarily recognized elements are constituted out of and ultimately get resolved into,” and the third “usage” is found in the specification of fire as the one that (according to Stoics) fits that description. Long and Sedley likewise seem to find, with respect to the specification of earth air fire and water as “elements” according to the first of Chrysippus’ usages (in the initial order), a further general characterization (or “account”) of “element,” indicated in their translation (see the bracketed phrase “[i.e., (1) above]”) as to be found in the first line and a half of the text. (In that case, I guess they must have in mind some general idea of an “element” as what comes from “substance” as the account according to which the four usual elements will get counted as elements; this seems to me not to make good sense.) Perhaps, though, “[i.e., above (1)]” is a slip, for “(2),” and they mean to count the first application itself, assigning the term “element” to the four usual ones, as the first “usage” without having any separate “account” for the term. But, whichever of these two things they intended, their interpretation mixes applications with definitions or general characterizations (I suppose it is possible that Chrysippus could be guilty of this, so I would not want to exclude their interpretation simply on this ground). But on the first option (the one they actually propose, with “(1)” rather than “2)” in their bracket), if the second “account” is registered as one of Chrysippus’ usages, alongside its specification as another one

is constructive of things along with other <elements>: the first change that happens is the constructing change out of fire (11) into air, the second from the latter into water, third the yet further change in a corresponding way of water, once constructed, into earth. And in the other direction, from that [i.e., earth] being dissolved and dispersed, the first dispersal that happens is into water, second out of water into air, and third and last into fire. (All that is fiery is called fire, what is airy air, the rest similarly.)³⁵ So, ac-

of them, then the corresponding first account, leading to the identification of four elements, ought to count as an additional “usage” for Chrysippus—resulting in four, not three usages. In fact, it seems far better to take Long and Sedley’s second “account” together with its specification with fire, as constituting a single one of Chrysippus’ three “usages,” i.e., as I have insisted, applications, of the term “element.” (See DL 7. 136 and my discussion above for the only definition the Stoics provide of “element”; we do not hear elsewhere about an alternative “account” or “accounts” such as Long and Sedley postulate.) Hence this “way of speaking” with its specification in terms of fire corresponds to the first of the three usages as listed in resumption (the second in the order of prior presentation). (See the next three fns.)

³⁴The first way of speaking referred to here is manifestly the one mentioned first above, viz. the one according to which fire, air, water, and earth are elements. This is also, again manifestly, the usage listed and discussed below, lines 16-20, as the second of the three usages Arius sets out in resumption.

³⁵I take it to be the point of this parenthetical explanation to make clear that proto-fire, though (if you like) fiery, is not actually fire, and proto-air and -water are airy and watery but not air or water (the ordinary elements everyone is already familiar with)—nonetheless, these proto-

According to Chrysippus, element is spoken in three ways: in one way it is spoken of fire, because the rest are constructed (16) by change out of it and get their reduction into it; in a second way, in the way that the four elements, fire air water and earth, are spoken of (since the rest are constructed through some one or some ones or even all of these: through the four as the animals and all the things on the earth are compounds, through two as the moon is constructed through fire and air, through one as the sun, for it is through one only, since the sun is pure fire); in the third way of speaking,³⁶ that is spo-

substances do deserve to be called, as Chrysippus has just been doing, by those names, because of their respective special characters as fiery etc.

³⁶For Long and Sedley the exposition of this usage (the third according to my count) in what follows is limited to lines 20-22 of my text in the Appendix—they do not print or translate, and say nothing about, lines 22-26. Hence, for them, this usage, which they identify as being constituted simply by a general characterization of an “element” (see n. 33 above), is here only explicated by what they must regard as a paraphrase in terms of “providing generation from itself methodically” On my view, in my main text below, the exposition continues down to the end of the selection, so that quite a bit more is said in explication of this usage; and this phrase is by no means a paraphrase of that general characterization (which in fact, as I understand it, applies to the item that is an element according to the first of the usages described in resumption, not at all to what counts as “element” according to the third application). The explication of the third usage discusses not proto-fire (or, as Long and Sedley would say, simply fire, the basic one of the four elements), but the originary substance, as these further remarks in fact make clear. It is a significant mark in favor of my interpretation of this passage over theirs that I include

ken of as element which is originally constituted (21) in such a way as to provide generation from itself methodically up to a conclusion, and out of that [sc., that conclusion] to receive reduction into itself similarly methodically. And he said there were explanations about element of the following sort, that it is both that which is most easily moved through itself,³⁷ and the principle <and> reason and the eternal power possessing a nature such as to move itself downwards to turning and from turning upwards, everywhere cyclically, both consuming everything into itself and in the other direction (26) reconstituting it from itself in an orderly and methodical way.

As I mentioned at the outset, we find no difficulty in understanding the first of the three usages Chrysippus distinguishes, according to this passage: the usage according to which there are four elements of equal standing. These are the four material substances out of which all other materials and all material objects in the actual world are constructed, and into which at their destruction they are ultimately dissolved, while thereafter new materials or material objects get constructed from the same elemental bodies that were previously their material constituents.

within my analysis the whole of the passage, and do not lop off the final four or so lines as some further separate remark, or set of remarks, of Chrysippus on the general topic of elements.

³⁷Diels (*Elementum*, p. 39) sees in this the first of three definitions of what it is to be an element that Arius now appends to the previous discussion of three, in fact, ways of applying the term. It is plain, however, that the following material relates to the third of the three ways of applying the term as explained in lines 20-22 my text. I therefore think it is better to take this phrase (“that which is most easily moved through itself”) to go with that material, relating to the third way of applying the term “element.”

These are fire, air, water and earth. This usage is referred to and explained in lines 2-4, 9-13, and 16-20 of my Greek text.

However, now that we have examined closely Chrysippus' account of the two sets of turnings by which the originary substance gives rise, eventually, to these four elements, one sees at once that in 9-13 (in my translation, "the first change ... third and last into fire") we are told, not, as you might have expected, about the second set of turnings, whereby, beginning with the creation of the material element earth out of the moisture that has god in it as seminal thought, we then get formed in order the material elements air and fire, with water coming to be out of the remainder of the moisture that arose as the conclusion of the first set of turnings. Rather, we are given there a brief account of precisely that first set of turnings. What lines 9-13 give us is a brief run-through of the turnings from proto-fire through proto-air to proto-water, resulting (as the first step of the second set of turnings) in the condensation of some of the proto-water into actual earth—the first of the material elements of the world as it actually exists. This is followed, as we now know, but is not mentioned here, by the generation out of that moisture, through rarefaction, of actual air and actual fire, with actual water coming to be out of the remainder of the proto-water of the moisture. This second series of turnings, apart from the mention of earth, is not described or mentioned in lines 9-13. Instead, as I just said, it is the first set of turnings that we are told about here. This first set of turnings begins, as we see reflected here in lines 9-13, from proto-fire: there, we are told, "the first change that happens is the constructing change out of fire into air."³⁸ But, as we now know, proto-fire is itself preceded in ex-

³⁸So, as we can now see, the addition in Diog. Laert. 7. 142 of "from fire through air into moisture" to the mere "through air into water" of 7. 136 is very significant. This indicates, as we see here in our Stobaeus text, that these changes begin from proto-fire.

istence by the originary substance, the flash: the absolutely first turning was from that originary substance.

Accordingly, we can now also see that the usage Chrysippus takes notice of second in order here, at the beginning of the passage, according to which something called “fire” is the sole element, an element par excellence and self-sufficiently,³⁹ refers to the proto-fire of the first set of turnings. This raises a question that it will be worth while to pursue briefly. It is true that the first thing that comes to be when the originary substance begins to turn itself is proto-fire, and the Stoic definition of element emphasizes that on any usage an element should be what things first come from (in this case, the ordinary elements come to be first from proto-fire, in the series (proto-) fire-air-water. But how are we to understand (proto-)fire as the sole element, on this usage (the sole element from which the ordinary elements come to be)? That seems to imply that ordinary fire, air, water and earth have proto-fire as their only constitutive element. One might ask, however, why one should count fire as the sole constitutive material of the things that come from it, according to this second usage? What about proto-air and (even more) proto-water, i.e. that moisture in which, we are told by Diogenes Laertius, the seminal thinking of the world stays behind, making matter suitable for its purposes in generation of the world through the generation, to begin with, of the actual four material elements? Ought they not also to be counted as elements according to this second usage—so that on this usage there would be three elements, not four as on the first usage, and not, as Arius tells us, Chrysippus in fact claimed, just one?

³⁹The second usage is referred to and explained in lines 4-9 and 15-16 of my Greek text: “But that which is called ... along with another” and “in one way ... reduction into it” in my translation.

In addressing this question we need first to take notice of the fact that the descriptions I have cited above from Diogenes Laertius of the first set of turnings (7. 136 and 142), resulting in the moisture from which then the generation of the four elements begins, are presented by him as giving the view not only of Chrysippus but of Zeno and indeed other Stoics. In 136, for example, Diogenes concludes the passage I quoted with, “Zeno speaks about them [sc., the four elements] in *On the Whole*, and Chrysippus in the first book of his *Physics*, and Archedemus in a work *On Elements*.” To these authors in the passage I quoted from 142 about the generation and destruction of the cosmos, he adds references to works of Posidonius, Cleanthes, and Antipater.⁴⁰ Indeed, the parallel text to 142 (*SVF* 1. 102) that I cited in n. 27, also from Stobaeus, is prefaced with “Zeno declared himself expressly as follows”: there is no reference there to Chrysippus, or to any of these others, at all. Of course, Chrysippus wanted to follow Zeno in his own ordering of the first set of turnings, as well as in the second set. But we must be ready to interpret him in ways that in fact distinguish his view from Zeno’s. He himself would maintain that his own view is the one that Zeno really had in mind all along. But we already know that he rejected any idea that the originary substance was fire, as suggested in 142, either in the sense of the ordinary element or in any other sense that implies a substance flaming up in any way; and we can expect other related “precisifications.” In speaking of the turnings in 136 Diogenes only uses the term “element” in connection with the usual four, and leaves one with the impression that the references to air and water in his exposition of the first set of turnings, leading to the further turnings that form the four, are just references to two of these same four elements.

⁴⁰It is worth noting that Plutarch, quoting or paraphrasing from the first book of Chrysippus’ *Physics* (*Stoic Self-contradictions* 1053a=*SVF* 2.579), confirms that the details reported in 142 represent Chrysippus’ own view.

Presumably that in fact faithfully reflects Zeno's own innocence. He did not mind that, strictly speaking, there weren't any elemental air or water, not to mention any fire, in existence before the completion of the second set of turnings. As we have seen, Zeno did not distinguish, as Chrysippus took great care to do, between the originary substance as a flash, not some fire of the ordinary elemental kind, even the purest version. Accordingly Zeno may, as I have already suggested, have loosely and naively spoken of the originary substance as fire, which then turned through air into water or moisture, and remained inside the moisture as a seed, working on it to generate from it the element earth by condensation, and the elements air and fire by rarefaction, leaving the rest of it to be or become the element water.

Chrysippus knew that, as stated, this made no good sense. In his own version, then, he must have clarified as follows. Actually, as we have seen, the originary substance is a flash, not a fire; the first turn out of it, as world-formation gets underway, is to proto-fire, with further turnings through proto-air to proto-moisture, at which point the four elements come into being by condensation and rarefaction of the proto-moisture—an additional set of turnings. Wishing then to distinguish the first set of turnings from the second by marking a distinct way of applying the term “element” from that according to which the four basic material bodies make up all the world's actual materials, he declared (in our Arius excerpt) that only the body (viz. god as proto-fire) produced at the first of these turns should be counted as an element in that second way of applying the term. Apparently his thought was as follows. Anything deserving the name “element” must be some stuff out of which things are made, as I noted just now. The things that are to be made in these turnings are, ultimately, the four ordinarily recognized elements. Even if these result from the condensation and rarefaction of proto-water or moisture, it would be a mistake to say that they are made out of water or out of anything watery, as in any sense a stuff they are made of (in the strictest sense, they and everything else is made out of the origi-

nary substance, of course). Proto-water is only a preliminary, short-lived transition-point in the turning of proto-fire so that the four elements get generated. The same applies to proto-air. Zeno's insight had been that it is the power and energy of fire that underlies all the actual materials of the cosmos and all material objects. The truth of this insight requires that in our account of world-formation we make this power and energy, and only it, as proto-fire, the material basis for the four elements. It is god as proto-fire that is spread through the four ordinary elements as what, in their different material constitutions (depending on their varying densities), they are made out of.

We should conceive proto-fire, proto-air, and proto-water in the following way. The originary substance turns itself first by creating proto-fire, as a stuff that is by its material nature so structured as to possess the fostering and generative powers that are needed for subsequent stages of world-formation. It does this by, so to speak, overlaying over itself just those qualities that are needed for this task. It thereby "becomes" something like fire by giving itself these further fiery and fostering characteristics, ones that it needs to have in order to complete Zeus's plan of world-creation. It cannot be called "fire" in any strict sense, as I have already observed. But it does deserve to be so designated because of its powers of generation and sustenance.⁴¹ This "fire" produces moisture (again by overlaying everywhere over itself watery characteristics), in which it "stays behind" as "the seminal thinking of the world" (see DL 7.136, cited above)—in the first instance, as the seminal thought of the four elements that it is immediately going to

⁴¹ That is surely why it is precisely at this point in the exposition, at lines 13-14, where proto-fire has been introduced for the first time, that Arius or Chrysippus points out that he is using the term "firer" in this connection to refer to whatever is fire-like (and so, too, for "air" and the others).

produce, using its generative powers. It remains in all four of these elements, and must remain in them as what they are made out of, in order for those elements to have the distinctive powers of generation and construction (as with fire and air) or more or less passive constitutability (as with earth and water) that, on Stoic theory, must belong to them, if they in turn are to play their roles in world-constitution. Proto-air is a mere stage through which proto-fire must pass as it produces proto-water (“fire” has to go through the more dense stage marked by proto air, before it can become proto-water). Proto-water is also itself only a temporary stage in proto-fire’s (and the originary substance’s) “turning” downward to world-generation. Proto-fire needs proto-water as a residing point in which its own generative powers can reside, while carrying out its generative activities, through condensation of that material in some parts of it (leading to the existence of earth), and through rarefaction of other parts of it (leading to air and fire), with the creation of proper water from the remainder. Thus, as I said, proto-fire, and only proto-fire (among the three proto-stuffs) counts as the element, on this second usage of the term: it is all by itself what the usually recognized four elements of the material world are made of.

Let us attend now to the third of Chrysippus’ ways of applying the term “element.” This is referred to in lines 20-26 of my Greek text (“in the third way of speaking ... in an orderly and methodical way” in my translation). Two striking facts about this usage and about what on it gets spoken of as an element deserve immediate notice. First, according to this passage, whereas in both the first two usages the element or elements include something called “fire,” in reference to the third there is, quite strikingly, no mention of fire. Second, we should note the use of the dative ὁδῶς, which I have translated “methodically,” which appears three times in the exposition of the third usage (and nowhere in the exposition of the other two usages). The first two times it modifies the “generation” of unspecified things from, and their “reduction” into, the element on this usage. In his exposition, earlier in our excerpt, of elements according to both the

other usages Arius Didymus has indeed spoken similarly of “construction” out of and “dissolution” into elements, but in neither case do we find this interesting qualification, “methodically.” Moreover, in the third appearance of ὁδῶν we read of “the principle <and> reason and the eternal power ... both consuming everything into itself and in the other direction reconstituting it from itself in an orderly and methodical way.” We have already examined passages where god is described when the world has been conflagrated as being all by himself, having consumed all substance (DL 7. 137, 136), and subsequently generating it all out of himself, and another passage (Aetius in *SVF* 2. 1027) which speaks of god, when the world has been conflagrated, as “proceeding methodically to the generation of the world.” So there can be no doubt that in this third way of applying the term Chrysippus means to be assigning the title of element to god, as the originary substance, i.e. to prime matter as qualified by having god or reason spread everywhere through it. Arius has prepared the way for us to recognize this third usage in what he has said in lines 10-11 (“the first change that happens is the constructing change out of fire into air”). I have argued above that this is a reference to the first change out of proto-fire. If we bear in mind, as we ought to in reading about Chrysippus’ views, that proto-fire is a substance existing as the first step in the reconstruction of the world, and is not the originary substance itself that exists when the world has been conflagrated, it must be evident that lying behind it stands that originary substance, the flash.

This third way of speaking of an element, according to which the originary substance, as the absolutely first stuff out of which things subsequent to it in cosmogenesis are made, is the sole element, makes very good sense. It is out of this, by the first of those methodical turnings, but (it appears) not yet a constructing change (a change κατὰ οὐστάσιν), that proto-fire comes

to be.⁴² Since proto-fire is what (with their different consistencies) elemental fire, air, water, and earth are made out of (by “constructing” changes), one can therefore well say that, in a cer-

⁴²Arius speaks of the “turns” both from proto-fire through proto-air to proto-water, and from proto-water to the four ordinary elements, as “constructing changes” (see συνίστασθαι κατὰ μεταβολήν in line 5, τῆς ... κατὰ σύστασιν ... μεταβολῆς in lines 10-11, and συνίστασθαι κατὰ μεταβολήν in line 16). But in connection with the first turn of all, from the originary substance to proto-fire, he does not speak in that way. He says only that the originary substance itself is “constituted” (συνέστηκεν)—it is not constructed, since that implies a coming-into-being, while this substance is eternal—so as to provide generation methodically all the way to an end and dissolution methodically back again into it (lines 20-22), and that it “moves itself downwards to turning” (line 24). He does not call the move a constructing change. That might suggest that proto-fire, the result of the first turn, is not to be thought of as constructed out of the originary substance, but to have some other relation to it, even though it comes from it and eventually gets reduced to it. Perhaps this difference in language is not significant. But maybe it is. The first turn (the first “move”) is to proto-fire. In subsequent moves, first proto-fire turns so as to engage in a constructive change that produces other proto-elements, ending with proto-water, and then proto-water gets changed so as to construct ordinary earth, air, fire and water. But the move from the originary substance to proto-fire yields the first material actually within the cosmos now already in formation. Perhaps Chrysippus’ idea is that all constructing changes start from there, because all processes of construction must be carried out within the cosmos, or within the cosmos-in-formation, from materials already on hand. Construction only begins once proto-fire is on hand. That means that, though proto-fire materially derives, as everything else

tain sense, this originary substance is the most basic material body there is, the one out of which, ultimately, everything in the world is constituted. As such, given the Stoic definition (Diog. Laert. 7. 136) of element as that “out of which things that come to be, first come to be, and into which they are in the end reduced,” we can entirely appropriately give it the title of element.

Here we must bear in mind the Stoic theory of through-and-through interblending of bodies. Just as both the two principles are everywhere where either of them is, so also the originary body is everywhere they are too, and, as the world gets generated and the ordinary four elements come into being, anywhere any element is, everywhere there, there will also be several distinct other bodies, including proto-fire as well as the originary substance. Though, as we see in our Stobaeus passage (lines 17-20), the sun is made out of only one element, fire, and the moon of two, fire and air, most material things have, in differing proportions, all four. So in the case of the latter, they have everywhere in them all four material elements in some or other proportions, plus proto-fire, plus the originary substance (all of which count as elements, on one of Chrysippus’ usages or another), plus reason and prime matter (which, of course, are not elements at all according to any proper usage, but principles).⁴³

does also, from the originary substance, it does not get constructed out of it, but comes into being rather as the necessary presupposition to all constructed forms of matter.

⁴³I thank Prof. Ricardo Salles for providing the incentive to write up these ideas, which were first presented at a conference on “God and the Cosmos in Stoic Philosophy” that he organized at the Instituto de Investigaciones Filosóficas of the Universidad Nacional Autónoma de México, July 3-5, 2006. I have profited greatly from the thorough discussion of the paper on that occasion, and thank particularly David Hahm, Brad Inwood, Thomas Bénatouil, and Professor Salles

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Appendix

(SVF 2. 413) Stobaeus *Eclog.* I, p. 129, 1-130, 20 Wachsmuth

Χρυσίππου. περὶ δὲ τῶν ἐκ τῆς οὐσίας στοιχείων τοιαῦτά τινα ἀποφαίνεται, τῶ τῆς αἰρέσεως ἡγεμόνι Ζήνωνι κατακολουθῶν, τέτταρα λέγων εἶναι στοιχεῖα <πῦρ, ἀέρα, ὕδωρ, γῆν, ἐξ ὧν συνίστασθαι πάντα καὶ ζῶα^a καὶ φυτὰ καὶ τὸν ὅλον κόσμον καὶ τὰ ἐν αὐτῶ περιεχόμενα καὶ εἰς ταῦτα διαλύεσθαι. τὸ δὲ <πῦρ καὶ^b κατ' ἐξοχὴν στοιχεῖον λέγεσθαι διὰ τὸ ἐξ αὐτοῦ πρώτου τὰ λοιπὰ συνίστασθαι κατὰ μεταβολὴν καὶ εἰς αὐτὸ ἔσχατον πάντα χεόμενα διαλύεσθαι, τοῦτο δὲ μὴ ἐπιδέχεσθαι τὴν εἰς ἄλλο χύσιν ἢ ἀνάλυσιν· συνίστασθαι δὲ ἐξ αὐτοῦ τὰ λοιπὰ καὶ χεόμενα εἰς τοῦτο ἔσχατον τελευτᾶν· παρὸ καὶ στοιχεῖον λέγεσθαι, ὃ πρῶτον ἔστηκεν οὕτως, ὥστε σύστασιν διδόναι ἀφ' αὐτοῦ καὶ αὐτὸ τῶν λοιπῶν χύσιν καὶ διάλυσιν δέχεσθαι εἰς αὐτό.]^c κατὰ μὲν τὸν λόγον τοῦτον αὐτοτελῶς λεγομένου τοῦ πυρὸς στοιχείου· οὐ μετ' ἄλλου γάρ·^d κατὰ δὲ τὸν πρότερον καὶ μετ' ἄλλων συστατικὸν εἶναι, πρώτης μὲν γιγνομένης τῆς ἐκ πυρὸς κατὰ σύστασιν εἰς ἀέρα μεταβολῆς, δευτέρας δ' ἀπὸ τούτου εἰς ὕδωρ, τρίτης δ' ἔτι μᾶλλον κατὰ τὸ ἀνάλογον συνισταμένου τοῦ ὕδατος εἰς γῆν. πάλιν δ' ἀπὸ ταύτης διαλυομένης καὶ διαχεομένης πρώτη μὲν γίνεται χύσις εἰς ὕδωρ, δευτέρα δ' ἐξ ὕδατος εἰς ἀέρα, τρίτη δὲ καὶ ἐσχάτη εἰς πῦρ. Λέγεσθαι <δὲ^e πῦρ τὸ πυρῶδες πᾶν καὶ ἀέρα τὸ ἀερῶδες καὶ ὁμοίως τὰ λοιπὰ. Τριχῶς δὴ λεγομένου κατὰ Χρυσίππον τοῦ στοιχείου, καθ' ἓνα μὲν τρόπον τοῦ πυρὸς, διὰ τὸ ἐξ αὐτοῦ τὰ λοιπὰ συνίστασθαι κατὰ μεταβολὴν καὶ εἰς αὐτὸ λαμβάνειν τὴν ἀνάλυσιν· καθ' ἕτερον δέ, καθὸ λέγεται τὰ τέσσαρα στοιχεῖα, πῦρ, ἀήρ, ὕδωρ, γῆ (ἐπεὶ διὰ τούτων τινὸς ἢ τινῶν ἢ καὶ πάντων τὰ λοιπὰ συνέστηκε, διὰ μὲν τῶν τεττάρων, ὡς τὰ ζῶα καὶ τὰ ἐπὶ γῆς πάντα συγκρίματα, διὰ δυοῖν δέ, ὡς ἡ σελήνη διὰ πυρὸς καὶ ἀέρος συνέστηκε, δι' ἑνὸς δὲ ὡς ὁ ἥλιος, διὰ πυρὸς γὰρ μόνου, ὁ γὰρ ἥλιος πῦρ ἐστὶν εἰλικρινές), κατὰ τρίτον λόγον λέγεται στοιχεῖον ^{***f} εἶναι ὃ πρῶτον συνέστηκεν οὕτως, ὥστε γένεσιν διδόναι ἀφ' αὐτοῦ ὁδῶ μέχρι τέλους καὶ ἐξ ἐκείνου τὴν ἀνάλυσιν δέχεσθαι εἰς ἑαυτὸ τῆ

ὁμοία ὀδῶ. Γεγονέναι δ' ἔφησε καὶ τοιαύτας ἀποδόσεις περὶ στοιχείου, ὡς ἔστι τό τε δι' αὐτοῦ εὐκιν-
ητότατον καὶ ἡ ἀρχὴ <καὶ ὁ σπερματικὸς>^g λόγος καὶ ἡ αἰδῖος δύναμις φύσιν ἔχουσα τοιαύτην, ὥστε
αὐτήν^h τε κινεῖν κάτω πρὸς [γῆν]ⁱ τὴν τροπὴν καὶ ἀπὸ τῆς τροπῆς ἄνω πάντη κύκλω, εἰς αὐτήν τε
πάντα καταναλίσκουσα καὶ ἀφ' αὐτῆς πάλιν ἀποκαθιστᾶσα τεταγμένως καὶ ὀδῶ.

^a This addition is due to Diels, and I accept it (so do Long and Sedley). Something has obviously dropped out of the text here (the sentence makes no grammatical sense as it appears in the mss.); the full list of the usual four elements given below in lines 17-18, with the explication in 17-18 of how animals and everything else on the earth are composed from them, justify the details of Diels' addition.

^b This is an addition of Usener (Heeren had emended with the addition of πῦρ without καί), accepted by Diels, which Long and Sedley argue is unnecessary, and also distorts the structure of the passage. I follow Long and Sedley in not accepting any emendation here. In this sentence Arius/Chrysippus is explaining the ground on which something would deserve to be called "element" par excellence; below, lines 8-9, he then tells us that this thing is "fire" (i.e. proto-fire, as I explain in my discussion in the main text). Usener's/Heeren's addition is premature.

^c Wachsmuth detects here an intrusion into the text of a marginal note by a reader (he detects a similar one further on in Stobaeus, at p. 154, 24 ff.). I accept this deletion. It seems just to repeat in somewhat different words what has just been said in lines 4-6.

^d The phrase οὐ μετ' ἄλλου γάρ appears in the mss. after πρότερον, line 10, where it certainly makes no sense. It was first moved here by Heeren, and is so printed by Diels, Wachsmuth, von Arnim, and Long and Sedley. The genitive absolute in the phrase beginning κατὰ μὲν τὸν λόγον τοῦτον, with the matching κατὰ δὲ τὸν πρότερον in 9-10, which is followed by the infinitive εἶναι

(with τὸ πῦρ to be understood as subject), seems anacoluthic; Diels at first wondered whether we oughtn't to read γίγνεσθαι for γάρ in the transposed phrase, since that would provide an infinitive to attach the genitive absolute to, so as to match the infinitive in the following clause and remove the anacoluthon. This seems to me attractive, though radical; but in his Addenda (p. 854) Diels points to what he seems to take to be the same matched genitive absolute and infinitival clauses at p. 144, 6 W ff. (in another Stoic report, identified by Diels as Arius Didymus fr. 19), and concludes that no emendation is needed. Reluctantly, I follow him in this.

^e Some connective is required here by the grammar; this addition is Heeren's proposal, accepted by all subsequent editors. I accept it.

^f Wachsmuth saw a lacuna here, and von Arnim agreed. I think that was a mistake. The mss. text makes good enough sense without emendation. I follow Long and Sedley here.

^g Some addition is obviously necessary here; Usener proposed the one here printed (accepted by von Arnim). Meineke and Diels, more modestly and more reasonably, suggested simply adding <καὶ ὁ>. I follow Meineke and Diels. (Long and Sedley print this Stobaeus text only down to ὁδῶ in my line 22, so they offer no help here; they omit the important last lines.)

^h The mss. here read γῆν; the correction is due to Wachsmuth: this is reasonable and gives what ought to be the right sense. I accept this emendation.

ⁱ Hirzel first proposed deleting this word, and he is followed by Wachsmuth. I accept Hirzel's deletion. The text of this whole clause is transmitted in confused form in the mss., some of which give τροφήν and τροφής instead of τροπήν and τροπής, no doubt in error.