

On the Separability and Inseparability of the Stoic Principles

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ABSTRACT Sources for Stoicism present conflicting accounts of the Stoic principles. Some suggest that the principles are inseparable from each other. Others suggest that they are separable. To resolve this apparent interpretive dilemma, I distinguish between the functions of the principles and the bodies that realize those functions. Although the principles cannot separate when realizing their roles, the Stoic theory of blending entails that the bodies that realize those roles are physically separable. I present a strategy for further work on the principles in light of this interpretation.

KEYWORDS Stoicism, principles, God, matter, bodies, blending, functionalism, modality

I. INTRODUCTION

THE ANCIENT GREEK STOICS claim that there are two principles (ἀρχαί): the active principle and the passive principle.¹ The sources for Stoicism often call the active principle ‘God,’ and the passive principle ‘matter.’ These two entities play an important role in Stoic physics. In their analysis of the natural world, the Stoics invoke God and matter at a basic level. Thus, a full understanding of Stoic physics requires a full understanding of the principles.

In this paper, I will examine the relations that the principles bear to each other and to the natural world. This discussion also lays the groundwork for determining the nature of the principles—their ontological status within Stoic physics and their intrinsic characteristics. First, describing the relations that the principles bear to

¹I will defend an interpretation of orthodox Chrysippean Stoicism. I will assume that this theory is consistent with Zeno of Citium and Cleanthes of Assos’s views, since there is no clear evidence that the first three leaders of the school disagreed on the topics I discuss. Thus, by ‘the Stoics,’ I mean ‘the first three leaders of the Stoic school.’ In sect. 4, I will consider whether we should think that different Stoics held different views concerning the principles. See also n. 28.

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each other narrows in on the sorts of entities the principles are, since only certain sorts of entities will be able to bear these relations. Furthermore, by describing the roles of the principles in terms of the relations they bear to the natural world, one can identify the principles by locating the entities that carry out these roles and stand in these relations.

Other scholars have discussed these issues. In describing the nature of the principles, most scholars once maintained that they were aspects or descriptions of every natural object.² Call this the ‘old orthodoxy.’ According to the old orthodoxy, a complete metaphysical analysis of the natural world will refer to its active aspects (God) and its passive aspects (matter). The principles would not be bodies themselves. Rather, they would only be descriptions or aspects of the same body. Thus, the old orthodoxy maintains that God and matter are incorporeal entities of some sort.

As I stated above, the principles are supposed to explain the natural world at a basic level, according to the Stoics. Difficulties arise for the old orthodoxy when we attempt to determine how incorporeal aspects of natural objects influence the natural world such that the Stoics could explain the world through them. For the Stoics do not allow incorporeal entities to affect the world at all.³ For this reason, among others, most scholars now maintain that the principles are two bodies.⁴ Call this the ‘new orthodoxy.’ This interpretation is based on substantial evidence. Many sources simply assert that the principles are bodies.⁵ Furthermore, the new orthodoxy seems better positioned to describe how the principles influence the

²Dirk Baltzy, “Stoic Pantheism,” 10; Michael Lapidge, “ἀρχαί and στοιχεῖα,” 241–44 (though see 263–65); “Stoic Cosmology,” 163–64; F. H. Sandbach, *The Stoics*, 73–74; and Robert Todd, “Monism and Immanence,” 139–41. See Jon Miller, *Spinoza and the Stoics*, 39–41, for a discussion and defense of this view, which he does not ultimately endorse.

³See, e.g. Sextus Empiricus, *Adversus mathematicos*, 8.263/SVF 2.363/LS 45B/FDS 700. Citations to primary literature are according to book (if applicable), chapter (if applicable), section or page, and line number (if applicable, after commas). “8.263” above refers to book 8, section 263. Translations are my own unless otherwise stated in the notes. Whenever possible, I will also provide citations to anthologies of Stoic sources. These citations will be formatted in the following way. “SVF 2.363” refers to Hans von Arnim, ed., *Stoicorum Veterum Fragmenta*, Volume 2, Section 363. “LS 45B” refers to A. A. Long and D. N. Sedley, eds., *The Hellenistic philosophers*, Chapter 45, Section B. “FDS 700” refers to, Karlheinz Hülsner, ed., *Die Fragmente zur Dialektik der Stoiker*, Section 700.

⁴Jacques Brunschwig, “Stoic Metaphysics,” 210–11; John Cooper, “Chrysippus on Physical Elements,” 96–100; Michael Frede, “La Théologie stoïcienne”; David Furley “Cosmology,” 43–56; Jean-Baptiste Gourinat, “Matter,” 55–58; David Hahn, *Origins*, 32; Long and Sedley, *The Hellenistic philosophers*, 1:273–74; Gretchen Reydams-Schils, *Demiurge*, 56–60; Ricardo Salles, “Los Cuatro Elementos,” 29–31; Sedley, “Stoic physics and metaphysics,” 384–85; Katja Vogt, “Sons of the Earth,” 139–40; and Michael White, “Stoic Natural Philosophy,” 128–38.

⁵On God, see the group of sources collected in SVF 2.1028–48, including Hippolytus, Clement, Sextus Empiricus, and Alexander of Aphrodisias. On matter, see Aetius, *Placita*, 1.9.7/SVF 2.325/FDS 741; Sextus Empiricus, *Adversus mathematicos*, 10.312/SVF 2.309; and Theodoret, *Graecarum affectionum curatio*, 58.19/SVF 2.305. On the principles as a pair, see Alexander of Aphrodisias, *De mixtione*, 225, 3–5/SVF 2.310; Diogenes Laertius, *Vitae philosophorum* 7.134/SVF 2.299/LS 44B/FDS 744. This final source is controversial. The manuscripts read ἀλλὰ καὶ σώματα εἶναι τὰς ἀρχὰς καὶ ἀμόρφους, τὰ δὲ μεμορφῶσθαι. A variant of the text from the Suda reads ἀλλὰ καὶ ἀσωμάτους εἶναι τὰς ἀρχὰς καὶ ἀμόρφους, τὰ δὲ μεμορφῶσθαι. Some scholars from the old orthodoxy have endorsed this variant reading. See, e.g. Todd, “Monism and Immanence,” 139–40. However, the variant should be rejected, for reasons I describe in sect. 2. For helpful discussions of this text, see Cooper, “Chrysippus on Physical Elements,” 97n11; and Frede, “La Théologie stoïcienne,” 215–16.

natural world. When explaining, for example, how an animal is generated and sustained, the Stoics would describe a relation or interaction between an active body (God) and a passive body (matter). This justifies God's and matter's status as principles of that animal. Yet, accounts of the sorts of relations or interactions that are relevant for justifying God's and matter's basic status have varied among members of the new orthodoxy. So, even given widespread acceptance of the new orthodoxy and its advantages over the old orthodoxy, we still lack a clear and complete picture of the role of the principles.

Furthermore, members of both the old and new orthodoxies have agreed on one problematic claim concerning the principles' relation to each other: that the principles are inseparable from each other. That is, the active principle cannot exist without the passive principle and vice versa. This interpretation hinders us from obtaining a clear understanding of the nature of the principles. For, as I will argue below, the new orthodoxy's claim that the principles are bodies is true. However, this claim is difficult to square with the claim that the principles are inseparable. If they are inseparable, the principles would need to be anomalous bodies, quite unlike the separable bodies we observe every day. Perhaps such considerations lead scholars, such as David Sedley, to maintain that "it is therefore hard if not impossible to conduct an informative account of cosmic processes in terms of" the principles.⁶

I think that a more informative analysis of the natural world in terms of the principles' interaction is possible. However, it requires us to rethink the principles' relation to each other and to the natural world. Given this, I will reexamine the widely-accepted claim that the principles are inseparable from each other. While there is evidence that supports this claim, there is also evidence that supports the apparently contradictory claim that the principles are *separable* from each other. Thus, an apparent interpretive dilemma arises: we have evidence that the principles are both inseparable and separable. How can this be?

By examining the principles' roles, Stoic semantics, and Stoic modal logic, a solution to this dilemma will emerge. Specifically, the principles are bodies that are capable of existing independently of each other, although they are still functionally inseparable, in a way that I will describe. Given this solution, we are not compelled to assume that the principles are anomalous bodies incapable of independent existence. Thus, this paper lays the groundwork for a new, more informative interpretation of Stoic physics.

In section 2, I will examine the relations that God and matter bear to the natural world and each other in virtue of which our sources identify them as principles. I reject a common way to conceive of the principles' roles—that they are basic components of the natural world. I also argue that the principles are bodies, and thus that the old orthodoxy is false. In section 3, I develop the interpretive dilemma I described above. Some of our sources suggest that the principles are inseparable from each other, and others suggest that they are separable. I shall examine these sources and show how they seem to ascribe conflicting claims to

⁶"Matter," 58.

the Stoics. In section 4, I describe and reject several ways that someone could resolve this dilemma. In section 5, by drawing on details within Stoic semantics and modal logic, I will show how the Stoics can consistently maintain that the principles are inseparable and separable, according to different understandings of ‘the principles.’ I argue that this interpretation agrees with the evidence from section 3. Finally, in section 6, I describe how to approach questions concerning the nature of the principles, given this solution to the dilemma.

2. THE ROLES OF THE PRINCIPLES

In this section, I explain the principles’ roles within Stoic physics by describing the relations in virtue of which the Stoics claim God and matter are principles. This interpretation, in turn, entails a theory of what kinds of entities are capable of realizing these roles.

It will be helpful to begin by contrasting my interpretation of the principles’ roles with another interpretation. Commentators sometimes describe the principles in compositional terms; they claim that the two principles combine to form the natural world as two parts of a whole. Katja Vogt claims that they “together constitute physical reality.”⁷ In a recent article, Eduardo Boechat states, “the cosmos and every one of its parts could be analysed into an active and a passive component.”⁸ John Cooper says that “The two principles . . . are always combined with one another and thereby constitute” the world and that “The principles *compose*” the cosmos.⁹

These quotations suggest the following interpretation of the principles. God is a part of the natural world, matter is a part of the natural world, and together they compose the natural world. Furthermore, one might assume that it is in virtue of jointly composing the world that the Stoics identify God and matter as the principles.

However, it is not in virtue of this proposed joint-composition relation that the Stoics identify God and matter as principles. Furthermore, I shall argue that our evidence does not entail that God partially composes the natural world at all. Instead, our evidence suggests that matter constitutes natural objects,¹⁰ and God is an immanent efficient cause of those objects.¹¹ While it is possible that, in

⁷“Sons of the Earth,” 137.

⁸“Stoic Physics,” 426.

⁹“Chrysippus on Physical Elements,” 99, 105.

¹⁰By ‘constitute,’ I have in mind a one-one relation between two distinct bodies, one of which provides the material basis for the other. The two bodies share material bits but have different properties. See Ryan Wasserman, “Material Constitution,” for analysis. Such a relation between matter and peculiarly qualified objects (i.e. particular things like Socrates, *this* horse, *this* tree etc.) is described in Plutarch, *De comm. not.*, 1083c–d/LS 28A/FDS 843a. See Sedley, “Identity,” 260. While the other texts I survey do not describe matter’s relationship with such objects as clearly as Plutarch does, they do describe matter as somehow providing the material basis for natural objects. I will assume that this relationship is one of constitution.

¹¹On God’s role within Stoicism, I agree with much of Thomas Bénatouïl, “Zeus,” 25–28. However, please note that Bénatouïl does not explicitly say that his account of God’s role contrasts with the compositional accounts. For other explicit discussions of the roles of the principles, see Hahm, *Origins*, 32–34; Paul Scade, “Cosmological Limits,” 143–59; and Sedley, “Matter,” 57.

addition to being an immanent efficient cause, God composes the natural world, our evidence does not require this, and our sources do not identify God as a principle on this basis.

Consider a report from Seneca. He says,

[Text A] [1] Our Stoic philosophers, as you know, say that there are two things in nature from which everything is produced: cause and matter. [2] Matter lies inert, an entity ready for anything but destined to lie idle if no one moves it. [3] Cause, on the other hand, being the same as reason, shapes matter and directs it wherever it wants, and out of matter produces its manifold creations. [4] Hence a thing must be made from something, and by something: the latter is its cause, the former its matter. (*Letters*, 65.2/SVF 2.303/LS 55E)¹²

In A (1), Seneca claims that objects are generated out of two things: cause (God, the active principle) and matter (the passive principle).¹³ In A (2) and A (3), he describes how each principle contributes to objects' generation. Matter is shaped into these objects, and the active principle shapes matter, acting with a plan in mind as it turns matter "wherever it wants" (*quocumque vult*). Seneca concludes, in A (4), by describing the principles' roles with different prepositions: for any object *x*, the passive principle is that from which *x* is made and the active principle is that by which it is made. The difference in prepositions gives us reason to doubt that the principles both play the same compositional role. For these constructions seem to mean that matter constitutes *x* as its material basis, and God causes matter to be *x*'s material basis.¹⁴

According to Seneca, God is an efficient cause. While matter makes things up, God is somehow distinct from those things, since it causes matter to make them up. However, God is not separate from matter, as an artisan is separate from her products. Consider the following report from Alexander of Aphrodisias:

[Text B] [1] One could also inquire whether it is possible to say that God, who pervades matter and is in it, is the craftsman of the things that are generated out of matter. [2] For the Stoics support this with the claim that artificial products are not generated similarly to those that are generated by nature. For natural products are not formed and molded superficially, but totally, and their inner parts have been carefully crafted to be most precise. On the other hand, artificial products have been shaped like statues. For their inner parts are unmolded. [3] So because of this the Stoics say that the producer [τὸ ποιῶν] of the things that are generated by art is external and

¹²Translation from Long and Sedley.

¹³In this passage, Seneca uses 'cause' synonymously with 'God,' the active principle. Later, he explicitly identifies the first cause with God (*Letters*, 65.12, 23). See also Diogenes Laertius, *Vitae philosophorum*, 7.134, D (2) below, who calls God the "reason" in matter, echoing A (3).

¹⁴One might argue that Seneca is not trustworthy on this point. Certainly, Seneca does not write pure summaries of orthodox early Stoic doctrine. Thus, we should not automatically assume that if Seneca says "*p*," the early Stoics believed *p*. Yet our other evidence supports Seneca's analysis of the principles' roles. Sextus Empiricus, Galen, and Philo describe the relation of the principles to each other and to the natural world in terms similar to those used by Seneca. See Sextus Empiricus, *Adversus mathematicos*, 9.75–76/SVF 2.311/LS 44C; Galen, *De qualitibus incorporeis*, 19.476/SVF 2.323; and Philo, *De officio mundi*, 8/SVF 2.302. Texts B, C, and D below also agree with Seneca. Seneca appears to be faithfully representing orthodox Stoic doctrine on these points. Brad Inwood, "Seneca, Plato and Platonism," 152, 154, seems to agree.

separated, while in the case of the things that are generated by nature, the power that shapes and produces *them* is in their matter. (*De mixtione*, 225, 18–27/SVF 2.1044)

According to B (2), the Stoics say that natural products' internal parts display craftsmanship, while artifacts' internal parts do not. From this, they infer that the cause of natural objects is in their matter. B (1) implies that the Stoics identify God with that internal, natural cause. Hence God is in natural objects' matter.¹⁵ God differs from artisans in other ways. Consider the duration of God's activity on matter. While an artisan separates from her products once they have been generated, God continually acts on matter. We can see this from another passage in Alexander:

[Text C] [1] Is it not unworthy of our preconception of the divine to say that God has gone through all of the underlying matter and remains in it (no matter its state), [2] and that he has as his guiding work to constantly produce and mold one of the things capable of being generated out of it, [3] and to make God a "craftsman" of grubs and gnats, [4] just like a modeler who simply devotes himself to clay and making everything that's capable of being generated out of it? (*De mixtione*, 226, 24–30/SVF 2.1048)

C (1) confirms that God is immanent within matter. C (1) and C (2) also imply that God continually acts on matter. For he remains in it and constantly produces and molds natural objects out of it. Hence, he does not separate from matter once an object is generated. Therefore, the interaction between God and matter continues past the point of objects' initial generation.

Texts B and C describe God as immanent within the natural objects he creates. I believe that this gives rise to commentators' thought that God composes the natural world. For, since God is immanent within natural objects, we are tempted to conclude that he at least partially composes these objects. But while the active principle takes up space in the same area in which natural objects' matter is located, Alexander does not indicate that God is a material component of those natural objects. To make an analogy, think of God as water in a sponge. The water does not compose the sponge, although it is present within it. Likewise, it is consistent with our evidence that God does not compose objects, although he is present within them. Furthermore, God non-compositionally contributes toward the continued existence of objects, like a conscious and corporeal strong nuclear force. For he continually causes matter to constitute those objects from within, just as the strong force causes sub-atomic particles to compose nuclei from within. Thus, according to our evidence, God is an immanent efficient cause of natural objects, and it is on this basis that Seneca, at least, identifies him as foundational entity within Stoic physics. And while it is possible that in addition to being an immanent efficient cause, God composes natural objects as a part of a whole, our evidence does not require this interpretation.

¹⁵Alexander goes on to criticize this theory. He claims that natural objects are brought into existence by external causes and not internal causes (*De mixtione*, 225, 27–226, 6). Since God is the first productive cause, God cannot be an internal cause (*De mixtione*, 226, 6–10). As a result, Alexander concludes that the Stoic physical theory is false. For the Stoics maintain that God is a cause within matter.

Texts B and C suggest that the products of God's activity are particular natural objects like animals and plants. For God is described as the immanent efficient cause of natural objects in Text B, and in C (3) Alexander sarcastically describes God as the craftsman of grubs and gnats. This interpretation is confirmed by Diogenes Laertius's account of the Stoic principles:

[Text D] [1] They believe that there are two principles of the wholes [τῶν ὅλων]: the active and the passive. [2] The passive is unqualified substance—matter—and the active is the reason in it—God. [3] For the latter, being eternal, constructs each one through all of matter. (*Vitae philosophorum*, 7.134/SVF 2.300/LS 44B/FDS 744)

D (2) confirms that God is immanent within matter. In D (3), Diogenes explains why the Stoics think that there are two principles “of the wholes” or “of the whole of things” (τῶν ὅλων).¹⁶ His explanation, signaled by “for” (γάρ) in D (3), is that God constructs “each one” (ἕκαστα), using all of matter. ‘Each one’ refers back to ‘the wholes’ in D (1). So, according to Diogenes, the Stoics claim that God is a principle because he constructs the wholes and that matter is a principle because it makes up the wholes.

Now, ‘the wholes’ or ‘the whole of things’ is a term of art in our sources for Stoicism. It appears to refer to the natural world—meaning the set of all natural objects, which includes the cosmos itself.¹⁷ By constructing the wholes, God thereby constructs the natural world. Thus, Diogenes confirms Alexander's report that God builds natural objects out of matter.

I have described relations that hold between the principles and the natural world—the set of objects including animals, plants, and the cosmos itself. Matter constitutes the natural world. God efficiently causes or constructs the natural world from within. Furthermore, I have argued that our sources focus on these relations when they describe the principles. Hence, while it is consistent with this picture that God also partially composes the natural world, our evidence does not require this interpretation.

I have also described a relation that holds between God and matter. In order to construct natural objects, God acts on and affects matter. Given this, the Stoics

¹⁶Others have translated this phrase with “of the universe” or “in the universe.” See R. D. Hicks in Diogenes Laertius, *Lives of Eminent Philosophers*; Long and Sedley, *The Hellenistic philosophers*, 1:268; and Inwood and L. P. Gerson, *Hellenistic Philosophy*, 132. I do not think this difference in translation indicates a difference in extension of τῶν ὅλων, even if it entails a difference in meaning.

¹⁷Plutarch states that “whole” is predicated of “what has been ordered” (*De comm. not.*, 1074c). Cf. Sextus Empiricus, *Adversus mathematicos*, 9.332/SVF 2.524/LS 44A. Wholes are not just any compounds, but compounds that have some sort of order. See editor's note in Plutarch, *Moralia*, 776–77ne; Jonathan Barnes, “Bits and Pieces,” 247–49; and Scade “Plato and the Stoics,” 87–92. See Baltzly “Stoic Pantheism,” 21. I suggest that the objects that have this kind of order are unified bodies (ἡνωμένα σώματα)—animals, plants, inanimate objects like rocks and logs, and the world itself. Sextus Empiricus, *Adversus mathematicos*, 9.78–81/SVF 2.1013 reports a Stoic argument, which includes the claims that unified objects are governed by a single *hexis* and that their parts sympathize. A *hexis* is a volume of pneuma that pervades discrete objects. By governing those objects, it unifies them—turns them into wholes by organizing their parts. This is why I claim that God, by constructing the wholes, constructs the set of natural objects, i.e. unified bodies. Wholeness and unity seem to be related. However, in this paper, not much rests on this point. Even those mentioned in n. 16 who translate τῶν ὅλων with the less technical ‘of the universe’ would likely agree that God constructs the natural world.

maintain that God and matter are causally related in a particular way. I will now argue for this point. Consider Sextus Empiricus's canonical analysis of Stoic causation:

[Text E] [1] The Stoics say that every cause is a body to a body of something incorporeal. [2] For example, the knife—a body—is a cause to the flesh—a body—of the incorporeal predicate 'being cut,' and again, the fire—a body—is a cause to the wood—a body—of the incorporeal predicate 'being burned.' (*Adversus mathematicos*, 9.211/SVF 2.341/LS 55B/FDS 765)

According to the Stoics, a causal interaction occurs when one thing affects another. Both the active and the passive entity are bodies. Sextus states this in E (1), and it is confirmed by many sources.¹⁸

The active body is the cause. The cause is a cause *to* the affected body, which is represented with the dative case. As a result of the cause's activity on the affected body, something happens to the passive body—either it takes on a new characteristic, or some characteristic persists. The Stoics represent this by saying that the cause is *of* a predicate. More precisely, because of a cause's activity on an affected body, a proposition formed from a case (πῶσις) correlated to the affected body and a predicate describing how it is affected is made true.¹⁹ Using Sextus's example, the knife affects the flesh. As a result, the proposition 'the flesh is cut' is made true.

Not all causal interactions are punctual events, though. The Stoics also posit internal causes that continually affect bodies to which they are causes. For example, Zeno claims that a soul continually causes an animal to live.²⁰ Thus, the soul is an internal cause that continually affects the animal. Furthermore, the soul's effect would also be lost if it ceased contact with the affected body. This is why death is the separation of the soul from the body, according to the Stoics.²¹ The Stoics call causes that must be present for their effects to obtain 'sustaining' or 'cohesive causes' (συνεκτικὰ αἴτια).²² The soul is such a sustaining cause.

Although sustaining causes differ from non-sustaining causes like the knife and the fire, they are all equally causes. For the Stoics claim that, as Seneca helpfully reports, "there is one cause—the active" (*Letters*, 65.4). All causes act and affect. All causes, sustaining or otherwise, are bodies. Everything affected by a cause is a body. Therefore, no matter the type of cause, the Stoics claim that causes and affected things are bodies.

Our sources above suggest that God acts on matter. As a result, matter constitutes natural objects. Clearly, the principles' interaction fits neatly into the Stoic analysis of causation. For example, in one part of the world, God acts on matter such that a portion of matter constitutes Socrates and 'this matter constitutes Socrates' is made

¹⁸Aetius, *Placita*, 1.11.5/SVF 2.340; Cicero, *Academica*, 1.39/SVF 1.90/LS 45A/FDS 736; Stobaeus, *Eclogae*, 1.138, 14–139, 4/SVF 1.89/FDS 762, and SVF 2.336/LS 55A/FDS 762.

¹⁹See Diogenes Laertius, *Vitae philosophorum*, 7.64/SVF 2.183/LS 33G/FDS 696.

²⁰Stobaeus, *Eclogae*, 1.138, 18–22/SVF 1.89/LS 55A/FDS 762.

²¹See, e.g. Plutarch, *De stoic. repug.*, 1052c/SVF 2.604/LS 46E.

²²See, e.g. Clement, *Stromata*, 8.9.33.1/SVF 2.351/LS 55I/FDS 770.

true.²³ (Other predicates that are coextensive with ‘constitutes Socrates’ would likely provide us with a more detailed physical understanding of what God does to matter such that it constitutes Socrates. However, since we do not yet know the exact physical nature of God or matter, we are not in a position to describe those more informative predicates.) Thus, because God affects matter in such a way that matter constitutes the natural world, God is a cause to matter. Specifically, God seems to be an internal cause to matter. For he continually acts on matter from within, just as the soul continually acts on an animal from within.

Our evidence does not provide a clear statement of whether God is a sustaining cause of his effects on matter. For it is unclear whether, if God were removed from matter, matter would continue to constitute natural objects. Presumably, to answer this question, one would need more information regarding the nature of the principles. So I will leave this question to the side.

All causes—external, internal, sustaining, or otherwise—are bodies. God is a cause to matter. Therefore, God is a body. All affected entities are bodies. Matter is affected by God. So matter is a body. Thus, the old orthodoxy is false.²⁴ For this interpretation claims that the principles are not bodies; rather, they are two incorporeal aspects of a single body. Yet, the causal relationship of the principles entails that they must be bodies.

The principles enter into explanations of natural phenomena at a basic level. When explaining how any natural object is generated, the Stoics cite the relations that hold between matter, God, and that object. Matter constitutes the object. God, acting from within as an immanent cause, shapes matter and causes it to constitute that object.

²³I would like to thank an anonymous reviewer for pointing out that the predicate that is truly predicated of matter because of this interaction cannot be ‘is Socrates,’ at least when we understand this to mean ‘is identical to Socrates.’ For this would conflict with the Stoic theories of identity and persistence of natural objects. See Plutarch, *De comm. nol.*, 1083c–d, who suggests that Chrysippus claims that a human being’s matter is destroyed repeatedly during his life, while the human being persists. This suggests that a human being is not identical to his matter.

²⁴Others have cited the principles’ causal nature in refuting the old orthodoxy. See, e.g. Long and Sedley, *The Hellenistic philosophers*, 1:273–74. Others have criticized the old orthodoxy for other reasons. See those cited in n. 4. At this point, a member of the old orthodoxy might retort: “Yes, the principles are corporeal, but they are *the same body*. One body acts as a cause to itself.” For such a view, consider Baltzly, “Stoic Pantheism,” 10, and Richard Sorabji, *Matter, Space and Motion*, 93–98. Such a view seems coherent to me. Yet, the burden of proof lies with the old orthodoxy at this point. For Texts A, B, C and sources cited in n. 14 all seem to describe one thing (God) acting on another, distinct thing (matter). Thus, we need some account of how an incorporeal aspect or description of a single body can be said to *act on* another aspect or description, and I am skeptical that such an account could be consistent with the Stoic analysis of causation. Sorabji, *Matter, Space and Motion*, 96–97, claims that a body *somehow disposed* can act on that same body, and he suggests that matter disposed (God) can act on matter. Yet, this is a misuse of the Stoic category theory, which the Stoics did not seem to develop in order to explain how one body can act on itself. See Stephen Menn, “Categories.” Sorabji’s account would be analogous to claiming that the fist, which the Stoics claim is the hand somehow disposed (Sextus Empiricus, *Pyrrhoniae hypotyposes* 2.81/FDS 322; Alexander of Aphrodisias, *On Aristotle’s Topics* 360, 12–13/SVF 2.379/FDS 839), acts on the hand. But the fist does not act on the hand, since the fist *is* the hand in a certain condition. While it seems acceptable to claim that a part of one body can act on another part of that same body, it is difficult to see how one whole body could act on itself qua one whole body.

3. THE DILEMMA

The principles are two bodies. God acts on matter. As a result, matter constitutes the natural world. At this point, it seems natural to attempt to determine what sorts of bodies the principles turn out to be and describe the nature of their interaction in physical terms. This would lead to a more complete picture of the principles' nature and how they fulfill their functions.

However, an interpretive dilemma prevents us from engaging in this inquiry right away. We have additional evidence concerning the relations the principles bear to each other that should be examined. Namely, several sources suggest that the principles are inseparable from each other. On the basis of these sources, many commentators have reasonably asserted that God and matter are inseparable. However, other sources suggest that the principles are separable from each other. This latter body of evidence has not been examined in relation to this topic. Before we can examine the nature of the principles, it is necessary to determine in what sense, if any, they can be separated from each other. For bodies that cannot be separated will likely be much different from bodies that can. So, in this section, I will examine both sets of sources and describe how they lead to this interpretive dilemma.

I will begin by examining the sources that suggest that the principles are inseparable from each other. Proclus says,

[Text F] [1] The Epicureans deny that a craftsman exists and state that there is no cause of the universe at all. [2] The Stoics say that he exists, although he is inseparable [ἀχώριστον] from matter. [3] The Peripatetics state that a separated entity exists, but that it is a final rather than efficient cause. . . . [4] Plato and the Pythagoreans, however, have celebrated the craftsman of the universe as separate and transcendent and founder of all things and the providence of the wholes. (*On Plato's Timaeus*, I.266, 25–267, 4/SVF 2.307)²⁵

Proclus distinguishes the ancient schools based on whether they posit a cause of the universe, and, if they do, whether they think that it is efficient and separate. According to F (2), the Stoics claim that there is an efficient cause of the universe, a “craftsman,” but they claim that it is inseparable from matter.²⁶ According to the Stoics, the cause or craftsman of the universe is God. For, as we have seen, God is the immanent efficient cause of natural objects, including the cosmos itself. Therefore, according to Proclus, the Stoics think that God and matter are inseparable.

Both Syrianus and Alexander of Aphrodisias describe God and matter's relationship similarly. Syrianus says,

²⁵Translation modified from David Runia and Michael Share's translation in Proclus, *Commentary on Plato's Timaeus*.

²⁶‘Inseparable’ translates ἀχώριστον, which could also be translated non-modally as ‘unseparated’ (see Herbert Smyth, *Greek Grammar*, §472). Since most commentators on this topic assume that Proclus's report suggests that God and matter are inseparable, I will follow Runia and Share in translating this term with ‘inseparable’ rather than ‘unseparated.’ However, in sect. 4, I will examine whether we should really understand the sources in this section as suggesting that God and matter are inseparable from each other.

[Text G] [1] The natural philosophers, seeing only matter, said it was water or air or fire; [2] among the others, some allowed also that there is an efficient cause [ποιητικὴν . . . αἰτίαν], but saw it as inseparable from matter, [3] as in the case of the Stoics, later on, and of some others before them. [4] But others allowed that there was a cause separable from matter, as Aristotle and Plato too. (*On Aristotle's Metaphysics*, 8, 2–6/SVF 2.308)²⁷

Syrianus distinguishes philosophers on the basis of whether they posit only matter, or also an efficient cause. Those mentioned in G (1) posit only matter. Those mentioned in G (3) and G (4) also posit an efficient cause. According to G (2) and G (3), the Stoics claim that this efficient cause is inseparable from matter. According to G (4), Aristotle and Plato claim that the efficient cause is separable from matter. Now, as we have seen, the efficient cause related to matter is God, according to the Stoics. So Syrianus provides evidence that God and matter are inseparable.²⁸

Now examine Alexander's report. He says,

[Text H] [1] But if there is also a per se cause beyond matter, Aristotle says it is necessary to examine something else as well: [2] whether this is separate from matter and subsists by itself [3] or whether it is in matter, of the sort which an unmattered form is, [4] and as God seems to also be an efficient cause in matter, according to the Stoics. (*On Aristotle's Metaphysics*, 178, 15–19/SVF 2.306)

Alexander presents two contrasting options. Either the per se cause beyond matter is (a) separate from matter, or (b) in matter. In H (4), he states that the Stoics accept (b). If (a) and (b) contrast completely, and (a) states that the cause is separate from matter, then presumably (b) implies that the cause and matter are not separate. So, if the Stoics accept (b), they accept that God is not separate from matter. Instead, God is like an unmattered form, according to H (3)—inseparable from its matter. Thus, commentators have claimed that Alexander provides evidence that God is inseparable from matter.

Finally, Calcidius also suggests that God and matter are inseparable. He says,

[Text I] [1] It is in this way that the Stoics arrived at the impious opinion that God is what matter is, [2] or that God is even an inseparable quality [*qualitatem inseparabilem*] of matter, [3] and that he goes through matter just as semen goes through the genitals, and that he is the source and cause of everything that arises—not only of bad things, but also of disgraceful and immoral things. (*On Plato's Timaeus*, 294/SVF 1.87)

In I (1), Calcidius suggests that God and matter are identical, or perhaps that they are the same type of thing. The latter understanding would represent the

²⁷Translation modified from Dominic O'Meara and John Dillon's translation in Syrianus, *On Aristotle's Metaphysics*.

²⁸I would like to thank an anonymous reviewer for pointing out that Syrianus's report might be misunderstood. When providing an example of philosophers who claim that the efficient cause is inseparable from matter, Syrianus says, "as in the case of the Stoics, later on" (καθ' ἄτερ οἱ Στωϊκοὶ μὲν ὕστερον). One might read this as suggesting that only post-Chrysippean Stoics think that God and matter are inseparable. However, 'later on' instead seems to distinguish the Stoics in time from the other philosophers mentioned in G (1), G (3), and G (4). Syrianus thus seems to be reporting orthodox Chrysippean Stoicism. Syrianus uses similar phrasing at *On Aristotle's Metaphysics*, 105, 22–23 and explicitly includes Chrysippus in the 'later on' qualification.

Stoics more accurately, since God and matter are not identical, but they are both corporeal. In I (2), Calcidius ascribes another claim to the Stoics: that God is a quality of matter, which is inseparable from it. According to the Stoics, qualities are bodies that cause other bodies to be qualified in various ways. The sources in the previous section describe God acting on matter and affecting it in various ways. Calcidius agrees with these accounts when he describes God pervading matter and becoming the source and cause of everything that happens in I (3). Calcidius thus provides evidence, which is confirmed by other sources, that God acts on matter and qualifies it in various ways. And he also states that God is inseparable from matter.

There are several ways that one could resist inferring that the principles are inseparable, which I will survey in the following section. Yet, to my knowledge, no scholar has explicitly challenged this interpretation. Furthermore, on the basis of Texts F, G, H, and I, many scholars have explicitly maintained that the principles are inseparable from each other.²⁹ However, another body of evidence supports the apparently contradictory claim that the principles are separable from each other. I will now turn to this evidence.

Matter constitutes natural objects. God is the immanent, efficient cause of these natural objects, acting on matter to shape it. According to the Stoics, this is a causal interaction. For they claim that whenever one body acts on and affects another, a causal interaction takes place. And since, as Alexander describes above, God continually acts on matter, God and matter continually causally interact. The Stoics also claim that causal interactions require physical contact.³⁰ Therefore, the principles make continual physical contact. When two bodies make continual physical contact, the Stoics would say that they are mixed.³¹ Chrysippus puts forth a detailed chemical theory to account for the different types of mixtures in the world.³² To summarize, he claims that mixtures come in three varieties: juxtaposition, fusion, and blending.

²⁹Bernard Collette-Dučić and Sylvain Delcomminette, "Mélange," 25; H. A. K. Hunt, *A Physical Interpretation of the Universe*, 18, 21; Lapidge, "ἀρχαί and στοιχεῖα," 244; Salles, "Los Cuatro Elementos," 30–31 and 30n30; and Todd, "Monism and Immanence," 139. Lapidge, "ἀρχαί and στοιχεῖα," 244 also cites passages from Origen in support of this interpretation. See Origen, *De oratione*, 27.8/SVF 2.318 and *On John*, 13.21/SVF 2.1054. Yet these passages do not seem to suggest that the principles are inseparable from each other. See also Long and Sedley, *The Hellenistic philosophers*, 1:278, who call God abstracted from matter "an impossibility." Though see 1:271, where they use non-modal language to describe God and matter's relationship.

³⁰Plutarch, *De comm. not.*, 1080; Simplicius, *On Aristotle's Categories*, 302, 29–32/SVF 2.342/FDS 756. See Sedley, "Stoic physics and metaphysics," 385.

³¹See Long and Sedley, *The Hellenistic philosophers*, 1:273. Cf. White, "Stoic Natural Philosophy," 132–33.

³²The most complete presentations of the Stoic theory of mixture come from Alexander of Aphrodisias's *De mixtione* and a fragment of the doxographer Arius Didymus's *Epitome of Physics* recorded by Stobaeus, *Eclogae*, 1, 153, 24–155, 14/SVF 2.471. See also Diogenes Laertius, *Vitae philosophorum*, 7.151/SVF 2.479/LS 48A; Philo, *De confusione linguarum*, 184–87/SVF 2.472; Plotinus, *Enneads*, 2.7.1/SVF 2.478; and Plutarch, *De comm. not.*, 1077e–1078e/SVF 2.465, 2.480/LS 48B, 48E. For discussion of the Stoic theory of mixture, see Collette-Dučić and Delcomminette, "Mélange"; Eric Lewis, "Mixture"; Long and Sedley, *The Hellenistic philosophers*, 1:290–94; Daniel Nolan, "Stoic Gunk"; Sandbach, *The Stoics*, 75–76; Todd, *Alexander*; and White, "Zeno's Arrow"; "Blended"; "Stoic Natural Philosophy."

Juxtaposition should be familiar. Two or more bodies are juxtaposed when they are placed side by side, making surface contact with each other. They do not interpenetrate, and each ingredient in the juxtaposition retains its structural integrity and own particular quality. The example often cited in our sources is a mixture of beans and grains of wheat.

Fusions are likely a bit less familiar. Two or more bodies interpenetrate each other in a particular way when they fuse. In this interpenetration process, these bodies are destroyed and replaced by a new body, which is distinct from the precursors. Philo cites the fusion of pitch, wax, resin, and fat, each of which goes out of existence, replaced by a drug (*De confusione linguarum*, 187/SVF 2.472). We might also consider the mixture of eggs, sugar, butter, and flour, each of which goes out of existence and is replaced by a cake by means of a baking process; this might be a fusion, as well.³³

Blending is the third type of mixture. Unlike fused things, blended ingredients remain after the blending process. Unlike juxtaposed things, the ingredients interpenetrate each other and become completely coextended. Hence, they occupy the same place, and they are actually present within the blend. Our sources describe many examples of blends—most commonly mixtures of water and wine, and mixtures of soul and body. A volume of water and a volume of wine will completely interpenetrate each other, but both the wine and the water remain present in the mixture. Likewise for souls and bodies.³⁴

Since the Stoics claim that God and matter are bodies that continually make contact, the principles must be mixed in one of these three ways.³⁵ The language that our sources use to describe how God is physically related to matter seems to exclude juxtaposition. For our sources describe God pervading matter. Consider Galen, who criticizes the Stoic theory of principles. He says,

[Text J] Nor do they say that Zeus is a composer like some sort of artisan, but rather that God has become the craftsman of everything while totally going through matter. (*De qualitibus incorporeis*, 19.478/SVF 2.323a)

Galen contrasts the Stoics' God, or Zeus, with an artisan. While the artisan is external to the materials that she works on, God totally pervades his materials. When an artisan makes contact with her materials, she becomes juxtaposed to them for some period of time. However, God makes contact with matter from within. In fact, he pervades the matter totally. This is confirmed by Alexander at

³³Thanks to Karen Bennett for this example. See also Julia Annas, *Hellenistic Philosophy of Mind*, 47.

³⁴On water and wine, see Alexander, *De mixtione*, 217, 31–32/SVF 2.473/LS 48C; Stobaeus, *Ecolgae*, 1.155, 8–11/SVF 2.471/LS 48D; Diogenes Laertius, *Vitae philosophorum*, 7.151/SVF 2.479/LS 48A; Philo, *De confusione linguarum*, 186/SVF 2.472; and Plutarch *De comm. not.*, 1078e/SVF 2.480/LS 48B. On soul and body, see Alexander, *De mixtione*, 217, 32–36/SVF 2.473/LS 48C/FDS 432; Stobaeus, *Ecolgae* 1.154, 19–21/SVF 2.471; Hierocles, *Elements of Ethics*, 4, 4–10; and Themistius, *On De Anima*, 5.3.17/SVF 1.145/FDS 432. Note that the Stoics think that the soul is corporeal.

³⁵See Alexander of Aphrodisias, *De mixtione* 225, 1–2/SVF 2.310/LS 45H and discussion by Long and Sedley, *The Hellenistic Philosophers*, 1:273. On the relationship between the Stoic theory of mixture and the principles, see also Collette-Dučić and Delcomminette, "Mélange," 24–25; and John Sellars, *Stoicism*, 88–89.

B (1), when he says that God pervades matter, and at C (1), when he says that God has gone through all of matter. Thus, the language that our sources use to describe the physical relationship between God and matter seems to exclude the principles from merely being juxtaposed.

The remaining options are fusion and blending. It is difficult to understand how God and matter could be fused. For fused bodies are destroyed in the fusion process. But God and matter continually causally interact, which would be impossible if they were destroyed.

Furthermore, Alexander compares God and matter's relationship to the relationship between a body and soul. He says,

[Text K] [1] Based on their statements, they seem to say that God is the form of matter. [2] For if, according to them, God is mixed with matter in such a way as, in animals, the soul is mixed with body, [3] and God is also the power of matter, . . . [4] then they might mean that God is the form of matter. (*De mixtione*, 226, 10–12/SVF 2.1047)

Alexander offers a Peripatetic interpretation of the Stoics, which he states in K (4): they think that God is the form of matter. This does not concern us. What is relevant is Alexander's evidence for this interpretation: the Stoics' statements, seemingly reported in K (2). The Stoics posit an analogy between God and matter on the one hand, and soul and body on the other: God and matter are mixed in the same way that the soul and body are mixed.

The Stoics say that souls and bodies are blended. Such a view is confirmed by Hierocles, Stobaeus, and Themistius.³⁶ The Stoics' reasons for this probably relate to the interaction between the body and the soul. The soul affects the body and the body affects the soul everywhere within an animal. For example, Hierocles reports that animals perceive themselves by means of the soul impressing on all parts of the body, while the body counterimpinges on the soul. He infers that the soul must be blended with the body. For blending is a complete interpenetration and coextension of two or more bodies, and this is required for complete self-perception.³⁷

The Stoics likely require the principles to be blended for similar reasons. That is, God must act on and affect all parts of matter, as D (3) suggests. Since God constructs the entire natural world out of matter, he must be present everywhere just as the soul is present everywhere within the body.³⁸ Hence, as Alexander says, God and matter are mixed in the same way that the soul and the body are mixed: they are blended.

At two other points, Alexander explicitly states that God and matter are blended. After criticizing the Stoics by arguing that natural objects are brought about by external causes, he asks, "If the things that are generated from matter are generated in this way [i.e. by external causes], how could God still be the cause by means of being mixed and blended with matter?" (*De mixtione*, 226, 6–8). Later, he infers

³⁶See n. 34.

³⁷Hierocles, *Elements of Ethics*, 4, 38–53/LS 53B.

³⁸See Plutarch, *De stoic. repug.*, 1052c/SVF 2.604/LS 46E. The passage suggests that God plays the role of the soul of the cosmos and matter plays the role of the body of the cosmos.

from the Stoic claim that God goes through matter, and the claim that bodies that go through one another are blended, that, according to the Stoics, “God is blended with matter” (*De mixtione*, 226, 33a). Thus, Alexander explicitly states twice that God is blended with matter, and he ascribes an analogy to the Stoics that entails that God is blended with matter.³⁹ While it is possible that Alexander does not faithfully represent the Stoics, all of the evidence suggests that God and matter are blended and not juxtaposed or fused. Given this, the Stoics likely maintain that the principles are blended.

The Stoics also claim that blended things can physically separate. For example, when one lowers an oiled sponge into a blend of water and wine, the Stoics say that the sponge will absorb the water and leave the wine—thus separating the blended components.⁴⁰ Similarly, when a human being dies, the *pneuma* or fire that constitutes her soul exits the body and exists independently.⁴¹ Zeno first put forth this claim. His successors differ on the details of the theory. Cleanthes claims that all human souls will persist until the next conflagration, during which everything will be consumed by fire. Chrysippus claims that only the souls of the wise will persist this long—perhaps because wisdom supervenes on the physical toughness of someone’s soul. In any case, the Stoics maintain that the physical stuff—*pneuma* or fire—that makes up the human soul separates and comes to exist outside of the body after death, at least for a time.

The Stoics justify their claim that blended things separate with their analysis of blending. Even though blending is a complete interpenetration of bodies, blended bodies are actually present within the blend according to the Stoics. Therefore, it is possible to separate them. The Stoics maintain that “it is a peculiarity [*ἴδιον*] of blended things that they are capable of being separated from each other again” (Alexander of Aphrodisias, *De mixtione*, 216, 32–217, 1/SVF 2.473/LS 48C/FDS 310). The ability of blended components to separate distinguishes blends from fusions. This is confirmed by Philo. He states,

[Text L] [1] Blending is not juxtaposition, but rather it is a coextension [*ἀντιπάρεκτασις*] of dissimilar parts going into each other totally, [2] while the qualities are still capable of being separated by artificial means, as they say happens in the case of wine and water. [3] For they say that after the substances combine, they form a blend; but after being blended, the blend is nonetheless simplified again into the qualities from which it was formed. [4] For the water is taken up by an oiled sponge, but the wine remains. (*De confusione linguarum*, 185–86/SVF 2.472)

In L (1) and L (2), Philo defines the Stoic concept of blending. It is a total coextension of two or more bodies, while the qualities of the blend remain separable. He describes an example of this process in L (3) and L (4): after water and wine blend, an oiled sponge will extract the water and leave the wine. ‘Qualities’ in L (2) seems to refer to the components of a blend. For Philo cites

³⁹Contra Collette-Dučić and Delcomminette, “Mélange,” 24–25.

⁴⁰See Philo, *De confusione linguarum*, 186/SVF 2.472; and Stobaeus, *Eclogae*, 1.155, 8–11/SVF 2.471/LS 48D. See also Sorabji, *Matter, Space and Motion*, 103n101.

⁴¹See Aetius, *Placita*, 4.7.3/SVF 2.810; Calcidius, *On Plato’s Timaeus*, 220/SVF 1.138/FDS 424; Diogenes Laertius, *Vitae philosophorum*, 7.157/SVF 2.811/FDS 421; Eusebius, *Praeparatio evangelica*, 15.20.4/SVF 2.821; 15.20.6/SVF 2.809/LS 53W; and Tertullian, *De Anima*, 5/SVF 1.137/FDS 426.

the example of water and wine separating as an example of his general claim in L (2) that qualities are separable, and he calls these bodies qualities in L (3). Philo thus confirms Alexander's claim that blended components are separable.

Since the ability to separate is a peculiarity of blended things, and since God and matter are blended, God and matter must be able to separate from each other.⁴² And here lies the interpretive dilemma. We have good textual evidence for thinking that the principles must be inseparable from each other. However, we have equally good evidence for thinking that they must be separable from each other. These claims appear to be inconsistent. Unless the Stoics put forth an inconsistent theory, we are left with a puzzle. How can the principles be both separable and inseparable?

4. ATTEMPTS TO RESOLVE THE DILEMMA

In this section, I survey several ways to resolve this dilemma and argue that are unsatisfactory. In the following section, I defend my own preferred method of resolving the dilemma.

First, one could note that the Stoic school is made up of several individual philosophers who might not hold the same views. Even limiting ourselves to the first three leaders of the school—Zeno, Cleanthes, and Chrysippus—our evidence presents several topics on which the three philosophers disagree; for example, the nature of impressions and the formulation of the end.⁴³ Perhaps a subset of these philosophers claims that the principles are separable, and another that they are inseparable. Or perhaps the early Stoics endorse one of these claims, while later Stoics endorse the other. Either approach would resolve the dilemma, since no one Stoic would accept the apparent contradiction that the principles are separable and inseparable.

The evidence surveyed in the previous section casts doubt on this hypothesis. The claim that some bodies totally pervade each other probably extends back to Zeno, which Chrysippus then formalizes in his chemistry.⁴⁴ The claim that the principles are bodies that pervade each other seems to extend back to Zeno, as well.⁴⁵ No source suggests Cleanthes departed from his predecessor or successor on these counts. So it is likely that the first three leaders of the Stoics agreed that the principles are separable. Or perhaps they are all equally committed to this claim, given that they also claim that the principles totally pervade each other.

Perhaps the early Stoics endorse the claim that the principles are separable, and later Stoics endorse the claim that they are inseparable. Other scholars and

⁴²Contrast this interpretation with Collette-Dučić and Delcomminette, "Mélange," 25, who argue that because God and matter are bodies and because they are inseparable, they must be blended.

⁴³For the former, see Sextus Empiricus, *Adversus mathematicos*, 7.228–31/FDS 259. For the latter, see Stobaeus, *Eclogae*, 2.75, 11–76, 10/LS 63B/FDS 794a; and Diogenes Laertius, *Vitae philosophorum*, 7.87–89/LS 63C.

⁴⁴On Zeno and Chrysippus, see Hippolytus, *Refutatio omnium haeresium*, 21.1/SVF 2.469. On the doctrine of blending preceding Chrysippus, either by Zeno or Cleanthes, see Plutarch, *De comm. not.*, 1078c–d/SVF 2.465/LS 48E, and discussion by Long and Sedley, *The Hellenistic philosophers*, 1:293.

⁴⁵Diogenes Laertius, *Vitae philosophorum*, 7.134/SVF 1.85/LS 44B/FDS 744; Hippolytus, *Refutatio omnium haeresium*, 21.1; and Stobaeus, *Eclogae* 1.133, 3–5/SVF 1.87/FDS 741.

I infer that the principles are inseparable from Proclus, Syrianus, Alexander, and Calcidius. The first three sources present the views of the Stoics, in general. So it is possible that they could be representing later Stoics and not Zeno, Cleanthes, and Chrysippus. However, Calcidius's report is embedded within a longer passage where he references Zeno twice and Chrysippus once.⁴⁶ It would be surprising if he did not qualify his claim that God is an inseparable quality of matter by noting that neither Zeno nor Chrysippus endorse it. Furthermore, his report in Text I agrees with Stoic orthodoxy on the relationship between God and matter. Thus, while our evidence does not explicitly disconfirm this hypothesis, I doubt its plausibility.

I will now move on to other ways to resolve the dilemma. Given that those who have commented on this topic have claimed that God and matter are inseparable, one obvious way to resolve the dilemma is to reject the claim that God and matter are separable. One could argue that the blend of God and matter is an exception to the otherwise universal claim that blended bodies are separable. While every other pair of blended bodies can be separated, God and matter cannot. It would follow that no interpretive dilemma arises.

Yet, it is unclear why we should think that God and matter are such an exception. God and matter are bodies, and the Stoics define 'body' as what has three-dimensional extension with resistance.⁴⁷ Therefore, God and matter are two resistant three-dimensional extensions. In principle, at least, it seems possible to separate two extensions. At this point, one could argue that God and matter are anomalous bodies—there is something special about them. And this special feature entails that they cannot exist separately.⁴⁸ However, without a further specification about the nature of these extensions and what makes them anomalous, it is still unclear why we should claim that they violate the Stoic law of chemistry that blended bodies are separable. Thus, without these further specifications, we should proceed as if God and matter are separable.⁴⁹

Instead of arguing that God and matter are not separable, one could break with the consensus in the literature and argue that God and matter are not inseparable, at least on the basis of the evidence provided in the previous section. There are two ways to argue for this claim. First, one could reject the reliability of the sources for this claim. Second, one could offer an alternative interpretation of these sources. I will consider these arguments in turn.

First, given that Proclus, Syrianus, Alexander, and Calcidius are late, non-Stoic sources, one could argue that we should not trust their reports that God and

⁴⁶See *On Plato's Timaeus*, 290, 292. Calcidius also attributes a certain line of reasoning to "most of the Stoics" at 291. Calcidius also references Zeno once and apparently quotes Chrysippus at 220.

⁴⁷See Galen, *De qualitibus incorporeis*, 19.483, 13-14/SVF 2.381/LS 45F.

⁴⁸Perhaps one could use a distinction posited by Cooper between bodies composed of the principles and the principles themselves. See Cooper, "Chrysippus on Physical Elements," 98-99. He calls the former 'material bodies.' However, while Cooper's distinction might be useful for our own purposes, the evidence does not explicitly suggest that the Stoics employed this distinction. Thus, it does not seem useful for describing why the principles are exceptions to this seemingly universal claim. I thank an anonymous reviewer for this suggestion.

⁴⁹I reconsider this way of solving the dilemma in sect. 6 and suggest a strategy for those who wish to defend it.

matter are inseparable. Yet, this reaction seems unwarranted to me. Calcidius provides crucial details about Stoic matter. Alexander's *De mixtione* provides the most detailed account of Stoic chemistry, which agrees with our other main sources on the topic. Syrianus describes Chrysippus's thinking about universals, and he presents an accurate paraphrase of the Stoic theory of blending.⁵⁰ Proclus presents an accurate account of the Stoic theory of time.⁵¹ On these topics, scholars have assumed that these sources are reliable. Thus, the rejection of Texts F, G, H, and I as evidence seems ad hoc.

Instead of arguing that these sources are unreliable, one could argue that at least Proclus and Syrianus's reports are ambiguous and admit of alternative interpretations. Proclus and Syrianus only suggest that God is ἀχώριστον from matter, which could mean either 'inseparable' or 'unseparated.' Perhaps these sources only offer evidence that God and matter do not separate. No dilemma emerges if God and matter are separable, but never separate.

I admit that ἀχώριστον is ambiguous; it can be read modally or non-modally. However, Calcidius's report in Text I that God is an inseparable quality of matter remains. Thus, we still have unambiguous evidence that the principles are inseparable. It seems more reasonable to read the ambiguous sources so that they agree with our unambiguous source, rather than to read the ambiguous sources such that they conflict with our unambiguous source. Thus, we should understand ἀχώριστον modally as 'inseparable' in Texts G and H.⁵²

5. RESOLVING THE DILEMMA

Instead of rejecting one of the horns of the interpretive dilemma or attributing different horns to different Stoics, I will argue that the Stoics can consistently maintain that the principles are both separable and inseparable. Details within Stoic modal logic and semantics allow the Stoics to maintain that 'the principles' are inseparable in one sense of this phrase and separable in another. Furthermore, I will argue that the resulting interpretation of the Stoics' physical theory agrees with the evidence surveyed in section 3 and does not suffer from the problems associated with the rejected solutions from the previous section.

Consider the concept of a role. Some philosophers have maintained that states like pain have functional or causal roles, which can be realized by different types of physical states.⁵³ Furthermore, some philosophers claim that what it is for a physical state to be pain, for example, is to fulfill these roles. Thus, we can talk about the role of pain and the states that realize that role. Stoic physics is similar. The principles have roles within Stoic physics. One role is to efficiently cause

⁵⁰On universals, see *On Aristotle's Metaphysics*, 104, 17–21/SVF 2.361/LS 30G; 105, 21–25/SVF 2.364/LS 30H/FDS 318a; On blending, see *On Aristotle's Metaphysics*, 84, 29–31.

⁵¹See *On Plato's Timaeus*, 271d/SVF 2.521/LS 51F/FDS 716.

⁵²One could argue that Calcidius has mistranslated ἀχώριστον into Latin. However, given that Calcidius appears to be a reliable source on the nature of matter in Stoicism, and his reports on the principles agree with other sources, I think it is warranted to trust his own interpretation and translation of his sources for Stoicism. If Calcidius were shown to be unreliable, I would be more amenable to this solution to the dilemma.

⁵³For the foundational argument on this topic, see Hilary Putnam, "Psychological Predicates."

natural objects, acting from within their matter. Another role is to constitute natural objects. And, like pain, we can talk about the ‘roles’ of the principles and the ‘occupants’ or ‘realizers’ of those roles, and we can analyze the principles both in terms of what they do and what they are.⁵⁴

Now I will make a semantic argument. Consider the Presidency of the United States. This is a constitutional role, realized by one human being at a time. We can talk about the role independently of talking about any given realizer of the role. Furthermore, we can talk about the realizer in two different ways. Consider the sentence “The President will select the next Supreme Court Justice.” The phrase ‘The President’ can be understood in two ways. It might refer *de re* to Donald Trump, the current realizer of the Presidency. Thus, this sentence might be true or false. For whoever the next United States Supreme Court Justice turns out to be, it is unclear whether Donald Trump will nominate him or her. If he does not, the sentence is false. However, we can also understand ‘The President’ to refer *de dicto* to whoever realizes the office of the Presidency. And then the sentence will be necessarily true. For whenever a Supreme Court nominee is successfully confirmed, he or she will be nominated by someone occupying the Presidency, assuming certain facts about the United States Constitution and Government remain fixed.⁵⁵

Furthermore, in some contexts, ‘The President’ will always refer to whoever realizes the role of the Presidency. That is, in some contexts we will always understand ‘The President’ *de dicto*. For example, when reading the United States Constitution, one assumes that instances of ‘The President’ do not refer to Donald Trump. Rather, they refer to whoever realizes the role of the Presidency.

Assume that the Stoics posit roles associated with the principles, and the bodies that realize those roles are distinct from the roles themselves.⁵⁶ It is likely that the Stoics sometimes discuss the principles’ roles and sometimes the bodies that realize those roles. In the former case, they would discuss what the principles do within Stoic physics. In the latter case, they would discuss what types of bodies do those activities. Furthermore, it is possible that the Stoics used the terms ‘the principles,’

⁵⁴Compare with what D. T. J. Bailey, “Structure,” calls ‘offices’ and ‘bodies.’ He claims that the Stoic incorporeals are offices that become occupied by bodies under certain conditions. His offices are similar to my roles. However, Bailey does not discuss the Stoic principles in relation to these ideas.

⁵⁵One might be tempted to assert that the same terms can refer to the *roles*, as well. E.g. Bailey, “Structure,” 265, suggests that the term ‘my watch’ refers to an incorporeal description, somewhat akin to a role. I am unsure of this. For we seem to distinguish ‘The President’ from ‘The Presidency,’ where the former refers to the occupant and the latter to the role. However, some functionalists argue that mental properties should be identified with particular causal roles and not the things realizing those roles. See discussion by Ned Block, “What is Functionalism?”; Janet Levin, “Functionalism”; Brian McLaughlin, “Epiphenomenalism”; and Andrew Melnyk, *A Physicalist Manifesto*. Perhaps some people within the functionalist debate would say that words referring to mental states, such as ‘pain,’ ‘belief,’ and ‘desire’ might refer to roles and might refer to realizers. For the purposes of this paper, I will not take a stand on this issue. Thanks to August Faller for discussion of this point.

⁵⁶Where do these roles belong within Stoic ontology? Following Bailey, “Structure,” I think we should say that they are incorporeal descriptions about bodies. Certain bodies come to stand in certain realization relations to these incorporeal descriptions. E.g. a certain volume of fire might realize God’s role and thus ‘efficiently causes this portion of matter to constitute the natural world’ belongs to that volume of fire. In these conditions, the fire realizes God’s role.

'God,' 'matter,' and so on in two ways: to refer to whatever realizes the roles of the principles, and to refer to some particular realizer at some particular time. And even if the Stoics themselves did not use the terms in this way, it is still possible that our sources for Stoicism did. Another possibility is that, in some contexts, 'principles,' 'God,' 'matter' or other such terms behave like 'The President' in the United States Constitution. That is, they always refer *de dicto* to whatever is realizing the roles of the principles. When interpreting evidence for the Stoics, we should keep these possibilities in mind.

To solve the interpretive dilemma, I suggest the following interpretive framework. In discussions of the functions and activities of the principles within Stoic physics, the terms referring to the principles should be read *de dicto* as referring to whatever realizes the principles' roles. Those terms function like 'The President' in the United States Constitution. Using details from Stoic modal logic and semantics, we can use this suggestion to solve the dilemma.

First, note that modalities are properties of propositions, according to the Stoics. The relevant modalities for the present discussion are 'possibility' and 'impossibility.' According to Stoic modal logic, saying that the principles are separable or inseparable is equivalent to saying that it is possible or impossible that the principles separate. So I shall examine whether such a proposition is possible or impossible. According to the Stoics, a proposition is possible if and only if it admits of being true and it is not prevented from being true by something external. A proposition is impossible if and only if it does not admit of being true or it is prevented from being true by something external.⁵⁷ Using this analysis, consider the following proposition:

Separation-Role: The active principle and the passive principle separate.

I assert that the Stoics would claim that this proposition is impossible. Therefore, either it must not admit of being true, or it must be prevented from being true by something external. It appears to admit of being true. For it is not straightforwardly contradictory. Therefore, if it is impossible, something external must prevent it from being true.

The external hindrance that prevents *Separation-Role* from being true is the nature of causation within Stoic physics. As we have seen, the Stoics claim that only bodies can be causes or the things affected by causes. Bodies affect each other by means of contact alone. Therefore, if two bodies are causally related, they make contact. This is external to *Separation-Role* insofar as the information concerning causation is not contained in the subject of the proposition.⁵⁸ For, presumably,

⁵⁷See Diogenes Laertius, *Vitae philosophorum*, 7.75/LS 38D; Boethius, *On Aristotle's De Interpretatione*, 2.11 234, 27–235, 4/FDS 988. See discussion by Susanne Bobzien, "Logic," 117–19.

⁵⁸See Bobzien, "Logic," 119. One might argue that the names 'the active principle' and 'the passive principle' already contain information about causation. It would follow that by calling the principles active and passive, we know that they causally interact through investigating their concepts alone. Even if this is true, the claim that bodies that causally interact make contact is still external to the subject of the proposition. We will not know that the active principle and the passive principle make contact simply through investigating those concepts. Thus, something external still prevents this proposition from being true. Thanks to Tad Brennan for raising this objection.

these facts are obtained through a posteriori investigation of the world and not an investigation of the concepts of ‘active principle’ and ‘passive principle.’

In *Separation-Role*, we should understand the terms ‘active principle’ and ‘passive principle’ as if they refer indirectly to the roles of the principles. That is, they refer to realizers of the principles’ roles qua realizers. Thus, ‘the active principle’ in *Separation-Role* refers to whatever is currently realizing the role of the active principle. To realize this role, this entity must affect the passive principle. For God is an immanent efficient cause of the natural world by means of affecting matter and shaping it in various ways, as illustrated by the evidence in section 2. Given the nature of causation within Stoic physics, the entity realizing the active principle’s role must be corporeal and make contact with the body realizing matter’s role. Thus, the nature of causation within Stoic physics prevents *Separation-Role* from being true. When two bodies are carrying out the roles of the principles, those two bodies must be in contact.⁵⁹ Therefore, *Separation-Role* turns out to be impossible, according to the Stoic analysis of impossibility.⁶⁰

Now consider this proposition:

Separation-Body: This one and that one separate.

This proposition is a definite assertible (ὠρισμένον ἀξιωμα).⁶¹ Such propositions make use of demonstrative pronouns and are true “whenever the predicate . . . belongs to the thing which falls under the demonstrative reference [τὴν δεῖξιν]” (Sextus Empiricus, *Adversus mathematicos*, 8.100/SVF 2.205/LS 34I/FDS 916).⁶² Assume that, in *Separation-Body*, a body carrying out God’s role falls under the demonstrative reference associated with ‘this one’ and a body carrying out matter’s role falls under the demonstrative reference associated with ‘that one.’ Although ‘this one’ and ‘that one’ both refer to bodies carrying out the roles of the principles, neither of these phrases makes indirect reference to the roles of the principles. That is, ‘this one’ does not refer de dicto to whatever is carrying out God’s role, and ‘that one’ does not refer de dicto to whatever is carrying out matter’s role. Thus, *Separation-Body* does not entail that this one affects that one. Unlike *Separation-Role*, the nature of causation within Stoic physics does not

⁵⁹Anachronistically, I think the Stoics would accept this: necessarily, for all bodies x and y , and for all times T , if x realizes God’s role at T and y realizes matter’s role at T , then x and y are conjoined (i.e. not separated) at T .

⁶⁰What kind of proposition is *Separation-Role*? It seems to belong to the category of the middle (μέσον) or categorical assertible (κατηγορικὸν ἀξιωμα). Contrast this definite assertibles, which are discussed below—e.g. ‘this one separates’—and indefinite assertibles—e.g. ‘something separates.’ See Diogenes Laertius, *Vitae philosophorum*, 7.70/SVF 2.204/LS 34K/FDS 914; and Sextus Empiricus, *Adversus mathematicos*, 8.97/SVF 2.205/LS 34H/FDS 916. The truth conditions for middle assertibles are not clear, given our evidence. For discussion, see Brunschwig, “Noun,” 47–53. I have assumed that *Separation-Role* is true if and only if the predicate ‘separates’ belongs to two entities presently performing the functions of the active principle and the passive principle. The nature of causation prevents this from occurring.

⁶¹See Sextus Empiricus, *Adversus mathematicos*, 8.96–100/SVF 2.205/LS 34H, I/FDS 916; Galen, *De placitis Hippocratis et Platonis*, 2.2.9–11/SVF 2.895/LS 34J/FDS 560; Scholium to Dionysius Thrax, 518–19/FDS 551; and Diogenes Laertius, *Vitae philosophorum*, 7.70/SVF 2.204/LS 34K/FDS 914.

⁶²Translation from Long and Sedley, *The Hellenistic philosophers*.

prevent *Separation-Body* from being true. The proposition itself admits of being true. So, if no other external things prevent this proposition from being true,⁶³ this proposition is possible according to the Stoic analysis of possibility.⁶⁴

The Stoics had the semantic resources to argue that the principles are inseparable in one sense and separable in another. ‘The principles’ de dicto are inseparable, and ‘the principles’ de re are separable. *Separation-Role* is impossible, but *Separation-Body* is possible. This entails the following physical theory. Two bodies that are currently carrying out the principles’ roles must be in contact with each other. For they must causally interact, and causal interaction requires contact. However, this does not entail that those two bodies cannot physically separate from each other. Granted, if they separate, they will cease carrying out the principles’ roles. However, the bodies themselves can physically separate.

This seems like a plausible view. When Article II, Section 2 of the United States Constitution states, “The President shall have Power to fill up all Vacancies that may happen during the Recess of the Senate, by granting Commissions which shall expire at the End of their next Session,” the text is not making a claim about Donald Trump per se. Once he leaves office, one will not refute this claim by noting that Donald Trump can no longer make recess appointments. Likewise, when I say, “this one is a real estate developer” while pointing at Donald Trump, I do not make a claim about anyone who occupies the Presidency; I claim something about the current occupant. And, again, when Trump leaves office, one will not falsify my past claim by showing that his successor is not a real estate developer. A similar phenomenon occurs with respect to *Separation-Role* and *Separation-Body*. When the Stoics claim that *Separation-Role* is impossible, they make a claim about conditions for occupying the principles’ roles: any bodies actively carrying out the principles roles must be conjoined. However, when they claim that *Separation-Body* is possible, they make a claim about particular bodies that happen to be realizing the principles’ roles, independent of their functional status: those particular bodies can exist in physical isolation from each other.

This claim is important for maintaining the consistency of the Stoic theory of blending, in light of the evidence that God and matter blend. Just as the fire or pneuma that constitutes a human being’s soul can exist in isolation from her body, and water can exist in isolation from wine, God can exist in isolation from matter. Thus, the laws of Stoic chemistry are universal and consistent.

This interpretation is consistent with several different physical theories. The Stoics might think that several different types of bodies carry out both principles’ roles. They might think that one of the principles’ roles is carried out by a number of different types of bodies, while another only has one realizer. They might, however, think that both principles’ roles are always carried out by a single type of body. This interpretation does not recommend one of these theories over the

⁶³I consider an external that could potentially prevent *Separation-Body* from being true in the following section.

⁶⁴Again, anachronistically, I think the Stoics would accept this: for all bodies x and y , and for some distinct times T_1 and T_2 , if x realizes God’s role at T_1 and y realizes matter’s role at T_1 , then it is possible that x and y are separated at T_2 .

other. It follows that adopting this interpretation of the Stoics does not require us to also adopt any particular account of the Stoic physical system.⁶⁵

The Stoics had the semantic resources to maintain that the principles are inseparable in one sense of ‘the principles’ and separable in another. We lack evidence that explicitly states that the Stoics claim that *Separation-Role* is impossible and *Separation-Body* is possible. However, the evidence I surveyed in the previous section agrees with the claim that the Stoics accept these two claims. In fact, this interpretation seems to make good sense out of this evidence.

Consider the texts that suggest that the principles are inseparable. In Text F, Proclus discusses the craftsman and cause of the universe. In F (3) and F (4), he states that the Peripatetics, Pythagoreans, and Plato think that such a cause exists, but that it is separate. His point is that these groups think that the craftsman can carry out his causal role without being in physical contact with the world. The Stoics, on the other hand, deny this. God qua efficient cause must be in contact with matter. For causes and the things to which they are causes are necessarily in contact, when the causal interaction is taking place. The Stoics construe God’s role causally. By acting on and affecting matter, God constructs the natural world. So Proclus seems to refer to whatever is occupying God’s role and not a specific body that occupies the role.

In Text G, Syrianus does not explicitly mention God or the active principle as such. He only refers to the active principle by calling it “the efficient cause.” This likely makes reference to ‘the active principle’ de dicto. Again, since Stoic causation occurs by means of physical contact between bodies, it is clear that God, insofar as he is an efficient cause, must be in contact with matter. So, again, we ought to read Text G as suggesting that the Stoics claim that *Separation-Role* is impossible.

In H (4), Alexander identifies God as the efficient cause in matter. Earlier, he implies that the Stoics accept that this cause is not separate from matter. Thus, again, Alexander lends support to the claim that the Stoics believe that ‘God’ and ‘matter’ de dicto are inseparable. For he focuses on God’s role as efficient cause to matter.

Finally, consider Calcidius’s report in Text I. He calls God an “inseparable quality” in matter. Qualities are causal entities, according to the Stoics. They cause objects to be qualified.⁶⁶ Thus, Calcidius’s claim that God is inseparable from matter refers to God qua cause to matter. This seems to be confirmed by Calcidius’s description of God’s activities on matter in I (3). For God can only be responsible for disgraceful and immoral things if he creates those things, and he creates those things only by acting on matter. Hence, again, Calcidius suggests that the Stoics would accept that *Separation-Role* is impossible.

In turn, the evidence that suggests that the Stoics believe that the principles are separable was extracted out of the claim that God and matter share a certain

⁶⁵Cf. Long and Sedley, *The Hellenistic philosophers*, 1:271: “It is important to notice that the two principles are so described that they do not depend upon specific theories about bodies, elements, or any of the detailed apparatus which underpins Stoic analysis of particular phenomena.”

⁶⁶See, e.g. Galen, *De constitutione artis medicae*, 1.252, 10–14/SVF 2.405; and Plutarch, *De stoic. repug.*, 1054a/SVF 2.449/FDS 842. See Menn, “Categories,” 219–23.

physical relationship. God pervades matter and blends with it. The Stoic laws of chemistry entail that any two bodies that instantiate such a relationship are separable. So the evidence seems to be talking about God and matter qua bodies instantiating a particular physical relationship. And whatever is true of such bodies can be understood independent of whether they also realize the roles of the principles. Therefore, the bodies that realize the principles' roles are physically separable.⁶⁷ The Stoics would accept that *Separation-Body* is possible, given that it only refers to bodies as such, and does not make essential reference to the roles of those bodies.

In the previous section, I surveyed other possible responses to this interpretive dilemma. These responses involved discounting otherwise reliable sources, positing exceptions to seemingly universal claims, or relying on alternative interpretations of ambiguous phrases that conflict with other sources' reports. My interpretation rejects these responses. It accepts all of the evidence as reliable, accepts universal claims as being universal, and interprets sources consistently. It offers a theory that the Stoics had the conceptual resources to accept, and it agrees with the evidence surveyed in the previous section. Furthermore, it does not require us to posit disagreements among the Stoics for which there is not strong evidence. Thus, it appears to be the best option among those surveyed for resolving the interpretive dilemma developed in the previous section.

6. A STRATEGY FOR FURTHER WORK ON THE PRINCIPLES

According to the interpretation that I defended in the previous section, bodies that are capable of independent existence realize the roles of the principles. Perhaps they never actually separate, but they are capable of doing so. This conflicts with several accounts of the principles in the literature. For many scholars have maintained that the bodies realizing the principles' roles are incapable of existing outside of their causal relationship. Scholars corporealize the roles of the principles by claiming that the God-body is essentially active or acting and the matter-body is essentially passive or acted-upon.⁶⁸ They claim that if the God-body had nothing to act on, it would cease to exist. And if the matter-body were not acted-upon, it would cease to exist. Or perhaps they mean that it is impossible to conceive of the God-body and the matter-body outside of their relationship.

If my interpretation is true, then this cannot be correct. If the body occupying God's role had nothing to act on, it would cease to occupy God's role. But the body itself could still exist. Likewise for matter.

⁶⁷Some have claimed that the principles are merely separable in thought. See Hunt, *A Physical Interpretation of the Universe*, 21; Sedley, "Stoic physics and metaphysics," 384; and Sedley, "Matter," 55. While I would agree that one can conceive of the bodies occupying the principles roles separately, this does not go far enough. The principles are physically separable according to the Stoic laws of chemistry, in addition to being conceptually separable. For every other blended pair is not merely conceptually separable; they are physically separable. For every other blended pair actually physically separates. There is no reason to suspect, insofar as they are blended, that the principles are anomalous in this regard.

⁶⁸See Bénatouïl, "Zeus," 29; and Salles, "Ἐκπόρωσις," 67n15.

If someone is unhappy with this result, I think they should pursue the following interpretive strategy. They should maintain that the bodies realizing the principles' roles are somehow special or anomalous. While every other three-dimensional extension with resistance can physically separate from another three-dimensional extension with resistance, the principles cannot. To support this argument, they must provide a sufficient reason to think that *Separation-Body* is impossible when 'this one' refers to a body realizing God's role and 'that one' refers to a body realizing matter's role. To do this, they must describe something external that prevents this proposition from being true. As I noted above, the nature of causation within Stoic physics is not sufficient on its own to justify this claim. However, perhaps the nature of the bodies that realize the principles' roles prevents them from existing outside of their relationship. For if the bodies that fall under the demonstrative references in *Separation-Body* have characteristics that entail that they cannot exist in separation from each other, then information external to the subject of *Separation-Body* will prevent that proposition from being true. Therefore, it will be impossible, according to the Stoic analysis of impossibility.

Note that this moves the debate to different terrain. The principles' relation to the natural world and each other does not entail that they are not capable of independent existence, and therefore anomalous. To support the claim that these bodies are anomalous, we need information regarding what kinds of bodies these realizers are. And presumably this information must come from sources that discuss what sorts of bodies realize the roles of the principles.⁶⁹

One might think that those, like me, who wish to maintain that the principles are capable of independent existence are in a better position, given the solution to the dilemma that I defended in the previous section. Perhaps this is true. However, I think such commentators still should pursue the same strategy: we should describe the sorts of bodies that realize the roles of the principles. For only then will we be certain that no other externals prevent *Separation-Body* from being true.⁷⁰

⁶⁹The best argument in this vein would rely on evidence describing the nature of the body that realizes matter's role. Several sources seem to describe this body as if it lacked any intrinsic physical characteristics. It is described as "unqualified" repeatedly by our sources. See, e.g. Calcidius, *On Plato's Timaeus*, 292/SVF 1.88/LS 44D; Diogenes Laertius, *Vitae philosophorum*, 7.134/SVF 2.300/LS 44B/FDS 744 (Text D above); and Sextus Empiricus, *Adversus mathematicos*, 9.75/SVF 2.311/LS 44C. On the basis of these reports, one might claim that such an unqualified body cannot exist independently. For one might argue that a body completely lacking any intrinsic physical characteristics cannot exist as such. Against this interpretation, see Diogenes Laertius, *Vitae philosophorum*, 7.137, who states that the four elements—fire, air, water, and earth—together are matter. These bodies possess intrinsic physical characteristics. If matter is fire, air, water, and earth, then matter cannot lack intrinsic physical characteristics.

⁷⁰The best argument in this vein would rely on evidence that suggests that fire realizes God's role. See, e.g. Aetius, *Placita*, 1.7.33/SVF 2.1027/LS 46A; Eusebius, *Praeparatio evangelica*, 3.9.9/SVF 2.1032; and Servius, *On Virgil's Aeneid*, 6.727/SVF 2.1033. There is a period during which fire comes to exist on its own, according to the Stoics: the conflagration. On the Stoic theory of the conflagration, see Cicero, *De natura deorum*, 2.118/SVF 2.593; Eusebius, *Praeparatio evangelica*, 15.14.2/SVF 1.98/LS 46G/FDS 327a; 15.18.1–3/SVF 2.596/LS 46K; 15.19.1/SVF 2.599; Philo, *De aeternitate mundi*, 90/SVF 1.511/LS 46M; 94/SVF 2.618; *De specialibus legibus*, 1.208/SVF 2.616; Plutarch, *De stoic. repug.*, 1053b/SVF 2.605/LS 46F; and Stobaeus, *Eclogae*, 1.171, 2–7/SVF 2.596. See discussion by Furley, "Cosmology"; Long, "Conflagration"; Jaap Mansfeld, "Providence"; and Salles, "Ἐκπύρωσις." Since fire exists independently during conflagrations, if fire realizes the role of the active principle, the type of

In either case, describing the roles of the principles provides a framework for determining the bodies that realize those roles. For one set of bodies must be capable of pervading natural objects and causing their matter to constitute them, and the other must be capable of constituting those natural objects. Hopefully, our evidence will suggest that the Stoics identify particular types of bodies that seem well suited for carrying out those tasks as the realizers of those roles. That is, hopefully, characteristics of a certain class of bodies will make them suitable for carrying out God's or matter's role in the Stoics' eyes. For this would allow us to grasp the foundations of the Stoics' explanations of the natural world in more informative terms. In the investigation of what sorts of bodies carry out those principles' roles, I believe that these should act as guiding considerations.⁷¹

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body that realizes the role of the active principle would be capable of existing without the body that realizes the role of the passive principle. In support of this interpretation, see Sellars, *Stoicism*, 99. Comments by Vogt, "Sons of the Earth," 138n7, suggest that she considers this interpretation an open possibility. As evidence, see Plutarch, *De stoic. repug.*, 1052b–c/SVF 2.604/LS 46E, which suggests that God consumes matter during the conflagration. Against this interpretation, see Cooper, "Chrysippus on Physical Elements," 103; Bénatouïl, "Zeus," 29–30; and Salles, "Ἐκπύρωσις," 67n15.

⁷¹Thanks to Tad Brennan, Charles Brittain, Gail Fine, Simon Shogry, and audiences at Cornell University and the University of Kentucky for comments on previous versions of this paper. Thanks also to several anonymous referees for their suggestions and criticisms, as well as the editors of *Journal of the History of Philosophy*.

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