

SOUL AS STRUCTURE:
PLATO AND ARISTOTLE ON THE *HARMONIA* THEORY

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We are conscious beings who think, understand, feel and perceive. We are also material beings composed out of ordinary material stuff. Determining the precise connections between the psychological and the material remains problematic. The *harmonia* theory is one of the first attempts to frame this as a problem about composite objects. The theory itself is simple: the soul is the *harmonia* of the material parts of the body. But what a *harmonia* is and what the theory amounts to are matters of much dispute. I argue that a *harmonia* is best understood as the structure of the body's material parts.

Plato introduces the theory in the *Phaedo*, and Aristotle mentions it in *On the Soul*. In both instances it is roundly criticized. Given that Plato thinks the soul is independent of the body, it is not surprising that he rejects the *harmonia* theory. However, he has been described as "extraordinarily obtuse" for arguing against the view, since doing so seems to undermine his arguments for a tripartite soul. Aristotle's rejection has been thought equally perplexing, since his own positive view (that the soul is the form of a living body) looks very much like a version of the *harmonia* theory.

Looking closely at the *harmonia* theory helps clarify persistent misunderstandings of the view and the reasons Plato and Aristotle reject it. This avenue offers insight into Plato's and Aristotle's positive theories about the soul and its

relation to matter. In addition, their rejections of the theory shed light on how they understand the relation between parts and wholes.

The problems lying behind the ancient debate about the *harmonia* theory are not just historically significant, but also resonate with contemporary discussions about material composition and the metaphysics of mind. Plato articulates a version of the *harmonia* theory which is perhaps the first expression of a supervenience thesis about the mental, but the precise sort of supervenience at issue hasn't been well understood. But most importantly, whether wholes and souls are causally relevant and whether conscious beings are mereologically simple are issues at the heart of the debate, both ancient and modern.

BIOGRAPHICAL SKETCH

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For Jessie, Isaac and Angus

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Introduction

Many wise people say either that the soul is a *harmonia*
or that the soul has a *harmonia*.

-Aristotle *Politics* 8.5.1340b18

We are conscious beings who think, understand, feel and perceive. We are also material beings composed out of ordinary material stuff. Determining the precise connections between the psychological and the material remains problematic. The *harmonia* theory is one of the first attempts to frame this as a problem about composite objects. According to the view, the soul is the *harmonia* of the material parts of the body.

The view is introduced in Plato's *Phaedo* and appears in Aristotle's treatise *On the Soul* and is resoundingly criticized by both. In the *Phaedo*, Plato devotes about ten Stephanus pages to articulating and refuting the *harmonia* theory (85e3-95a3). In *On the Soul* 1.4, Aristotle piles up four or five arguments against the view in rapid succession (407b27-408a34). My main aims in this thesis are the following:

- (1) to determine precisely what a *harmonia* is and as a result to determine what the *harmonia* theory amounts to;

- (2) to outline and assess the criticisms Plato and Aristotle mount against the *harmonia* theory in order to see what light they shed on their own positive theories about the soul; and
- (3) to explore what Plato's and Aristotle's understandings of the *harmonia* theory tell us about how they understand the relations between a whole and its parts.

A *harmonia* is usually explained in musical terms as a harmony or a tuning and in mathematical terms as a ratio or proportion. It's understandable why it's typically glossed in these ways. When a *harmonia* makes its first appearance in Plato's *Phaedo*, the relation between the soul and body is explained with a musical metaphor: “the *harmonia*—something invisible, incorporeal, beautiful and divine—is in the tuned lyre, while the lyre itself and the strings are bodies—corporeal, composite, earthly and akin to what is mortal” (85e4-86a3). Likewise when Aristotle first introduces the view, he describes a *harmonia* as “a ratio of the things mixed” (407b32-33). Despite resonances the word ‘*harmonia*’ has with musical terms like ‘harmony’ or ‘tuning’ and mathematical terms like ‘ratio’ or ‘proportion’ these terms only capture one way to understand what a *harmonia* is. In fact, it is precisely these musical and mathematical resonances which have led to persistent misunderstandings of the theory itself and of the reasons Plato and Aristotle reject it.

These misunderstandings stem, in part, from a failure to recognize that a *harmonia* is not always described in these terms. In the course of arguing against the *harmonia* theory of the soul, Plato explains that “a *harmonia* is a composite thing and that the soul is composed out of things held in tension in the body” (92a8-9). Aristotle also thinks a *harmonia* can be understood as a

composite (407b33). A *harmonia* isn't just something musical or mathematical, it's something *material*.

In my view—a view for which this thesis in large part counts as a defense—a *harmonia* is best understood as the *structure* of the material parts of the body. But what is a structure? I argue that there are two ways we typically think about structure. On the one hand, a structure is something like the arrangement of the parts in a composite object. It's the way those parts were put together or the principle of organization those parts have. The tuning of a lyre is a *harmonia* in this sense. On the other hand, a structure is a composite object—a whole of parts. According to this way of thinking the lyre itself, not the organization of its parts, is a structure.

The materialist conception of the *harmonia* theory has been ignored or dismissed. This has led, I argue, to a misunderstanding of Plato's arguments against the view and the implications for rejecting it. One example of this can be found in the charge C.C.W. Taylor levels against Plato on this count. He writes that “it is necessary to attribute extraordinary obtuseness to Plato if one accepts that...the arguments of the *Phaedo* are conclusive against the thesis”¹ since by doing so he would be undermining the view of the tripartite soul upon which the political and psychological theories of the *Republic* are based. This charge (and those like it) results from failing to take seriously the materialist specification of the *harmonia* theory. I argue that Plato need not be seen as “extraordinarily obtuse” even if two of the three arguments against the

¹ Taylor 1983, 230.

harmonia theory are conclusive. They are conclusive only against the materialist specification of the view.

Given that Plato thinks the soul can exist independently of the body, it is not surprising that he rejects the *harmonia* theory. However, commentators both ancient and modern have been perplexed by Aristotle's rejection of it. According to his own view, the soul is the form of a living body—a view which looks very much like a version of the *harmonia* theory. In fact, in his fourth century commentary on *On the Soul*, Themistius writes that those arguing that the soul is a *harmonia* are “none too close, nor yet too far, from the truth.”² Jonathan Barnes argued more recently that the best sense he can make of Aristotle's positive view about the soul is to regard it as a version of the *harmonia* theory.³

Yet there has been no satisfying explanation for why Aristotle so pointedly rejects a view which bears such an affinity to his own. In this thesis, I offer a suggestion. The key is to see that there are different versions of the *harmonia* theory. In fact, calling it ‘the’ *harmonia* theory is something of a misnomer. On the Platonic account, a *harmonia* is either something non-material—the abstract principle of organization a whole of parts has—or something material—the organized whole itself. I make the case that Aristotle considers a narrower, more technical notion of a *harmonia*: it is either the ratio of the four elements in the mixed parts of the body, or a composite of material parts, namely the living body itself. Although Aristotle rejects the versions of the *harmonia* theo-

² Themistius *On Aristotle's On the Soul* 25, 23.

³ Barnes 1982, 491-492.

ry he describes, it doesn't follow that he rejects every version of a *harmonia* theory. In fact, his own view is a version of the sort of *harmonia* that Plato describes. Aristotle can fail to be one kind of *harmonia* theorist without failing to be a *harmonia* theorist. Commentators who have been puzzled about why Aristotle rejects 'the' *harmonia* theory have not seen the important distinctions among the different versions of it.

The results of this have wide-ranging implications for Aristotle's metaphysics of mind. The way in which he argues against the *harmonia* theory provides important insight into his own positive view of the soul. The arguments against the *harmonia* theory reveal that Aristotle's soul looks much more Platonic than it might first have appeared. In making a case against the *harmonia* theory Aristotle maintains that the soul is a substance as the form of the body, that it has causal powers which aren't reducible to the causal powers of the parts of the body and, perhaps most intriguingly, that it's non-material. Although this doesn't mean that he thought the soul could exist independently of the body as Plato did, he does make it clear that the soul cannot be composed of material parts, as some commentators have maintained.⁴ Aristotle's rejection of the *harmonia* theory gives us a compelling reason to reconsider that view.

Although my thesis focuses on the *harmonia* theory as it is presented and rejected by Plato and Aristotle, the view has a pre-Platonic provenance as well as post-Aristotelian legacy. The precise origin of the *harmonia* theory is a matter of some speculation. There are some good reasons to think that the view orig-

⁴ Whiting 1992, 81; Irwin 1988, 285; Sorabji 1975 [1974]; Ackrill 1973; and Wiggins 1971, 38.

inated in Pythagorean circles and even a bit of evidence to trace it back to Philolaus.⁵ By the time Plato wrote the *Phaedo*, the *harmonia* theory was acknowledged to have Pythagorean origins. Socrates recognizes two of the main adherents of the view in that dialogue, Simmias and Cebes, as people “who keep company with Philolaus” (*Phaedo* 61d6-7). In part because Simmias and Cebes “at least mixed in Pythagorean circles” the *harmonia* theory is thought to have Pythagorean roots.⁶

The theory also persisted in some form beyond Aristotle and has been ascribed to two of his students in the Lyceum: Aristoxenos and Dicaearchus.⁷ Aristoxenos was known both as a musician and a philosopher and Cicero reports that he understood the soul as “a sort of tensioning of the body itself, like what we call a ‘*harmonia*’ in singing and lyre playing.”⁸ Dicaearchus likewise was reported to have regarded the soul as a “*harmonia* of the four elements” and that “he does not mean a *harmonia* composed of notes, but rather the harmonious combination...of the hot, cold, wet and dry things.”⁹ This is just one indication that the view continued to enjoy some stature even among Aristotle’s immediate successors.

I mention the pre-Platonic origins and the beginnings of the post-Aristotelian legacy not because they play an important role in this thesis, but precisely be-

⁵ For an excellent discussion of the pre-Platonic origins of the theory as well as its fate after Aristotle see Gottschalk 1971. Evidence that the view can be traced to Philolaus can be found in Sedley 1995.

⁶ Ross 1961, 195.

⁷ See Caston 1997, 339 ff.; Gottschalk 1971, 182 ff.

⁸ *Tusculan Disputations* 1.19.

⁹ Nemesius *De Natura Hominis* 2.17.5-9.

cause they do not. My aim is not to trace the entire historical development of the *harmonia* theory, but only to take up one uniquely important stage in that development—how and why the view is understood and ultimately rejected by Plato in the *Phaedo* and by Aristotle in *On the Soul*.

This is not to say that the legacy of the *harmonia* theory is unimportant. In fact the interest in the *harmonia* theory is not solely historical. Many of the issues that lie behind the ancient debate still resonate with contemporary discussions about the nature of composite objects and about the metaphysics of mind. In particular, recent interpreters have claimed that the *harmonia* theory anticipates contemporary views about the supervenience of the mental, but the precise sort of supervenience hasn't been adequately explored.¹⁰ I argue that Plato's description of *harmoniai* anticipates some contemporary views about mereological supervenience—the relation between a whole and its parts. Further, both Plato and Aristotle reject the *harmonia* theory as an account of the soul because a *harmonia* could have no causal powers that aren't fully accounted for by the causal powers and relations between the parts which compose it. Those who are interested in current debates about material constitution and the causal (in)efficacy of the mental should find themselves right at home with those debating about the *harmonia* theory of the soul.

With these things in mind, this thesis is divided into two parts. Part One is about the *harmonia* theory as it is found in Plato's *Phaedo*. Since the view was first introduced as a counterexample to the Affinity Argument, I spend considerable time in Chapter 1 sketching the precise lines of that argument. The

¹⁰ See, for example, Wagner 2001; Shields 1988 and Caston 1997.

Affinity Argument is often criticized as weak, merely analogical or worse. Although these opinions dominate the literature, I show that it is meant as a serious argument which achieves its intended objective when its main claims are properly understood. I suggest that with the Affinity Argument Plato argues that the soul is naturally simple, unchanging, invisible and divine—though in many (and perhaps most) cases it is not in its natural condition. Chapter 2 explains the versions of the *harmonia* theory Plato considers. There I make the case that he's got two specifications in mind which correspond to our ordinary conception of structure. I make the case that, contrary to some commentators, the *harmonia* theory admits of a materialist specification. In this chapter I outline my case that the view can be understood as a precursor to a contemporary notion of mereological supervenience. In Chapter 3 I outline and explain the three arguments Plato uses to counter the *harmonia* theory.

Part Two of this thesis is about the *harmonia* theory as it is found in Aristotle's *On the Soul*. In Chapter 4 I explain the two specifications of the theory he considers. I argue that the technical notions he considers must be understood in light of his chemical, physical and biological works. Using clues from Aristotle's commentators as well as from his own fragmentary dialogue, the *Eudemus*, in Chapter 5 I piece together the arguments with which he objects to the *harmonia* theory. Lastly, Chapter 6 outlines Aristotle's positive view about what the soul is in light of his arguments against the theory. In the end, it turns out that Aristotle is a *harmonia* theorist of a sort, but what sort that is makes a great deal of difference for how we understand his views about the soul.

Part I

Plato on the *Harmonia* Theory

Chapter 1

The Soul's Affinity to the Forms

Plato's *Phaedo* is organized around four arguments concerning the state of the soul before, during and after its embodiment: the Cyclical Argument (69e6-72e1), the Recollection Argument (72e3-78b3), the Affinity Argument (78b4-84b4) and the Final Argument (102a10-107b10). In the third of these arguments Plato attempts to demonstrate the indestructibility (and presumably the immortality) of the soul by arguing for its affinity to the forms. The Affinity Argument hasn't been well received by Plato's commentators. It has been regarded as Plato's weakest proof for the soul's immortality,¹ a passage that shouldn't be counted as an argument for immortality,² or even as an example of

¹ Bluck 1955, 18 claims that only the Final Argument is convincing. Hackforth 1955, 19 offers only a lame endorsement of the argument—"we cannot simply wipe it out as otiose and valueless." See also Gallop 1986, 140. Cf. Dorter 1976 who takes the argument as logically flawed, but persuasive.

² Archer-Hind 1894, *xvi-xxiv* especially *xxiii*.

how not to do philosophy.³ Despite this cool reception, the line of thought introduced by the Affinity Argument encompasses nearly a third of the whole dialogue and occupies a central position in both location and thought.

In this chapter I claim that Plato does take the Affinity Argument seriously. The argument is intended to dispel the ‘childish’ fear of Simmias and Cebes, two of Socrates’ interlocutors who are afraid that Socrates’ soul will be “dispersed like breath or smoke” when it is separated from his body at death. Put another way, they are afraid that the soul is a material thing that is subject to destruction through the dissolution of its parts.⁴ The Affinity Argument is deployed to overthrow this opinion.

The argument itself is often criticized as weak, a failed argument by analogy or worse. But the more carefully we look at each claim Plato makes, the less it appears merely analogical. In the course of the argument, Plato argues that the soul has four properties which it shares with the forms: the soul is simple (78b4-79c4), unchanging (78c6-78e6; 79c2-79e8), invisible (79a1-79c1) and divine (79e8-80a9).

I argue that when these conclusions are properly understood, they are not analogical or merely comparative. With them, Plato is making positive assertions about what sort of thing the soul is and what it can do. When he claims that the soul is simple, he means that it isn’t naturally composed of material

³ Elton 1997, 313. There he argues that the Affinity Argument is put in the *Phaedo* “in order to illustrate how not to argue the case for immortality, and, more generally, how not to argue the case for any thesis.”

⁴ To use the terminology found in Shoemaker 2003 [1977], “Immortality and Dualism,” 150.

parts and so is not to be counted among the class of ‘scatterable’ entities. When he claims that the soul is unchanging, he means that when the soul is actively contemplating the forms, it is no longer subject to change. When he claims that the soul is invisible, he means that the soul isn’t something that can naturally be seen by human eyes. When he claims that the soul is divine, he means that it is able to oppose the desires of the body. What makes these claims seem analogical is just the fact that only under certain circumstances does the soul exhibit the positive property. There are exceptions in each case and Plato is well aware of them. But the soul in its natural state is simple, unchanging, invisible and divine.

In this chapter I look first at Socrates’ argument that death ought not be feared by the philosopher and the childish fear that argument evokes. In the next four sections I consider the positive claims made about the soul: it is simple, unchanging, invisible and divine. When these are properly understood the argument is no longer a failed analogical argument. In §1.6 I consider the preliminary and final conclusions of the Affinity Argument and the reasons why Socrates says the soul is “completely non-soluble or something close to that” (80b10-11).

1.1 The Philosophical Life & a Childish Fear of Death

In the part of the *Phaedo* that has come to be known as Socrates’ Defense (63e8-69e5), Socrates gives a self-described defense of the philosophical life. His argument centers on the seemingly strange notion that the “one aim of those who practice philosophy in the right way is to practice for dying and death”

(64a4-5). Simmias and Cebes ought to realize, Socrates argues, that death is not something a philosopher will fear precisely because it's what he has been trying to accomplish his whole life—the separation of the soul from the body. In this section, I examine what it means to say that the philosophical life is practice for death insofar as it involves the separation of the soul from the body. To do this requires four things: (1) an account of death as the separation of the soul from the body; (2) a description of the sort of separation that occurs at death; (3) a description of the sort of separation the philosopher attempts while alive; and (4) an account of what it is that is separated from the body at death. I conclude this section by looking at Simmias' and Cebes' childish fear that the soul is destroyed when it is separated from the body.

1.1.1 Death

After securing agreement that there is such a thing as death, Socrates proposes the following account of what death is:

Is it anything other than the separation (*ἀπαλλαγῆν*) of the soul from the body? And that being dead is this, the body's having come to be apart, separated from the soul, itself by itself (*αὐτὸ καθ' αὐτό*), and the soul's having come to be apart, itself by itself, separated from the body? Can death be anything other than this? (*Phaedo* 64c4-8)

Simmiias agrees. Death is the separation of the soul and body.⁵ Since what happens at death is the central concern of the dialogue, it is important that we take care to examine it carefully. Although the definition appears simple enough, that simplicity conceals a number of difficulties.

First, this account looks incompatible with Socrates' aim to convince his interlocutors that the soul is immortal. In order to show that the soul is immortal, he needs to show that the soul is not subject to death. But if death is the separation of the soul from the body, to show that the soul is not subject to death would amount to showing that it is *not* subject to separation from the body. This view of things has Socrates arguing at cross-purposes. The philosophical life, as we've seen, is practice for death and dying (64a4-6). This practice involves *separating* the soul from the body to the extent that one is able. The philosopher ought not fear death because death is just the separation of the soul from the body—just exactly what she will have been practicing while alive. But if the soul is immortal and so not subject to separation from the body, the philosopher's life will be lived in vain. So the deathlessness of the soul must not consist of its inseparability from the body.

What then is the proper subject of death? Plato is unclear about this point, variously claiming that the *human being* dies⁶ although he sometimes says that

⁵ This account of death is similar to that given in the *Gorgias* (likely an early dialogue, predating the *Phaedo*): “Death, it seems to be, is in fact nothing other than the separation of two things, the soul and the body, from each other. When they are separated, then, from each other each of them keeps not much less its own condition which it had when the man was alive” (524b2-6, Irwin trans.).

⁶ See 59a7, 70a3-4, 70b3-4, 72c5-d3, 80c2, 87a4 and 115d9.

even the *soul*⁷ or *body*⁸ is subject to death. It seems most reasonable, given the definition of death above, to suppose that the human being is the proper subject of the predicate ‘is dead.’ It is implicitly assumed throughout the dialogue that a human being is composed of a soul and body.⁹ When these two components are separated, the human being dies—the composite no longer exists. This is how ‘death’ is primarily used. Death is something that happens to the composite human being. To choose just one example, Cebes voices his fear that the soul might be destroyed and so asks Socrates’ opinion about the common belief “that the soul still exists after the human being (τοῦ ἀνθρώπου) dies and that it still possesses some capacity and intelligence” (70b3-4). There are many more passages like this.¹⁰

But things are not always as clear as one might hope. In a number of places Plato has his characters say or imply that the soul dies.¹¹ For example, Socrates summarizes Cebes’ position as follows: “he held that no one could be sure whether the soul, after wearing out many bodies again and again, might not then perish itself (αὐτὴ ἀπολλύηται), leaving its body behind” (91d3-6). And following this summary he entertains an alternative definition of death, asking “whether death might not be this very thing, the perishing of the soul (ψυχῆς ὄλεθρος)—since the body is unceasingly and continually perishing” (91d6-7).

⁷ See 77d4, 84b2, 88a6, 91d2-9.

⁸ See 91d6-7 and 106e4-6.

⁹ This assumption is made explicit at 105c9-d15.

¹⁰ See, for example, 59a7, 70a3-4, 72c5-d3, 80c2, 87a4, 115d9 where the human being or other animate thing dies.

¹¹ See 77d4, 84b2, 88a6, 91d2-9.

According to this alternative account, death is not the separation of the soul from the body but instead is the destruction of the soul itself.¹²

To complicate matters further, Plato occasionally attributes the predicate ‘is dead’ to the body. In a passage which seems to waver between two different subjects to which death is attributable, Socrates says: “when death comes to a human being, the mortal part ($\tau\delta\ldots\theta\nu\eta\tau\acute{o}\nu$) of him dies, it seems, but his deathless part yields its place to death and goes away intact and indestructible” (106e4-6). Here death is attributed both to the human being and to ‘the mortal part’ of the human being. Presumably this ‘mortal part’ is meant to be the body. The alternative definition of death—death is the destruction of the soul—lacks the resources to explain what a dead body might be. The original account fares a bit better. Although most clearly attributed to the composite human being, one might extend the original account to say that a dead body is one that has been separated from the soul.

In different contexts, the predicate ‘is dead’ has different senses. When applied to the composite human being, the predicate is best explained as the separation of the soul and body of that human being. When the predicate is applied to the body alone, it describes the state of the body when the soul and body have been separated. When the predicate is applied to the soul, it generally describes the soul’s destruction or failure to persist once separated from the body. The different senses among these various attributions—especially between the

¹² Compare those passages where he admits the *imperishability* of the soul: 88a1-b8, 95b8-e1, 106b2-4, 106e5-7.

attribution of death to the human being and to the soul—will be important to bear in mind.

1.1.2 Separation

Death (of a human being) is the separation of the soul from the body. The philosopher is also admonished to separate his soul from this body as much as possible (67c6-8). Since the philosophical life prepares one for death, it seems that the sort of separation the philosopher should practice is the same separation as that which occurs at death. It is not entirely clear, however, whether this is in fact Plato's view. The confusion turns on what 'separation' means.

We've seen Socrates and Simmias agree that being dead involves "the soul's having come to be apart, itself by itself ($\alpha\upsilon\tau\acute{\alpha}\rho\eta\nu\ \kappa\alpha\theta'\ \alpha\upsilon\tau\acute{\alpha}\rho\eta\nu$), separated from the body" (64c7-8). Separation of this sort seems to require that the soul exist independently from the body. At death the soul comes to be separated *itself by itself* ($\alpha\upsilon\tau\acute{\alpha}\rho\eta\nu\ \kappa\alpha\theta'\ \alpha\upsilon\tau\acute{\alpha}\rho\eta\nu$), in other words, without the body.

Before establishing this definition of death, Socrates got Simmias to agree that there is such a thing as death (i.e., death exists, 64c1-2). This admission, coupled with the view that separation requires the independent existence of the soul after death, begs the question. If there is such a thing as death and death requires that the soul survive without any body, then Simmias' agreement that death exists unwittingly commits him to the postmortem survival of the soul. Socrates need go no further in proving to worried interlocutors that death is not the end. Although the immortality of the soul has not been demonstrated, the continued existence of the soul after death is a necessary step in such a demon-

stration. But given the importance of showing that the soul exists independently of any body after death, it is curious that this would be an unargued assumption, agreed to by Simmias without hesitation or further question.

Separation of the soul from the body needn't require the *continued* independent existence of the soul, however. That the soul comes to be separated from the body at the moment of death tells us nothing about how long it survives once so separated (we'll return to this issue below). The soul might be separated from the body at death and immediately destroyed. That we can drive a wedge between the view that the soul is separated from the body at death and the view that the soul continues to exist after it is separated is already suggested by the various applications of 'death' considered above. The death of the human being involves the separation of the soul and the body. The death of the soul is a separate issue. Even if the account of death as separation were secure, it would still be an open question whether the soul is destroyed once separated.¹³ By distinguishing between death as separation and death as the destruction of the soul, Simmias' agreement needn't beg the question.

The philosopher is admonished to separate her soul as far as she is able as a way of practicing for death. What sort of separation does Plato have in mind here? He suggests that, while alive, the philosopher's soul "most disdains the body and flees from it and seeks to be itself by itself" (*ἀὐτῆ καθ' αὐτῆν*, 65d1-2).¹⁴

¹³ It is worth calling to mind the alternative definition Socrates considers when he asks "whether death might not be this very thing, the perishing of the soul (*ψυχῆς ἄλειτουργος*)—since the body is unceasingly and continually perishing" (91d6-7).

¹⁴ See also 65c5-9.

To say that for some x , x exists *itself by itself* seems to suggest that x moves apart and exists independently from any y not identical to x . But on this view Plato is asking that the philosopher practice metempsychosis, attempting to exist without his body.

The examples of how the philosopher ought to live, however, do not suggest that Plato thought philosophy was metempsychosis practice. The examples he gives suggest instead that the philosopher tries to disassociate himself from bodily pleasures. The philosopher will not be concerned with the pleasures of food and drink (64d2-5), sex (64d6-7), fine clothes (64d9-10), shoes or other bodily adornments (64d10). Philosophers, as lovers of wisdom, also ought to turn their attention from the unreliable reports of sense perception. Plato has Socrates put this point rather vehemently, asking whether the body helps or hinders the soul's attempts to gain wisdom:

Do sight and hearing offer any truth to people or, as the poets are always saying these sorts of things, that we neither hear nor see anything accurately? And yet if these among the bodily sense are neither accurate nor clear, the others can hardly be; for they are somehow worse than these. (65b1-6)

Perhaps Plato (or the poets he's reporting) overstates the case. It is not that we don't or can't see anything at all accurately, for there are surely cases where the senses do report accurately. In the course of the Recollection Argument (72e3-78b3), for example, he claims that one can be reminded of something by seeing something else. One lover can see the lyre or the garment that belongs to the beloved and the image of the one to whom those things belong comes to mind (73d6-9). The senses in this case are reporting accurately that the object

is a lyre or cloak. The senses are not *utterly* untrustworthy in every respect.¹⁵ Instead the philosopher will not rely on the reports of sense-perception to provide her with entirely reliable and transparent truths about the world.

Although the separability of the soul from the body after death ultimately requires that the soul exist independently of the body, the degree of separation necessary to live a philosophical life is less demanding. The philosopher need not work on extricating his soul from the world of perceptual appearance. What the philosopher needs to do, rather, is to use reason to discern the truth about the world and not to rely on the senses alone. The soul reasons best, Plato suggests, “whenever none of these things bothers it, neither hearing nor sight nor pain nor any pleasure either, but whenever it comes to be itself by itself (αὐτῆ καὶ αὐτῆν) as far as possible disregarding the body” (65c5-8). Separating the soul from the body doesn’t involve mysterious metempsychosis, but simply reasoning and disregarding bodily pleasures and perceptions.

1.1.3 The Soul

We’ve seen that the soul is that which ought to disregard bodily perception and pleasures and which exists separately from the body when one dies. But what is it? Throughout the course of the *Phaedo*, this question is answered in a number of different ways and not all of those answers are obviously compatible with each other. Still, they generally fall under two different kinds. According to the philosophical view the soul which survives bodily death is narrowly conceived as the rational capacity. According to the popular or traditional view, the disem-

¹⁵ Although the senses *are* untrustworthy in their reports about the forms.

bodied soul is capable of much more than the intellect. Throughout the *Phaedo* we can identify a variety of views maintained about the soul. The first clearly expresses the philosophical view about the soul, but the rest seem more compatible with the popular or traditional view:¹⁶

- (1) *The soul is the rational faculty.* Plato often describes the soul as that which is responsible for our intellectual or cognitive functions. The soul, he claims, grasps the truth (65b9); reasons (65c2-5); has knowledge of the forms (76c2-5); and has wisdom (76c12). It is under this description that the soul is described as that which can oppose the affections of the body—the soul can oppose the body’s hunger and thirst (94b8-10) as well as its passions and fears (94d5).¹⁷
- (2) *The soul is the person.* Plato also describes the soul as the true self, what one essentially is. In this regard he will sometimes use a personal pronoun to refer to the soul. At the end of the dialogue, for instance, Socrates tells his friends that they’re not going to bury him, just his body (115c4-116a1). The soul, both embodied and disembodied has the same character (81e2-82b2). This conception of the soul is, of course, of primary importance to Socrates’ interlocutors; they worry whether Socrates will survive.
- (3) *The soul is the subject of conscious states.* Plato describes the embodied soul (of the philosopher) as something which disdains the body (65c11-d1); can get confused (66a5-6); has wants, desires and fears (66c2-3, 83b5-7); can become confused and dizzy (79c7-8); and can suffer pain and pleasure (83b5-7; 83c5-6). The soul is the seat of these conscious states both in a living human being and in a disembodied soul. The disembodied soul can retain bodily desires (81e1-2; 108a8-9); it can struggle and suffer (108b2); and can call out to, beg, persuade and forgive other such souls (114a8-b2). According to this view of the soul, there is very little difference between what the soul is like while embodied and what one’s disembodied life is like.

¹⁶ This list is largely drawn from the aspects of the soul mentioned by Gallop 1975, 88-90.

¹⁷ The ability of the soul to oppose the desires of the body anticipates the arguments in *Republic* 4.435a-441b.

- (4) *The soul is the cause of life.* Plato also treats the soul as that in virtue of which living things are alive—the soul is the ‘animating agent’¹⁸ of the body it occupies. This way of thinking about the soul plays a prominent role in the Final Argument for the immortality of the soul (102a10-107b10, n.b. 105c9-d5). In the course of the Cyclical Argument (69e6-72e1), Plato seems to attribute life (and consequently souls) to plants and animals as well as human beings (70d4-e4).¹⁹
- (5) *The soul is (or can be) spatially extended.* Plato describes the purification of the soul required by the philosopher’s practice for death in this way: the soul will “assemble and collect itself, by itself, away from every part of the body” (67c7-8). This suggests that the soul is spatially distributed throughout the body and can be drawn and collected together, i.e., its parts can move in respect of place. Of course this might simply be picturesque language or metaphorical flourish.²⁰ But this view is taken seriously by Simmias and Cebes and is the root of their fears about Socrates’ postmortem existence. Socrates also claims that a soul which hasn’t undergone the purification that philosophy offers will drag corporeal elements along with it, never achieving full separation from the body (80d8-84b8).²¹

When arguing for the immortality of the soul, Plato doesn’t always make explicit which conception of the soul he’s operating with. Although Socrates expresses his belief in personal immortality, it is not clear whether the arguments which support the survival of the intellect alone would be adequate. Moreover, it is not clear how these different views about the soul are to be reconciled with one another. The soul understood as the rational faculty is described as most like something unvarying, always the same as itself (80b2-3). But the soul under-

¹⁸ Borrowing the terminology of Bostock 1975, 89.

¹⁹ Outside the *Phaedo* the evidence for souls in things other than human beings is clear. See also *Timaeus* 30c, 90c for an account of the ‘world-soul,’ the cause of life for the whole universe.

²⁰ This is how the passage is interpreted by Rowe 1993, 144 and Bostock 1986, 28.

²¹ We’ll take a closer look at this view in §1.2 and §1.6.

stood as the person is the subject of a wide variety of variation and change. This difference is important. Simmias and Cebes are concerned whether their friend will survive the separation of his soul from his body. They seem to operate with the view that the soul is the person. If Socrates' arguments for immortality only demonstrate the immortality of the rational capacity, the arguments might not be enough to mollify the fears of Simmias and Cebes. Let us now look more closely at those worries.

1.1.4 The Soul is Scatterable

Socrates' defense of the philosophical life is an argument intended to soothe Simmias' and Cebes' fears. Wouldn't it be strange, Socrates asks, for someone who has spent his life practicing for death to be afraid when it comes? Philosophers shouldn't fear death. Death, as we've seen, is the separation of the soul from the body (64c4-8). Once separated, the soul is able to apprehend the forms by thought (*διάνοια*) unmediated by the bodily senses and unhindered by bodily desires. Since one "acquires truth and wisdom" by apprehending the forms by means of the soul and since philosophers are lovers of wisdom after all, philosophers ought not fear death; rather it should be welcomed.²² While the body and soul are bound together, the quest for knowledge is much more difficult and perhaps even impossible. Socrates presents the following choice: "either it is not

²² The argument here is somewhat obscure. There is something good which is had only when the soul is separated from the body. But no matter what that good is, it still seems that one might fear death. I know that there is some good to come from going to the dentist, but I still dread to go. This fear might even be rational. Suppose I'm going in for a painful procedure; it seems rational to fear going, despite the good I know will result.

possible for us to acquire knowledge anywhere, or it is possible when we have died” (67e6). The sort of separation of soul and body the philosopher practices while alive only approximates the sort of separation achieved after death. This postmortem separation allows the soul, itself by itself, to cognitively grasp the forms. A philosopher shouldn’t fear death since it is only after the separation of the soul from the body that knowledge may be attainable.

This argument does little to convince Cebes. Socrates’ argument exploits two controversial assumptions: (1) Socrates assumes that the soul continues to exist once separated from the body; and (2) Supposing that the soul does continue to exist once separated, Socrates also assumes that a soul in that state is capable of wisdom. Since the separated soul’s capacity for wisdom depends on its continued existence once separated, that assumption is more basic. Cebes wants Socrates to convince him that, in the face of popular opinion, the soul does continue to exist once separated from the body.

Cebes offers a popular alternative view about what happens when the soul is separated from the body as a foil. On the popular view, the soul doesn’t exist eternally nor is it even long-lasting. According to the popular view:

After the soul has left the body it no longer exists anywhere but is destroyed and dies (*διαφθείρηται τε και ἀπολλύηται*) on the day the person dies, just as it is becoming separated from the body; and that as it emerges it flies off in different directions (*οἴχηται*), dispersed like breath or smoke (*ὥσπερ πνεῦμα ἢ καπνὸς διασκεδασθεῖσα*), and is no longer anything anywhere. (70a1-6)

This materialist view about the soul gets stated twice more, first by Simmias. After concluding the Cyclical and Recollection Arguments (70c4-72e2; 72e3-77a5), Socrates thinks he has addressed Cebes’ doubts that the soul doesn’t

continue to exist after it has been separated from the body. He also takes himself to have shown that the disembodied soul does have knowledge. With the Cyclical Argument, Socrates takes himself to have shown that the soul is capable of existing independently of the body.²³ With the Recollection Argument, he takes himself to have shown that the soul is capable of knowledge in a disembodied state.²⁴ Cebes is not persuaded by these arguments and Simmias picks up the dialectic. “The fear of the majority which Cebes mentioned still stands,” he insists, “that at the same time as the person is dying his soul is scattered and that this is its end” (77b2-5).

The view that the soul is scatterable is expressed once more by Socrates. Attempting to reassure Simmias and Cebes that their fears for him are unfounded he says:

It seems to me that you and Simmas would like to work though this point still further. You seem afraid, like children, that the wind would literally blow apart the soul and scatter it (*διαφυσᾶ καὶ διασκεδάσσιν*) as it leaves the body, especially if one happens to die in a high wind and not in calm weather. (77d5-e2)

Cebes and Simmias have the childish fear that the soul might be scattered like breath or smoke. They’re afraid that the soul is composed of material parts

²³ The Cyclical Argument turns on the dubious principle that opposites are generated from opposites—like waking and sleeping or the greater and smaller, the living are generated from the dead and the dead from the living. Given this principle, souls must continue to exist after death.

²⁴ The Recollection Argument crucially turns on two claims: (1) that learning is recollection and (2) that we have knowledge of the equal itself. Knowledge of the equal itself is not something we could have acquired by perception (since sensible equal things are different from the equal itself). Since we have knowledge of the equal itself, we must have acquired it before we began perceiving and so must have it before birth.

that are capable of being scattered. Their worry is that the soul is subject to destruction through the dissolution of its parts.

Socrates attempts to dispel this worry by offering the Affinity Argument (78b4-84b8). We can see that this argument targets Simmias' and Cebes' childish fear that the soul might blow apart in the wind, by how it is ultimately concluded. Socrates concludes the Affinity Argument as a whole by saying:

There is no danger, Simmias and Cebes, that one will fear that, torn apart (*διαφρασηθεῖα*) on its separation from the body, blown to pieces (*διαφρυσθηεῖα*) by winds and flying in different directions (*οἴχηται δαπτομένη*), <the soul> may depart and be no longer anything anywhere. (84b4-7)

This summary conclusion combines elements from both Cebes' statement of his worries (70a1-6) and Socrates' sarcastic recapitulation (77d5-e2)²⁵ and brings the Affinity Argument to a close. Thus the Affinity Argument should show that Simmias and Cebes needn't be afraid that the soul might be subject to destruction through the dissolution of its parts. Let us now turn to the first step of the argument

1.2 The Soul is Simple

Plato begins the Affinity Argument by connecting the simplicity of the soul with its indestructibility. The soul is not composed of (the sorts of) parts that might be scattered once it's separated from the body. I argue that Plato denies that the soul is among the class of scatterable things, a class comprising all and only the things composed of (certain sorts of) parts. I then discuss some varieties of

²⁵ Rowe 1993, 199.

parthood and the corresponding varieties of simplicity. I argue that Plato need only show that the soul is simple insofar as it lacks material parts. I argue this in opposition to two views: (1) K.W. Mills' suggestion that an object can be simple so long as it was not put together and (2) the suggestion of Gilbert Ryle and M.M. McCabe²⁶ that the simplicity of the soul requires that it have no parts or properties at all.

1.2.1 Scatterability & Composition

Given that Socrates' aim in the Affinity Argument is to dispel the worry that the soul might be scattered once separated from the body, he begins with an appropriate question: "To which sort of thing does suffering this affection, i.e., being scatterable, actually belong?" (τῷ ποίῳ τινὶ ἄρα προσήκει τοῦτο τὸ πάθος πάσχειν, τὸ διασκεδάνυσθαι, 78b5-6). The worry that the soul is subject to destruction through the dissolution of its parts is warranted only if the soul is the sort of thing that is scatterable.

I've chosen to render 'προσῆκειν' here and in what follows as 'to belong to' or 'to be applicable to' as opposed to the more traditional translation 'to be liable to' or 'to be likely to.'²⁷ The traditional translation imports misleading imprecision into the argument. The suggestion that something is liable or likely to be scatterable implies that the chances of that thing being scatterable are high. But the probability that something is scatterable is not what is at issue in this

²⁶ In separate papers: Ryle 1939 and McCabe 1994.

²⁷ For the traditional translation see Hackforth 1955; Gallop 1975 and Grube 1981 among others.

argument. Saying that the predicate ‘is scatterable’ is applicable to or belongs to some subject simply means that such an application is allowable, given what the subject is. Socrates is not asking what sorts of things have a high probability of being scatterable. Rather he’s asking to which class of things one can attribute the predicate ‘is scatterable.’ He’s asking for the class of entities such that only the members of that class are scatterable, although all the members of that class needn’t be. If the soul turns out to be a member of that class, Simmias and Cebes would have a reasonable worry. But if the soul is not a member of that class, their worry is unfounded. Suppose that the scatterability of the soul were a matter of probability or likelihood and that Socrates were able to prove that it was not probable or likely that the soul would be dissolved into its constituent parts. Would that be enough to mollify Simmias’ and Cebes’ childish fear? There’s still a chance that the soul could be destroyed once it is separated from the body. But if Socrates was able to prove that the soul didn’t belong to the class of things to which the predicate ‘is scatterable’ can be attributed, their fears would have no rational support.

Socrates answers his question with a question. The traditional translation has Socrates asking:

Isn’t what has been compounded and is composite by nature liable (τῷ...συντεθέντι τε καὶ συνθέτῳ ὄντι φύσει προσήκει) to being divided in the way in which it was compounded and only that which is non-composite (ἀσύνθετον) is liable not to undergo this, if anything? (78c1-3)

The traditional translation of this question is multiply ambiguous. The first ambiguity has to do with the modifier ‘by nature’ (φύσει). David Gallop suggests

two possible interpretations.²⁸ One can either take ‘by nature’ as an adjective modifying ‘composite’ or as an adverb modifying the expression ‘liable to being divided.’ Taking ‘by nature’ as an adjective suggests that Socrates is distinguishing between a natural composite and an artificial one. This view is favored by a minority of commentators.²⁹ My translation of ‘προσῆκειν’ as ‘to belong to’ or ‘to be applicable to’ carries the same sort of ambiguity. Socrates could either be making a claim about natural composites or about whether a composite (whether natural or artificial) is naturally subject to division into its constituent parts.

Burnet insists that it is “very unnatural to take φύσει προσῆκει together, as many editors do.”³⁰ However it seems more natural to me to take the ‘φύσει’ adverbially and here’s why: if we suppose along with Burnet that Plato means to draw a distinction between natural and artificial composites, it seems reasonable to suppose also that artificial composites would be more likely to be scaterable than natural ones. Natural composites—living things, for example—have an internal principle of unity by which they are held together. Artificial composites lack this internal principle, having been put together by someone and their unifying structure imposed from without. Taking ‘by nature’ adverbially makes more sense. It is the very nature of composite objects (no matter whether natural or artificial) that they are subject to destruction through the dissolution of their parts. If something has been put together in a certain way,

²⁸ Gallop 1975, 230 n.30.

²⁹ As far as I’ve been able to find, this view is supported by Burnet 1911, 66 and seems to be endorsed by Rowe 1993, 181-182.

³⁰ Burnet 1911, 66.

it's reasonable to suppose that it could also be dissolved by reversing that process. A composite object has the joints which would make dissolution possible.

This way of thinking about composite objects has led some commentators to a peculiar view about simplicity, or better, non-composition. K.W. Mills distinguishes two ways in which an entity could be non-composite (*ἀσύνθετον*).³¹ In one way, something could be non-composite if it doesn't have parts (or parts of a relevant sort); in another way, something could be non-composite if it wasn't put together. Mills thinks Plato opts for the second. He takes as evidence Plato's claim that what is composite is subject to division "in the way in which it was compounded" (78c2). Something that was never compounded would, by that very fact, not be subject to destruction in the way in which it was compounded. On this view, something could be non-composite but composed of parts—so long as it had those parts "from all eternity."³²

It is not entirely clear what Mills has in mind here. We could imagine a scenario according to which something was created *ex nihilo* consisting of two mereological atoms. For the entire time that object exists, it is composed of those two atoms. It was not put together from existing parts and so was not compounded and so not subject to destruction in the way in which it was compounded. Suppose further that this object persists for a minute and is then annihilated. Since this object wasn't composed from existing parts nor dissolved into its constituent atoms, it would be non-composite on Mills' reading, even

³¹ Mills 1958, 45-46. See Bluck 1959; Hall 1963; and Rist 1964 for responses.

³² Mills 1958, 45.

though it only existed for a minute. This object didn't have its parts "from all eternity" and so fails Mills' test for non-composition. But it seems that such an object would satisfy the spirit of his account. It was not put together from previously existing parts and so would not have been put together.

Mills is pushed into this account of non-composition by a false dilemma, however. The two views he sees available are these: something can be non-composite if it is either without parts or hasn't been put together. If this choice were exhaustive, it is clear why he opted for the second alternative. It could not be the case that something could exist and be entirely without parts of any sort. But there are a variety of ways of cashing-out the 'part of' relation and correspondingly a variety of ways one can think about simplicity, so let us now turn to those.

1.2.2 Simplicity & Parthood

Mills saw himself faced with the following choice: either an entity is non-composite because it has no parts whatsoever or an entity is non-composite because it was not put together. Although he opted for thinking of non-composition in the second sense, some have thought simplicity requires a complete lack of parts. Gilbert Ryle and M.M. McCabe defend the view that Plato thought of the forms (and souls) as simple.³³ They argue that the forms (as Plato conceived of them in his middle period) could not be thought of as having *any* properties.³⁴ Mc-

³³ Ryle 1939; McCabe 1994.

³⁴ I have my doubts whether this position is coherent, however. There are two ways a soul might be austere: either because the soul has no properties at all or because it is a bare particular (a propertyless bearer of properties).

Cabe puts it this way: “forms are not only explanations; they are *simple objects*, austere and indestructible, analogous to souls.”³⁵ She further elaborates in what this austerity consists:

both forms and souls are separate, mind-independent substances, free from the compresence of opposites. They are also, on this argument, quite simple (souls are as like them as possible), so that they have no properties at all. They are just “themselves by themselves,” just one.³⁶

In this section I argue that Plato was not interested in this ‘qualitative barrenness’ in the Affinity Argument, but rather was hopeful of securing the sort of simplicity which implies that any object having it is not subject to destruction through the dissolution of its parts. In short I wish to show that neither Mills’ view nor the Ryle/McCabe position on simplicity is required by the argument. There is a middle position between thinking of a simple object as one which wasn’t put together and thinking of a simple entity as something which has no properties at all. A non-composite entity is one which has certain sorts of parts

Consider the first alternative. If the soul has no properties at all, then it couldn’t be austere (assuming that austerity is a property of something). So an austere soul couldn’t exist. Consider the second alternative. If the soul is itself propertyless, then it can have no relational properties. But it seems that such a soul would have to have at least some relational properties—those which ‘connect’ the particular to the properties of which it is a bearer. Further, considered independently of the properties it bears, the bare particular would seemingly have to have some relational properties which allow it to be individuated from other such particulars. Despite Locke’s admission (*An Essay on Human Understanding* II.xxiii.2) that a bare particular is “something, I know not what,” it is hard to see how it could be something at all.

³⁵ McCabe 1994, 63.

³⁶ McCabe 1994, 64

but lacks others. To make my case that this is Plato's view in the Affinity Argument I first need an account of parthood.

Verity Harte's recent account of Plato's views on parts and wholes can serve as our starting point.³⁷ Since Plato makes no assumption that "the relation between a part and whole is an exclusively spatial relation,"³⁸ Harte distinguishes between three notions of parthood she finds in Plato: *spatial* parts, *property* parts and *instance* parts. Unfortunately Harte doesn't provide a concise definition for a spatial part; she seems to take the notion of spatial parthood as the central case of parthood and perhaps as primitive (or so obvious it is not worth defining). I think she's right in assuming that we have an intuitive idea of spatial parthood, but it is worth trying to articulate it.

Following Peter van Inwagen's convention for using plural variables,³⁹ let us first distinguish between a proper and an improper part:

For some x and some y , x is a *proper part* of y just in case there are some zs that compose y and x is one of the zs .

For some x and some y and some z , x is an *improper part* of y just in case there is some z that composes y and $x = y = z$.

³⁷ Harte 2002. It is worth comparing Shields 1999, 145-147. Shields distinguishes three different kinds of parts. An *aggregative part* is a portion of something that can exist after the dissolution of that thing. An *organic part* is a functionally defined portion of something on which its identity conditions are parasitic. A *conceptual part* is a portion of something, though not functionally defined, on which its identity conditions are parasitic.

³⁸ Harte 2002, 5.

³⁹ van Inwagen 1987, 22. There he explains that expression like 'the x s' or 'the y s' correspond to the English pronoun 'they' just as variables x and y correspond to the pronoun 'it.'

I will generally use ‘part’ to mean proper part, as I have been implicitly. I think this is what we ordinarily mean by ‘part.’ Since we have an account of parthood, adding a further condition will give us an account of material parthood:

For some x and some y , x is a *material part* of y just in case x is a part of y and x is a material object.

But what makes something a material object? Although we have an intuitive grasp of what features make something a material object, our concept is not as precise as one might hope. Still, van Inwagen articulates these features as follows:

A thing is a *material object* if it occupies space and endures through time and can move about in space (literally move about, unlike a shadow or a wave or a reflection) and has a surface and has a mass and is made of certain stuff or stuffs.⁴⁰

To fill out Harte’s account, we could move from the conception of a material part to that of a spatial part by backing off a bit from van Inwagen’s account. We might say that a thing is a *spatial object* if it occupies space and endures through time and can literally move about in space. If we leave off the addendum “has a surface and has a mass and is made of certain stuff or stuffs” then we have the notion of a spatial object. A *spatial part*, then, is a part of a spatial object.⁴¹ But for the purposes of describing the arguments in the *Phaedo*, we needn’t pay much attention to the distinction between spatial and material parts. The Affinity Argument is given to Simmias and Cebes in order to show

⁴⁰ van Inwagen 1990, 17.

⁴¹ The notion of a spatial part would allow for cases where something could be composed of parts which are subject to destruction through dissolution, but be neutral about whether those parts are material.

them that the soul cannot dissipate like breath or smoke once it is separated from the body. As it is articulated here and elsewhere in the *Phaedo* their worry is that the soul might be a material object composed of material parts.

To this notion of parthood we can add Harte's distinction between property- and instance-parts:⁴²

If an object *a* has some property, F-ness, then F-ness is present in *a*. The F-ness in *a* is, first, a part of *a*. Call a part of this kind a 'property-part.' The F-ness in *a* is, second, a part of the form F-ness. Call a part of this kind an 'instance-part.' What is predicat- ed of an object, on this account, is not only a property-part of it, but also an instance-part of the property in question.

On this account of parthood, the properties of everyday, perceptible objects are thought of as parts of that object. The whiteness of this page is a property-part of this page. But that very same whiteness can also be thought of as an in- stance-part of the form whiteness.

Failing to recognize the varieties of parthood Plato considers is what makes Mills' dilemma appear exhaustive. Since there are a number of different sorts of parts, there are correspondingly a number of different sorts of simplicity. Some- thing might be wholly without parts of a certain sort, though it has parts of another sort. An object might be simple insofar as it lacks material parts, but might have a complex of property-parts. This is precisely the sort of simplicity at issue in the Affinity Argument. Simmias and Cebes claim to be worried about whether the soul is scatterable once it is separated from the body. They make no mention of a worry about whether the soul has a number of different properties. In fact, since they are interested in the possibility of Socrates' perso-

⁴² Harte 2002, 70.

nal immortality they should be pleased to discover that the soul has a number of property-parts. Socrates need only prove that the soul lacks material parts in order to satisfy their demands.

1.3 The Soul is Unchanging

Having secured agreement that scatterability belongs to materially composite objects and that simple objects escape that fate, Socrates then connects simplicity with invariability (78c6-78e6; 79c2-79e8). Simple things are unchanging; composite things change. In order to figure out what Plato has in mind here, we first need an account of change. There are several varieties of change. In addition to qualitative alteration and local motion, the compresence of opposites can also be considered a kind of change. But the trouble starts when we see that Plato admits that the soul changes in all sorts of ways. In fact, the embodied human soul seems to be more frequently the subject of change than otherwise. My task in what follows will be to explain how Plato can conclude that the soul is unchanging, despite his many claims to the contrary. It turns out that the soul remains in the same state only when contemplating the forms, which are themselves unchanging in every way. It is this ‘cognitive contact’ between the soul and the forms which allows the soul a respite of changelessness.

1.3.1 Some Varieties of Change

Before determining whether and how the soul is subject to change, we first need to determine what sorts of change Plato considers in the *Phaedo*. Aristotle reports that as a young man Plato was introduced to Heraclitus’ idea that the per-

ceptible world is in flux and that he held this view later as well (*Metaphysics* A.6.987a32-b1). Aristotle also tells us that Plato's Heracliteanism eventually led him to posit the forms. If sensible particulars are always changing, we cannot have knowledge of them. But since knowledge is possible, it must be knowledge of the forms which escape the changeability of the sensible world. According to Plato, the doctrine of flux involved two claims:⁴³ (1) the *succession* of opposite properties in the same thing over time and (2) the *compresence* of opposite properties in the same thing at the same time.⁴⁴

According to the first claim, things undergo a succession of opposite properties over time. When we ordinarily talk about change, we typically have in mind the succession of opposites. Something changes if it gains or loses a property. The house changes if it was white but is now yellow. This is a succession of *opposites* insofar as the house goes from being white to being not-white. If something is subject to the succession of opposites, it loses properties it once had and comes to have properties it once lacked. Both qualitative alteration and lo-

⁴³ Irwin 1977a, 148-153; cf. Irwin 1977b; Irwin 1992, 55-56; Irwin 1995, 161-162. Although Irwin give somewhat different accounts, he consistently maintains that the doctrine of flux involves both the compresence and succession of opposites.

⁴⁴ In the case of the compresence of opposites 'the same thing' could refer either to individual things, to properties, or to types. The same person could be both short (when compared to someone) and tall (when compared to someone else). The same property is both heavy (to some) but light (to others). Finally, a type (e.g. human beings) might be both tall and short since the type contains members who are tall and others of whom are short. Since we're trying to determine what sorts of change the soul is subject to and the affinities (if any) it bears to sensible particulars, I'll focus my discussion primarily on the compresence of opposites in individual things. For a detailed discussion of the differences here see Irwin 1995, 154-163.

cal motion fit this model. I can go from being in location a at one time to being in location b at another time. In this case I also undergo a succession of opposite properties: being in a to not being in a . Irwin describes this as “self-change” (or ‘ s -change’):⁴⁵

x s -changes iff at time $t1$ x is F and at time $t2$ x is not-F, and x itself is not in the same condition at $t2$ as it was at $t1$.

The name here might be slightly misleading. If something s -changes it needn’t be both the subject and its own object—i.e., a thing needn’t change itself. Rather, something can s -change even if something else is responsible for the change. To say that something s -changes is just to say that a single subject has different properties at different times.

The second part of Plato’s conception of flux involves the compresence of opposites at a given time. This may not be intuitively an account of change, for something suffers the compresence of opposites if it has one property in certain circumstances or conditions and the opposite in different circumstances or conditions. The very same meal might be flavorful to you, but on account of a cold, it might be bland to me. Simmias might be tall when compared with Socrates, but short when compared to Phaedo (*Phaedo* 102b3-d4). Thus Simmias is both tall and its opposite at the same time. Irwin calls this “aspect change” (a -change):⁴⁶

x a -changes iff x is F in one respect, not-F in another, and x is in the same condition when it is F and when it is not-F.

⁴⁵ Irwin 1977b, 4.

⁴⁶ Irwin 1977b, 4.

Although less obviously a case of change than the succession of opposites, we do sometimes use the language of change to describe compresence. We might say that Simmias *went from* being tall (when compared with Socrates) *to* being short (when compared with Phaedo). This, of course, doesn't mean that Simmias grew or shrank. The language of change alone won't indicate whether compresence or succession is at issue. For instance, there are cases where Plato is clearly talking about compresence yet uses language which would ordinarily be the mark of succession.⁴⁷ When describing why Simmias goes from being tall in one circumstance to being small in another, Plato says that the tallness in Simmias “flees and retreats” (φεύγειν καὶ ὑπεκχωρεῖν) when its opposite advances (102d9-10). Despite sounding like a case of succession, clearly compresence is the issue in this case.

1.3.2 The Soul Changes

Recall that at this stage of the Affinity Argument, Socrates tries to forge a connection between simplicity and stability. Simple things remain the same; composite things vary. He puts the point even more strongly by distinguishing between “the things that always remain in exactly the same state” and “things that are now like this, now like that, and never the same” (78c6-d8). Simple things, he claims, are always the same; composite things never are. This seems to imply that simple objects never undergo change of any kind. Since simple

⁴⁷ See also *Theaetetus* 152d2-e9. There he explains that “things are always coming to be (γίγνεται)” because they suffer both compresence and succession of opposites (152e1) and that compresence and succession are both examples of “flux and change” (152e8).

things ought to “remain in exactly the same state” one might have expected the soul to be unchanging in every respect. But clearly it is not. Despite the apparent simplicity of the soul, it seems to suffer both the compresence and succession of opposites.

Let’s first take succession. Throughout the *Phaedo*, Plato describes the soul as undergoing both qualitative alteration and a sort of local motion. He pointedly claims that:

when the soul makes use of the body to investigate something, either by hearing or seeing or some other sense...it is dragged (ἔλκεται) by the body to those things that are never the same, and the soul itself strays (πλανᾶται) and is confused and dizzy (ταράττεται καὶ ἐλιγιγίᾳ), as if it were drunk, insofar as it is in contact with that kind of thing? (79c2-8)

Here we have a case where Plato describes the soul in ways which suggest it is not only subject to qualitative alteration, but also local motion. The soul is dragged around by the body and becomes dizzy. These things make it sound like the soul can undergo local motion. Furthermore, Plato later claims that philosophy bids the soul to “collect and gather itself together” (συλλέγεσθαι καὶ ἀθροίζεσθαι) which again seems to suggest that the soul, or at least parts of the soul, are subject to local motion.⁴⁸ Perhaps we shouldn’t rely too heavily on the language here—Plato may just be offering a picturesque development of the unreliability of the senses (see 66a5-6).

⁴⁸ See also 67c5-d2. This is not to mention the mythical passages from 107d1-115a8 which describe the nature of the afterlife and the subsequent judgment of separated souls. There Socrates claims that a guardian spirit leads the departed soul from place to place. See especially 107d1-108c5.

But even if these passages don't indicate the local motion of the soul (although I'm inclined to think they do), it surely points out the kinds of qualitative alteration the soul can undergo. The soul can be confused at one time, but clear at another. The soul can come to be aware of certain things which it was unaware of at an earlier time. For example, in the intellectual autobiography which precedes the Final Argument, Socrates describes his initial search to know the causes of everything. He used to think that someone was large through eating and drinking (96c8-9), but he later came to realize that the real reason someone was large was by participation in the form, Largeness (100e5-6). Since Socrates came to know something that he didn't previously, we have a straightforward case in which the soul suffers the succession of opposites.

The same can be said about the compresence of opposites. At a given time, one's soul is more knowledgeable than some and less knowledgeable than others. The souls of those who practice philosophy in the right way may be more wise than those who don't. Plato puts it this way:

We shall be closest to knowledge if we refrain as much as possible from association with the body and to not join with it more than we must, if we are not infected with its nature but purify ourselves from it until God himself frees us. (67a2-6)

Those who are better able to refrain from this association with the body will be closer to attaining true knowledge than those that aren't. Since Plato takes there to be such cases, some souls will be more knowledgeable (or at least closer to being knowledgeable) than others. The same goes for virtue: one's soul can be more virtuously ordered than some, but less than others. Likewise, one's soul can simultaneously be confused with regard to the deliverances of sense, but

clear with regard to the deliverances of reason. From this it seems clear that the soul can and does suffer the compresence of opposites as well.

1.3.3 The Soul is Unchanging

So if the soul suffers from both the compresence and succession of opposites, in what way can it be said to remain in the same state? Plato answers this way:

When the soul investigates by itself, it passes into the realm of what is pure, always existing, immortal and unchanging and on account of its kinship with it, always stays with it, whenever it comes to be itself by itself and is able to do so; it ceases from its wandering and always stays in the same state on account of its laying hold of things of the same kind and this condition of it is called ‘wisdom.’ (79d1-7)

The soul only ceases its dizzy wandering when contemplating the forms using reason alone, unhindered by the bodily senses. The cognitive contact the soul has with the forms allows the soul a respite from change. Although Plato admits that the soul does “wander” and “is confused and dizzy” while investigating sensibles, it needn’t change when investigating the forms using reason alone.

This suggests that the soul, to use Bostock’s terminology, has a ‘chameleon-like’ character, such that the soul takes on the nature of whatever it is thinking about.⁴⁹ When thinking about changeable things, the soul is the subject of change; when thinking about things that remain in the same state, the soul remains in the same state. Although this gives Plato license to say that the soul is unchanging in certain circumstances, much of the time (if not most) the soul *is* the subject of change. If Plato is trying to establish various affinities between

⁴⁹ Bostock 1986, 119.

the soul and the forms, it doesn't appear that he's got much of a ground for saying that the nature of the soul is more like the unchanging forms than it is like the changeable sensible particulars.

So in order to establish the affinity between the soul and the changeless forms, Plato's argument has to rely on claims about the nature of the soul and that only when the soul is contemplating the forms it is in its natural state.

1.3.4 The Nature of the Soul

We've looked at evidence suggesting that the soul is changing, but we've also looked at evidence suggesting the soul is unchanging. In the face of these apparently contradictory claims about the soul, we might reasonably wonder what the soul is *really* like or, in other words, what the true *nature* of the soul is. Bostock claimed that the soul takes on the nature of whatever it's investigating. When investigating the forms the soul has one nature, when investigating the sensibles it has another. This view doesn't take into account important claims Plato makes about the nature of the soul. When Plato attributes a property to the soul it is important to take note of whether he claims that the soul has that property naturally or not.

Frequently throughout the *Phaedo* Plato tells us that the embodied soul is in a kind of prison, just like Socrates himself. The soul is bound up with the body and in an unnatural state. One one occasion, Socrates puts the point this way:

The lovers of learning know that when philosophy gets a hold of their soul it is imprisoned in and clinging to the body and that it is forced to examine other things through it as though through a cage and not *itself by itself* and that it wallows in every kind of ignorance. (82d9-e5)

The soul is only in its most natural state not when it exists imprisoned in the body but “itself by itself” unencumbered by the body. So we can determine what the nature of the soul is only when we look at those places where the soul is described as doing its work “itself by itself.”

Now reconsider the evidence which purports to show that the soul is something that is subject to change. It’s only when the soul investigates by means of the body, i.e., through the senses, that “the soul itself strays and is confused and dizzy, as if it were drunk” (79c2-8). But he continues and explains that when the soul investigates *by itself* it passes into the realm of the things that are pure and unchanging. Since he claims that the soul is akin to these intelligible objects the soul:

always stays with <them> whenever it is by itself and can do so,
it ceases to stray and remains in the same state as it is in touch
with things of the same kind. (79d3-5)

So in which condition is the soul able to manifest its true nature? When the soul goes about investigating sensibles by means of the body, the soul is described as being in an impaired state—it’s dizzy and confused as if it were drunk. But when the soul investigates intelligible objects “itself by itself” there is no such impairment. When investigating the forms, the soul is best able to function without interference from anything else. Thus when the soul investigates intelligible objects without the senses and unhindered by the body it’s operating most fully in accordance with its own nature. From this we can conclude that the soul is *naturally* unchanging. This natural capacity of the soul is impaired when it tries to investigate the sensibles by means of the body in which it is imprisoned. In such an unnatural state the soul is the subject of all sorts of

change. So the soul doesn't have a 'chameleon-like' character, but rather is naturally something unchanging that *can* be the subject of change when it is in an unnatural condition.

1.4 The Soul is Invisible

To this point the argument runs as follows: materially simple things are not subject to destruction through the dissolution of their parts. Simple things are also stable; they avoid the changeability that sensibles suffer from. In particular, simple things lack the parts that would render them subject to destruction through dissolution. The next move in the Affinity Argument is to show that this stability is connected to invisibility (79a1-79c1). Invisible things, Plato claims, escape the Heraclitean flux that sensible things are subject to.⁵⁰ If Plato is able to show that the soul is invisible, he would be able to trace the connections back and show that the soul isn't subject to destruction through the dissolution of its parts.

But things aren't that simple. Plato claims only that the soul is invisible to human eyes, leaving open the possibility that the soul is visible to other observers. Likewise, souls which haven't been purified of their association with the body take on some corporeal parts and such souls could actually be seen by human eyes. Here again, we have a case where Plato argues that the soul in cer-

⁵⁰ Plato couldn't reasonably be suggesting that invisible things escape from every sort of flux since, for example, the same soul can be simultaneously wiser than one and less wise than another. What matters is that invisible things aren't subject to the kinds of change that would render them subject to destruction through the dissolution of their parts.

tain circumstances or in certain conditions is visible, while apparently coming short of saying that the soul is invisible, full stop. In what follows, I will show that the soul in its natural state *is* invisible, but the soul in an unnatural condition can become visible.

1.4.1 Invisible or Imperceptible?

This stage of the Affinity Argument begins by connecting the stability of the forms with their imperceptibility. Things that don't change in the way that would render them subject to destruction through dissolution cannot be perceived with the senses. Things that do suffer this sort of change “you could touch and see and perceive with the other senses, but those things that remain the same can only be grasped by the reasoning power of the mind ($\tau\tilde{\omega}\ \tau\tilde{\eta}\zeta\ \delta\iota\text{-}\alpha\nu\acute{\omicron}\iota\alpha\varsigma\ \lambda\omicron\gamma\iota\sigma\mu\tilde{\omega}$)” (*Phaedo* 79a1-3). Since the forms can only be grasped by the intellect and not by the senses, Socrates is able to conclude that “such things are invisible and not seen” ($\acute{\alpha}\iota\delta\tilde{\eta}\acute{\omega}\nu\alpha\iota\ \omicron\upsilon\chi\ \acute{\omicron}\rho\alpha\tau\acute{\alpha}$, 79a4). Because the forms are not perceptible through any of the sense modalities, they are *a fortiori* not visible. How does Plato support his claim that the forms are non-sensible, graspable only by the intellect?

Part of the answer comes from the much disputed equal sticks and stones argument in the *Phaedo* (74a9-c3). This particular argument has been discussed in detail elsewhere⁵¹ and so we can proceed with the following brief sketch. In

⁵¹ See, for example, Bostock 1986, 72-85; Fine 2003 [1984], 281-284; Gallop 1975, 121-125; Rist 1964; Ackrill 1958, 106-108; Mills 1958, 40-58 and Mills 1957, 128-147. Although the details of this argument are much disputed, it is generally agreed that Plato at least wants to show that the sensible

the argument Plato shows that the sensible Fs must be different from the form of F since the sensibles have a property that the forms lack. He argues using a particular form, the equal itself, as a representative example. Equal sticks and stones, while remaining the same,⁵² sometimes appear equal to one and unequal to another (74b7-10). The equals themselves (i.e., the form) never appeared unequal to you, nor did equality ever appear to be inequality (74c1-3). Therefore, the sensible equals—the equal sticks and stones—and the equal itself are not the same (74c4-5).

Although some have thought that Plato uses this argument to show that the forms are separate from sensible particulars,⁵³ for present purposes, I'll only assume that Plato means to establish the weaker claim that the forms are *different* than the sensibles. If the forms are different than the sensibles, we can reasonably conclude that the forms are non-sensible.

There are also passages outside the *Phaedo* which establish the same conclusion. In *Republic* 7.523a5-525a5, Plato argues that the sensibles and the forms are different since the sensibles suffer the compresence of opposites, but the forms do not. In this passage Plato distinguishes the sense perceptions which “summon the understanding” from those that don't. Sometimes sense perception can adequately discriminate some object, other times it cannot. Sense perception's inability to adequately discriminate its objects is to be found in cases where the senses report that the very same thing is both F and not-F.

particulars and the forms are different.

⁵² Alternatively, “the very same ones.”

⁵³ See Fine 2003 [1984] for arguments against this view.

Suppose you're looking at three of your fingers, Socrates explains. Our senses accurately report that there are three fingers. This is the case whether they're held up close or far away, whether they are dark or pale. The senses are accurate insofar as they report that there is a finger without simultaneously reporting that there is the opposite of a finger (523d5-6). These sorts of reports from the senses don't provoke the intellect.

What *does* provoke the intellect are cases where the senses do report that the same thing is both F and not-F. This happens when the senses report about the size of the fingers, or whether they are thick or thin, hard or soft, heavy or light. In each of these cases the senses report to the soul that the same thing has both attributes in each pair. The fact that the same thing is reported to be both big and small provokes the soul to investigate what the big and small are. Our senses cannot adequately discriminate between the two. Sight shows the big and small “not as separate, but as mixed up together” (524c3-4). Plato does not make clear the psychological mechanism by which this puzzle provokes the soul to thought. Still, from cases like this the question naturally arises about what the big and small are. But in order to understand what each of these are, we need to think about them, not in the way that the senses report, but as each is in itself: “understanding was compelled to see the big and the small, not as mixed up together (συγχεχυμένον), but as separate—the opposite way sight <presented them>” (524c6-8). In order to comprehend the big in such a way that it is not also mixed up with the small, it must be thought of in abstraction from its sensible instances. This requires the intellect. For this reason the big—

itself by itself (524d10)—is an object of the intellect while the various sensible big things are objects of sense.

The form of F is something graspable only by the intellect; the various Fs are objects graspable by sense. With this in hand, we can return to the Affinity Argument. Having established the distinction between the non-sensible forms and their sensible instances, Socrates and his interlocutor posit two kinds of beings (ὄντα): the visible and the invisible (*Phaedo* 79a6-7). This marks a shift from the more general imperceptibility of the forms to the more specific invisibility. Something imperceptible is not visible; but something invisible might still be perceptible by one of the other sense modalities. It is not clear, however, whether this is a hard and fast distinction or whether it is simply synecdoche. I return to this issue below.

1.4.2 Begging the Question

Having divided the things that are into the visible and the invisible, the argument takes a crucial turn. Plato takes the results reached so far and applies those lessons to the soul and body. He asks whether the body is visible or invisible, and he elicits the intended response—it is obviously visible (79b4-6). One would expect that the natural next step would be to conclude that the soul is obviously invisible. They do agree that the soul is invisible, but with the following proviso: the soul is invisible *to human beings* (79b8; 79b11). Plato twice claims that the soul is not visible to human eyes.⁵⁴ This emphasis suggests that

⁵⁴ The repetition is noteworthy in light of Vlastos' 1991, 69 dictum: Plato is "a fastidious writer who never repeats himself without good reason."

the soul is, in certain circumstances or by certain observers, visible. Here the invisibility of the soul is not synecdoche for the soul's imperceptibility.⁵⁵ The soul is not unqualifiedly invisible. Still the admission that the soul is invisible, even if only through human eyes, is seen by some commentators as begging the question against the materialist. Lloyd Gerson puts the point well: "It seems fairly obvious that one may deny either that the soul is an invisible entity or that it is an invisible entity in the way a Form is."⁵⁶ Hackforth's intuitions cut the other way: "it has just been agreed, and is indeed an obvious fact, that the soul is invisible."⁵⁷ So does the claim that the soul is invisible beg the question or is it an obvious fact?

The suggestion that the soul is invisible does not, in itself, beg the question against someone arguing that the soul is material. It is possible for the same thing to be both material and invisible. First, the material object could be invisible because no observers are looking at it. Such an object is capable of being seen, but is not actually being seen and so is not visible. Second, the material object could be invisible because it is too small to be visible or because it doesn't reflect light. What comes to mind here are certain fundamental stuff in physics—quarks and dark matter, for example. Quarks are too small to be seen directly; dark matter can't be seen directly because it doesn't reflect or emit

⁵⁵ Below I consider additional evidence which demonstrates that souls that haven't practiced philosophy or haven't practiced it in the right ways are visible to human eyes.

⁵⁶ Gerson 2003, 80.

⁵⁷ Hackforth 1955, 84-85.

light. So one could be a materialist about the soul and accept the view that it is invisible to human eyes.

Gerson is right, however, that it would be question begging to assume that the soul is an invisible entity in the way a form is; but it is not clear that Plato is assuming that much. Forms are invisible insofar as they are imperceptible; they are not properties that we can grasp through the senses. To assume that the soul is invisible in the way a form is would stop the argument in its tracks. If the soul were invisible in the way forms are, Socrates would have to be assuming that souls are not accessible to the senses. On this view souls must be objects of the intellect, not sense (or else not knowable at all).

Plato cannot be assuming that the soul is invisible in the way the forms are for by doing so, he would be contradicting a number of claims he explicitly makes about the soul. One pointed example is his claim that not only is it possible that souls might be visible to certain observers, there are cases where souls have actually been seen by human eyes. Souls which are corrupted and impure by their association with the body—i.e., those souls which haven't practiced philosophy or have not practiced it in the right way—become shot-through with material parts. He explains:

this bodily element is ponderous, heavy, earthly and visible; this sort of soul is weighed down and dragged back to the visible world in fear of the unseen and of Hades; and it roams among tombs and graves, as we are told, around which some shadowy phantoms, the images that such souls produce, have actually been seen. These souls have not been freed in a pure condition, but share in the visible and are therefore seen. (81c8-d4)

Plato is quite willing to admit that the soul is not only visible to non-human observers, but that souls which haven't be purified from their corporeal attach-

ments have actually been seen by people. Plato initially describes the “shadowy phantoms” that are seen as images that these impure souls produce, but later in the passage he describes the souls themselves as having a share in the visible and as a result are things capable of being seen. If Plato were assuming that souls were invisible in the way that forms are, he could not also claim that souls can and actually are seen by human eyes. I’ll say a bit more about this puzzle case in §1.6, but for now suffice it to say that it shows that souls, unlike forms, are sometimes accessible to the senses.

The conditions in which the soul can become visible are quite unnatural. Plato explains that the habitual association with the body can attach corporeal parts to it: “every pleasure and every pain, as if with a nail, nails the soul to the body and fastens them together making it bodily” (83d4-6). In this case the soul is not just *imprisoned* by the body but actually becomes bodily. These visible souls are in an utterly unnatural state, riveted to and shot-through with corporeal parts, polluted and impure. But when the soul is *itself by itself* it is free from such corporeal elements.

1.4.3 A Curious Step Back

Having established that the soul is invisible (at least naturally invisible, 79b13-15), Socrates concludes that the soul is more like (*ὁμοιότερον*) the invisible and the body more like the visible (79b16-17). “If it *is* invisible,” Hackforth asks, “what sense is there in saying that it is more like what is invisible than the body is?”⁵⁸ It is certainly valid to infer from the premise that x is F to the con-

⁵⁸ Hackforth 1955, 85. This curious step back has also struck other

clusion that x is more like F than some y which is not- F .⁵⁹ But why do it? Several answers have been proposed, none of which is entirely satisfactory. Commentators have argued that Socrates infers a weaker conclusion from a stronger one:

- (1) To postpone the eventual conclusion that the soul is more like the forms.
- (2) To highlight the fact that the soul is invisible, but not obviously immaterial.
- (3) To draw our attention to the fact that the argument is based on analogies and not a rigorous deduction.
- (4) As part of an object lesson in how not to do good philosophy.⁶⁰

(1) and (2) come closest to what I think Plato must have in mind when he seems to take this curious step back.

The last two responses downplay the importance of the Affinity Argument, claiming either that it is a weak argument (3), or that its value comes from its use as a negative example of how *not* to argue for a point (4). I don't think the argument is meant to be logically defective, but persuasive.⁶¹ I think the conclusion that the argument is weak or a negative example is incongruous both with

commentators as something in need of explanation. See also Rowe 1993, 185; Bostock 1986, 118 and Dorter 1976, 298.

⁵⁹ Hackforth 1955, 85 complains that this move is illogical. Although the move is strange and needs a bit of further explanation, there seems to be nothing illogical about it. The inference is perfectly valid.

⁶⁰ (1) is favored by Hackforth 1955, 85; (2) is favored by Bostock 1986, 118; (3) is expressed by Dorter 1976, 298; (4) is part of an argument offered by Elton 1997.

⁶¹ As Dorter 1976 does.

its placement within the *Phaedo* and with the lengths Plato goes to bring up and refute complex counter-examples to it.

First, the argument is placed at the center of the dialogue. It is preceded by the Cyclical and Recollection Arguments, which Socrates claims prove the immortality of the soul when they are taken together (77c6-d4). It is followed by the Final Argument (102a10-107b10) which proves the immortality of the soul on its own. Plato places the Affinity Argument in the center of the arguments which structure the dialogue. At the very least it would be odd to place an argument he consciously thought of as weak in such a place of prominence. Second, the Affinity Argument and the discussion of the counter-examples to it take up over a third of the whole dialogue (72e3-95a3). More time is taken up in discussing the Affinity Argument and the objections and replies to it than any other line of argument. I think there is little doubt that Plato took the argument seriously enough to spend most of the *Phaedo* making a case for it.

Furthermore, if the Affinity Argument wasn't meant to be good philosophy, Socrates would literally be putting the fate of his soul at risk. The consequences of not doing philosophy in the right way are quite dire indeed. A soul which hasn't practiced philosophy in the right way is not completely free from the prison of the body. Such a soul won't be able to "join the company of the gods" (82b) and what may be worse for a lover of wisdom, won't achieve the pure knowledge which comes from having unmediated contact with the forms (66d-e). Were the Affinity Argument intended as an object lesson in bad philosophy, Socrates would be doing so by putting his own soul up as collateral. Since practicing bad philosophy could lead to an eternal attachment to the physical world,

it would be too great a risk for Socrates to spend his final hours in just such a pursuit. It seems best, therefore, to assume that the argument is intended to be serious.

Responses (1) and (2) differ from (3) and (4) by presuming Plato is equivocating. That is, the first two responses assume that Plato means something different by ‘invisible’ when he concludes that the soul is invisible than what he means when he concludes that the soul is more like the invisible. For easier reference, let’s label these two claims:

- (a) The soul is invisible.
- (b) The soul is more like the invisible.

One restriction on the possible interpretations of these claims, as we’ve seen, is that the soul *is* visible to human beings in some circumstances. Taking this into account, we ought to take ‘invisible’ in (a) to mean ‘in its natural, ideal and purified state, it is not seen by human beings.’

Since Plato’s goal is to show that the soul is indestructible by proving its affinity to the forms, we ought to read the ‘invisible’ in (b) to mean ‘in principle inaccessible to the senses.’ In the previous section we’ve seen that the forms are objects of the intellect, not sense. They are not capable of being seen or otherwise sensed in any circumstances. Reading (b) in this way has Plato drawing the following conclusion: the soul is more like something inaccessible to the senses (i.e., the forms) than the body. This is because the soul, in its natural state, is invisible to human beings in contrast to the body, which is always capable of being seen. This has Plato making all the right connections. He connects the sort of invisibility which the soul can enjoy with the forms’ imperceptibility.

Thus the conclusion that the soul is more like the invisible drawn from the premise that the soul is invisible is not a step back, when we take into account what ‘invisible’ means in each case.

1.5 The Soul is Divine

The next stage of the Affinity Argument is seen by many commentators as subsidiary to what has preceded.⁶² Rather than continuing to compare the soul with the non-sensible forms, Plato switches to a different comparison—that between the soul and the divine. In this stage (79e8-80a9), Plato argues that the soul is like the divine and the body is like the mortal. The soul resembles the divine in two ways. First it is the nature of divine things to rule and lead (ἄρχειν τε καὶ ἡγεμονεύειν) and the soul rules and leads the body. Second he seems to imply that divine things are immortal. Both views are problematic. In what follows, I explain what is problematic about each view. In the first case, the soul doesn’t always lead and rule the body. In the second case, ‘divine’ and ‘immortal’ cannot be synonymous or else the *harmonia* objection to the Affinity Argument would be incoherent. I then argue that these problems are merely apparent. The claim that the soul naturally rules and leads the body is normative and doesn’t imply natural necessity. The apparent implication that divine things are immortal falls away when we see that the divinity of the soul consists in its ability to oppose the desires of the body.

⁶² Commentators who view this argument as an addendum or secondary include Gerson 2003, 86.

1.5.1 The Soul Isn't (Necessarily) Divine

Socrates' claims suggest that the divinity of the soul consists in two facts about the soul: (1) the soul naturally rules and leads the body; and (2) the soul is immortal. The first is clear enough and is captured in Socrates' rhetorical question: "Doesn't the divine seem to you to rule and lead naturally, but the mortal to be ruled and to be subject?" (80a3-5). Divine things naturally rule (*ἄρχειν*) and lead (*ἡγεμονεύειν*). The second feature of the soul's divinity is its immortality. Socrates establishes this by implication. This rhetorical question contrasts the divine with the mortal (*τὸ θνητὸν*, 80a5), which suggests that what is divine is also immortal. There are difficulties in attributing both of these features to the soul, however.

First consider the feature of the soul's divinity according to which it rules and leads the body. To this point in the *Phaedo* very little mention has been made suggesting that the soul rules or how it rules the body. In fact, just the opposite is the case. In Socrates' Defense (63e8-69e5) Plato warns that the body can influence the soul and these influences are best (or perhaps only) countered by doing philosophy in the right way. The body "fills us with wants and desires, fears and all sorts of illusions" (66c2-3). The body also causes wars by influencing the soul:

For all wars are due to the desire to acquire wealth, and it is the body and the care of it, to which we are enslaved (*δουλεύοντες*), which compel (*ἀναγκάζομεθα*) us to acquire wealth, and this makes us too busy to practice philosophy. (66c8-d3)

Here Socrates worries not only that the soul can influence the body, but also that in certain cases the influence of the body is one of compulsion and enslavement. This is clearly not a case where a divine soul rules and leads a subjugated body. The soul is also subject to the body in other ways. After the Affinity Argument, Socrates describes the state of the soul before philosophy's influence as "absolutely bound fast and clinging to the body" (82e1-2). The soul is "compelled (*ἀναγκασζομένην*) to examine things through the body as through a prison" (82e3). The soul cannot escape the influence of the body; the body is the prison in which the soul is held. In each of these cases it is the body which rules, leads and compels the soul in various ways, and not the other way around.

The second feature of the soul's divinity appears to be its immortality. Hackforth claims this is a straightforward move: "the unseen is now called 'divine,' which to a Greek is no more than calling it 'immortal,' as Socrates has already done (79d2)."⁶³ Hackforth sees little problem in Socrates' move from claiming that the soul is unseen to claiming that it is divine to claiming that it is immortal. However, this seems too quick and question-begging. As we shall see in chapter 3, Simmias exploits the difference between divinity and immortality in his counterexample to the Affinity Argument. The *harmonia* of a lyre is divine and invisible, but is destroyed along with the lyre—it is not immortal:

One might make the same argument about a *harmonia*, lyre and strings, that the tuning—something invisible, incorporeal, beautiful and *divine*—is in the tuned lyre, while the lyre itself and its

⁶³ Hackforth 1955, 85. But to be precise, the passage cited here (79d2) only claims that the soul passes into the realm of the immortal and is akin to it. See also Rowe 1993, 187.

strings are bodies, corporeal, composite, earthly and akin to what is mortal. (85e3-86a3, emphasis added)

For Simmias (who is a Greek after all), there is a difference between calling something ‘immortal’ and calling it ‘divine.’ It is precisely this seam at which the *harmonia* theory is targeted.

1.5.2 The Soul is Divine

So if the soul doesn’t always rule and lead the body and if divinity doesn’t necessarily imply immortality, in what sense is the soul divine? We can get around these difficulties by doing two things. First we can allow that the soul’s divinity consists in its natural ability to rule and lead the body, but the view needs to be qualified. To qualify it, we need to account for the obvious fact that Plato does think the body can influence, direct and sometimes compel the soul in various ways. Although nature ordains that the soul rule and direct the body, this is not a matter of natural necessity. The soul doesn’t always succeed nor does it always even attempt to rule the body, as Bostock rightly notes.⁶⁴ The soul can be, and often is, subject to bodily desires.

If the soul is supposed to rule and lead the body naturally, this cannot mean that the soul necessarily rules and leads the body. But if we take ‘by nature’ as expressing a normative claim, the view is clearer and avoids apparent inconsistency. Understanding ‘naturally’ in this way, what it is natural for something to do is what that thing should do or ought to do. The soul ought to rule and lead the body, though it might occasionally (or often) succumb to bodily desires.

⁶⁴ Bostock 1986, 119.

This use of ‘nature’ as a normative term is not unknown to Plato. When he defines ‘self-control’ in the *Republic*, he explains that when the better part of the soul controls the worse part, the person is self-controlled. One attains self-control “whenever the naturally better part is in control of the worse” (*Republic* 4.431a5-6). Of course not everyone is self-controlled. The ‘self-defeated’ person is one whose soul is disordered—the worse part of the soul is in control of the naturally better part. He’s not suggesting that the naturally better part always (or for the most part) rules the worse; ‘naturally’ expresses a normative standard. The better part of the soul ought to rule, though it doesn’t always.

Secondly, we need to show that despite appearances Plato does not take divinity and immortality to be coextensive. The connection between the two, as we’ve shown, seems to be implied when he contrasts the divine and the mortal (80a3; 5). There is better evidence that neither Socrates nor his interlocutors understood ‘divine’ to be coextensive with ‘immortal.’⁶⁵ Simmias’ presentation of the *harmonia* theory exploits the difference between the divine and the immortal. The tuning of a lyre is divine, but not immortal. Were the terms taken

⁶⁵ I agree with Apolloni 1996 that Plato cannot assume that ‘divinity’ and ‘immortality’ are synonyms, but I disagree with his reasons. He suggests that *Phaedo* 95c4-7 would make no sense were we to take the two as synonymous. The passage runs thus: “Showing that the soul is strong, θεοειδές and exiting before birth, you say that nothing prevents this from indicating that the soul is only long-lasting, not immortal.” If ‘θεοειδές’ means the same thing as ‘θείον’ in 80a3 and ‘θεῖον’ 80a5, then Apolloni would be right and Cebes’ objection wouldn’t make sense. His summary would amount to claiming that proving the soul is immortal only shows that it is long-lasting. But if ‘θεοειδές’ simply means ‘godlike,’ it is much less clear that the passage Apolloni cites is relevant—something godlike needn’t be divine. At the very least, Apolloni would need an argument to show that something godlike is divine.

to be coextensive, the *harmonia* objection wouldn't make sense. To admit that the tuning is divine would be to admit that it is immortal—something neither Simmias nor Socrates would accept.

Plato reveals what he means by 'divine' when arguing against the *harmonia* theory. He offers three arguments against the view that the soul is a *harmonia* (91e2-95a2).⁶⁶ The third argument—the Opposition Argument (94b3-95a2)—turns on the view that the soul is more divine than a *harmonia*. A *harmonia* follows the affections of the body and could never oppose them. The soul, or at least a wise soul, can oppose the affections of the body: “When the body is thirsty and the soul draws one to the opposite, to not drinking; when the body is hungry, and we see a thousand other examples of the soul opposing the affections of the body” (94b8-c1).⁶⁷ The soul, Plato explains, is much more divine (πολὺ θεϊοτέρου, 94e5) than the body insofar as it rules and masters the body's desires. The soul rules and masters the body's desires by opposing them in certain circumstances. So the divinity of the soul consists in its ability to oppose the desires of the body, not in its immortality.

1.6 Two Conclusions and Two Puzzle Cases

Having argued that in certain circumstances or in certain conditions the soul is simple, unchanging, invisible and divine, Socrates has established one conclusion of the Affinity Argument—the soul bears an affinity to the forms. But demon-

⁶⁶ I offer a detailed account of these arguments in chapter 3.

⁶⁷ See *Republic* 4.439a9-e1 where Plato exploits a similar phenomenon to divide the rational from the non-rational parts of the soul.

strating that the soul has an affinity to the forms is only a means to an end. The end Socrates is after is to calm the fears of his two friends, Simmias and Cebes. Recall from §1.1 that it was their childish fear that the soul would dissipate like breath or smoke which was the impetus for the Affinity Argument in the first place. Here Socrates makes good on his promise.

In the first conclusion, he summarizes the similarities between the soul and the forms. The soul is very much like “the divine, immortal, intelligible, uniform, non-soluble and always the same as itself” (τῷ μὲν θείῳ καὶ ἀθάνατῳ καὶ νοητῷ καὶ μονοειδεῖ καὶ ἀδιαλύτῳ καὶ ἀεὶ ὡσαύτως κατὰ ταῦτὰ ἔχοντι ἑαυτῷ, 80b1-3). The body is very much like “the human, mortal, multi-form, unintelligible, soluble and always changing” (τῷ δὲ ἀνθρωπίνῳ καὶ θνητῷ καὶ ἀνοήτῳ καὶ πολυειδεῖ καὶ δαλυτῷ καὶ μηδέποτε κατὰ ταῦτα ἔχοντι ἑαυτῷ, 80b3-5). But establishing an affinity between the soul and the forms is not his final aim. From the outset of the argument, it was Socrates’ professed aim to show that the soul is not subject to destruction through the dissolution of its parts. Though the soul is very much like the forms, it is not entirely so. One dissimilarity is particularly worrisome: the soul is “completely non-soluble, or something close to that” (παράπαν ἀδιαλύτῳ εἶναι ἢ ἐγγύς τι τούτου, 80b10-11). He concludes, disappointingly for Simmias and Cebes, that the soul is very much like (ὁμοιότατον) the forms.

Socrates brings up two puzzle cases—embalmed bodies and ghosts—to explain why the soul is only close to being completely non-soluble. I argue that the soul is only close to being completely non-soluble because it is only the souls of those who have practiced philosophy in the right way that have no material

parts or material accretions which might render them soluble.⁶⁸ For that reason, Simmias and Cebes ought to be assured that Socrates' soul couldn't be subject to destruction through the dissolution of its parts as they had feared it might.

1.6.1 Two Puzzle Cases

With the affinity of the soul and the forms established, Socrates begins the next phase of the argument by clearing up an ambiguity about the word 'non-soluble' (*ἀδιαλύτον*). Something can be non-soluble in two ways. First, something could be non-soluble because it is incapable of being dissolved. If something is non-soluble in this way, it is not the right sort of thing to be dissolved into parts. Something simple, not composed of material parts, clearly fits the bill. If something has no material parts, it has no parts into which it could be dissolved.⁶⁹ Understood in this way, 'ἀδιαλύτον' could rightly be rendered as 'indissoluble.' Second, something could be non-soluble insofar as it is not actually dissolved. If something is non-soluble in this way, it could be dissolvable into its parts but, as it happens, it remains undissolved. Something composed of material parts might be capable of dissolving into its constituent parts, though it is not actually so

⁶⁸ Here I'm not saying that only the souls of philosophers are indissoluble, but that Simmias and Cebes ought to be convinced that the soul which has no material parts or material accretions could conceivably be subject to destruction through dissolution.

⁶⁹ Although in Shoemaker 2003 [1977] he considers the possibility of a system of Cartesian souls which would be subject to destruction through dissolution, though it is not composed of material parts. Neither Simmias nor Socrates considers such a possibility.

dissolved. Understood in this way, ‘ἀδιαλύτον’ could rightly be rendered as ‘undissolved.’

Socrates clears up this ambiguity in the course of asking what might seem a rather odd question. He asks, “Is it not natural for the body to dissolve easily, while it belongs to the soul to be completely non-soluble (παράπαν ἀδιαλύτον), or something close to that?” (80b9-11). This question is odd because Socrates first adds an intensifier, ‘completely,’ and then seems to back off from this by saying that it is something close to completely non-soluble. Why take such a circuitous route? Adding the intensifier ‘παράπαν’ has a specific purpose: it eliminates from consideration the view that the soul might be more like something undissolved, though composed of parts. When ‘παράπαν’ is joined with a negative, it typically means something like ‘not at all.’ The alpha-primitive in ‘ἀδιαλύτον’ expresses a negative, so it seems best to take the phrase ‘παράπαν ἀδιαλύτον’ to mean ‘not at all soluble’ or ‘indissoluble’—something without material parts into which it could be dissolved.

But if this is the right way to read this phrase, why would Socrates hedge his conclusion by saying that it belongs to the soul to be indissoluble “or something close to that?” This question is answered by what follows in the rest of the argument. There he presents two puzzle cases: embalmed bodies (80c2-d4) and ghosts (80d5-84a1). Embalmed bodies (or at least parts of them) seem to be immortal even though they are composed of material parts. Ghosts are souls which seem to be composed of material parts.

Since corporeal things are composed of material parts, they are the sorts of things subject to destruction through the dissolution of these parts. There are

exceptions. Sometimes things composed of material parts don't dissolve. Socrates explains that "the very thing we call a corpse is something to which being dissolved, being crumbled into pieces and being scattered to the wind belongs" (*διαλύεσθαι καὶ διαπίπτειν καὶ διαπνεῖσθαι*, 80c4-5). Although these predicates are properly attributed to bodies, a body can remain undissolved for a really long time. An embalmed body is, or parts of an embalmed body are, 'deathless' (*ἀθάνατον*, 80d3) in a manner of speaking. Under the right circumstances a body might remain undissolved forever. Though it is actually undissolved, it is only quasi-indissoluble. For something to be deathless it mustn't be composed of parts for which there is a possibility of being dissolved. Embalmed bodies don't pass this test. No matter how long they last, even if it is for an eternity, embalmed bodies are not naturally indissoluble.

The second puzzle case has to do with ghosts. In certain circumstances the soul can become bound up with corporeal parts. These corporeal parts either come to compose the soul or attach themselves to the soul so as to make it quasi-material. Socrates explains that although not composed of material parts initially, when the soul is separated from the body it can drag along with it corporeal elements if the soul is polluted and impure. If the soul is polluted and impure it becomes "heavy, ponderous, earthy and visible" (81c8-11). This sort of impurity occurs because of the soul's constant association with the passions of the body. Habitually giving in to those desires can actually render the soul corporeal. The soul can be made corporeal either by coming to be composed of those parts or by having those corporeal elements attach to the soul, though perhaps not as parts. With a vivid illustration, Socrates explains that the soul's

constant association with the body attaches corporeal elements to it: “every pleasure and every pain, as if with a nail, nails the soul to the body and fastens them together making it corporeal” (ποιεῖ σωματοειδῆ, 83d4-6). If one habitually succumbs to bodily desires, when the soul is separated from the body at death it is “quite full of the corporeal” (τοῦ σώματος ἀναπλέα, 83d10). In the right circumstances the soul might be composed of material parts or have material elements attached to it making the soul behave as if it were so composed. Souls that are shot-through with the corporeal become heavy, and they are visible as shadowy images (81c8-d4). But such souls are in quite an unnatural condition.

1.6.2 The Second Conclusion

With this last hurdle cleared, Socrates has the conclusion he’s after. The true philosopher needn’t worry that her soul will be bound up with these bodily accretions.⁷⁰ Instead of constant association with the body and its passions, the

⁷⁰ There is an interesting parallel here between the encounter with Glaucus described in *Republic* 10. In that passage Plato distinguished between how the soul seems to us while it is embodied and the soul “in its truest nature” or “as it is in truth” (*Republic* 10.611b1; 611b10). While the soul is embodied, its true nature is obscured to us. The soul appears to be “composite and form many things and not most finely fitted together” (611b5-7). Though Plato still maintains that the soul is tripartite while it is embodied, the true nature of the soul may be different. The true nature of the soul is obscured by corporeal accretions—Plato puts it vividly by comparing the soul with Glaucus:

But just as when we look at the sea god we do not easily see his true nature—some of the parts of his body have been broken off, other crushed and he’s been wholly mutilated by waves and by shells, seaweed and stones that have attached themselves to him, so that he looks more like a wild beast than what he is by nature—so also is the soul when we study it, beset by many evils.

true philosopher practices for death. As we've seen in §1.1, the philosophical life involves separating the soul from the body to the extent one is able. The separation he has in mind does not require metempsychosis, just reasoning and disregarding bodily perceptions and pleasures. The philosopher separates his soul by contemplating the forms. Just as constant association with the corporeal can make the soul like something corporeal, constant contemplation of the forms can reveal the true nature of the soul—simple, unchanging, invisible and divine. The nurturing that philosophical training provides allows the soul to be purified from those corporeal elements which could weigh down the soul. The soul of someone who practices philosophy in the right way will have nothing corporeal clinging to it. Since such a soul has no corporeal parts, the conclusion Socrates was after is secure: provided that one is nurtured by philosophical training one needn't worry that upon its separation from the body the soul is “blown to pieces by winds, flying off in different directions” such that “it is no longer anything anywhere” (84b4-7). The soul, therefore, is not something subject to destruction through the dissolution of its parts. The nurture that philosophy provides to assure that the soul has completely disassociated itself from any corporeal accretions and so there is no chance that such a soul might be soluble. With this, Socrates rests his case.

That, Glaucon, is why we must look elsewhere to find its true nature. (611c7-d8)

It is the role of philosophy to pull the soul out of the sea and hammer off those corporeal accretions which obscure its true nature. Once that work is done, we should be able to see what the soul really is and what sorts of parts it has.

1.7 Conclusion

Although commentators have generally been dissatisfied with the Affinity Argument, a few have tried to find something positive about it. Although Kenneth Dorter claims the argument is “set forth rather casually, is frequently weakened by qualifications and hesitancy, and is based merely on analogy...,”⁷¹ elsewhere he claims that the argument is an emotional expression of the feeling that there is something noble and eternal in us.⁷² He thinks the argument is logically defective, but persuasive—obviously not a ringing endorsement of the argument’s logical force. Likewise, Ellen Wagner suggests that Socrates uses the Affinity Argument for a positive effect—as a philosophical charm intended to rouse souls “from philosophical slumber to wakefulness in service of their enlightenment.”⁷³ The Affinity Argument, on this view, is meant to charm the childish fear of death out of Simmias and Cebes.

Although I do find the Affinity Argument an emotional and rousing call to actively engage in the philosophical life, I do not think this is so because of any logical deficiency or analogical quality of the argument. When Plato ascribes a property to the soul, it is important to take into consideration whether this is a property natural to the soul or something unnatural to it. Commentators are correct that the soul can share properties with sensible particulars, but it also can share properties with the forms. However, this doesn’t mean that the soul is

⁷¹ Dorter 1976, 295

⁷² Dorter 1982, 76.

⁷³ Wagner 200X, 14.

something chameleon-like taking on the nature of whatever it associates most with. Rather the soul is something naturally simple, unchanging, invisible and divine, but can come to be in an unnatural state by constant association with the body and by failing to practice philosophy in the right way.

In the Affinity Argument, Plato argues that the soul is naturally like the simple, unchanging, invisible and divine. When the soul is itself by itself and is allowed to do so, the soul will exemplify each of these properties. Plato's hesitancy to conclude that the soul is necessarily something simple, unchanging, invisible and divine is neither weakness nor hesitancy, but a reasonable conclusion which accurately takes into account the unnatural state of the embodied soul.

Chapter 2

The Harmonia Theory

Despite the conclusions of the Affinity Argument, divinity and immateriality don't guarantee indestructibility. The tuning of a lyre, its *harmonia*, is divine and immaterial but doesn't survive the destruction or disorder of the wood, pegs and strings. If it turns out that the soul is related to the body like the tuning of a lyre is related to its material parts, there is little hope that it is immortal. In response to the Affinity Argument, Simmias presents this as a possibility. The soul isn't subject to destruction through the dissolution of its parts, but is nevertheless ontologically dependent on something which is so subject. This, in brief, is the *harmonia* theory of the soul.

Understanding the commitments of the *harmonia* theory is the central concern of this chapter. To understand what those commitments are, however, we first need to look at how it is presented in the dialogue. When a *harmonia* makes its first appearance in the *Phaedo* it is not as a theory about the soul, but as a counterexample to the Affinity Argument. It is only after the *harmonia* of

a lyre is given as a counterexample that Simmias then offers the *harmonia* theory as his positive view about what sort of thing the soul is. This, I argue, makes a difference. The divinity and immateriality which are important properties of the *harmonia* of a lyre aren't necessary features of every kind of *harmonia* there is. I further argue that despite the apparent variety of ways to understand '*harmonia*,' the theory admits of two basic specifications—one non-materialist and one materialist. This is the central claim of this chapter. We ought to regard a *harmonia* as a kind of structure. A structure, I will suggest, can either be the abstract principle of organization a whole of parts has (an non-material or abstract structure) or it can be the organized whole itself (a material structure). In either case, a *harmonia* is ontologically dependent on some material parts. In the last section I argue that mereological supervenience—the view according to which the properties of a whole are fixed by the properties and relations of its parts—best explains the relation between a *harmonia* and the parts upon which it depends.

2.1 Simmias' Presentation

Neither Cebes nor Simmias is convinced by the Affinity Argument. Cebes worries the soul might outlast the body, but like a cloak which outlasts its weaver, it might not last forever. Simmias is not convinced even this far. He presents the *harmonia* of a musical instrument as a counterexample to the Affinity Argument. Socrates offered that argument in order to show that, because of resemblance to the forms, the soul is not subject to destruction through the dissolution of its parts. The soul, he argues, is not composed of material parts and so

is not among the class of entities that are subject to that sort of destruction. But destruction through dissolution is not the only way a thing might be destroyed. Simmias presents a counterexample—the tuning of a musical instrument—which is not composed of material parts, though it is ontologically dependent on those parts:

One might give the same argument about a *harmonia*, a lyre and its strings, saying that the *harmonia*—something invisible, incorporeal, beautiful and divine—is in the tuned lyre, while the lyre itself and the strings are bodies—corporeal, composite, earthly and akin to what is mortal. And so if someone smashed the lyre, cut or clipped the strings, suppose he maintained, by the same argument as you, that the *harmonia* must still exist and is not destroyed for there would be no way that...the *harmonia*, which is akin and has the same nature as the divine and immortal, is destroyed before the mortal. Rather he would say that the *harmonia* itself must still exist somewhere and that the wood and strings will have rotted away before it is affected. (85e3-86a7; 86a8-b5)

The conclusion of the argument is absurd. The *harmonia* of a lyre is destroyed long before the parts of the instrument are. And what's worse, the wood and strings of a lyre needn't rot nor even be damaged for the *harmonia* to be destroyed—a humid day would suffice. Despite its invisibility, incorporeality, beauty and divinity, a *harmonia* is subject to destruction.

Simmias doesn't bring this up just to show that the Affinity Argument casts it net too wide; it is precisely what he takes the soul to be. The soul, he claims, is a *harmonia* of the parts out of which the body is composed. He puts it this way:

In point of fact, Socrates, I indeed think that you have noticed that we really suppose the soul to be this sort of thing. When our body is strung taut and held together by the hot, cold, dry, wet

and things of that sort, our soul is the compound ($\kappa\rho\tilde{\alpha}\sigma\iota\nu$) and *harmonia* of these very things, whenever they are tempered well and in due proportion against one another. If the soul turns out to be a certain *harmonia*, it's clear that when our body has been slackened and strung without measure by sickness and other ills, the soul must immediately be destroyed, even if it is most divine, like the other *harmoniai* both in notes ($\phi\theta\acute{o}\gamma\gamma\omicron\iota\varsigma$) and in all the products of craftsmen. (86b5-c8)

What exactly he means by calling the soul a ‘compound’ or ‘*harmonia*’ of the parts of the body will be taken up below. For now let the following observations suffice. First, according to Simmias’ *harmonia* theory, the soul is something destructible. When the elements which constitute the body are out of balance (either by being too slack or too tight) the *harmonia* no longer exists. If the soul is a *harmonia*, the soul perishes when the parts of the body no longer have the proper relation to one another. If the soul is a *harmonia*, the soul cannot be immortal. Second, in the presentation of the *harmonia* theory as a positive view, it is never explicitly described as immaterial. In fact, it even seems that Simmias is allowing for the possibility that the soul is something composed of the parts of the body. Finally, Simmias does not restrict the term ‘*harmonia*’ to its application only in musical contexts. *Harmoniai* exist not only in musical instruments, but in everything made by craftsmen. As we shall see below, this shift in scope about what counts as a *harmonia* is important.

2.1.1 A Counterexample to the Affinity Argument

Recall the structure of the Affinity Argument. Plato argues that the soul, like the forms, is naturally simple, unchanging, invisible and divine. Since the soul is naturally like the forms in these ways, it is likely to share other features in com-

mon with them. In particular, he is concerned to show that the soul, like the forms, is indestructible. So because the soul shares certain features in common with the forms, the argument concludes that it's likely to be like the forms in its indestructibility.

Simmiias challenges this argumentative strategy in the first part of his presentation. He argues that if the Affinity Argument successfully demonstrates that the soul is immortal on account of its similarity to the forms, it winds up casting its net too wide—it proves that the *harmonia* of a lyre is also something indestructible. The argument goes like this: the *harmonia* of a lyre is something invisible, incorporeal, beautiful and divine just like the forms. If the strategy of the Affinity Argument were correct, these similarities would be enough to show that the *harmonia* is indestructible. The friend of the Affinity Argument would be forced to conclude that even if the lyre is smashed and its strings cut, the *harmonia* of the lyre is not destroyed. In short: if the Affinity Argument successfully proves the soul to be indestructible, it does the same for the *harmonia* of a lyre.

This, of course, leaves the friend of the Affinity Argument with a choice—either to accept that the *harmonia* of a lyre is indestructible or to reject the strategy of the argument leading to that conclusion. Since Simmiias and Socrates tacitly agree that the *harmonia* of a lyre is destructible, they must conclude that the strategy of the Affinity Argument must be rejected. The *harmonia* of a lyre is, therefore, a successful counterexample to the Affinity Argument. Invisibility, incorporeality and divinity are not enough to secure indestructibility.¹

¹ Cf. Scaltsas 1990, 110-115. Scaltsas presents a slightly different

2.1.2 A Positive Theory About the Soul

Simmiias does not just offer the *harmonia* of a lyre as a counterexample to the Affinity Argument, it is the sort of thing he takes the soul to be.² As it's presented here, the *harmonia* theory of the soul has four important features. First, the soul is a 'compound' ($\kappa\rho\tilde{\alpha}\sigma\iota\varsigma$) and *harmonia* of the parts of the body. Second, these parts are fitted together according to some normative standard: they must be fitted 'rightly' ($\kappa\alpha\lambda\tilde{\omega}\varsigma$) and 'in due proportion' ($\mu\epsilon\tau\rho\acute{\iota}\omega\varsigma$). Third, the soul is destructible. Fourth, it's like the *harmoniai* that exist in musical instruments, but also in everything made by craftsmen.

So what does he mean when he says the soul is a 'compound' ($\kappa\rho\tilde{\alpha}\sigma\iota\varsigma$) and '*harmonia*' of the parts of the body? It seems that the two terms are synonyms. A bit later on in his presentation, Simmiias characterizes his own view as one which takes the soul to be "a compound ($\kappa\rho\tilde{\alpha}\sigma\iota\nu$) of bodily elements and to be the first to be destroyed in the process we call death" (86d2-3). So it seems to make no substantive difference to Simmiias whether the soul is called 'a com-

interpretation. He argues that Simmiias' presentation is meant to show that the soul is destructible. I think there is little to recommend this view. Simmiias makes no explicit claims about the destructibility of the soul here, only the destructibility of the *harmonia*. Simmiias advances his positive theory about the soul below, but here his only target is the structure of the Affinity Argument.

² Simmiias does say that it is what *we* take the soul to be. There has been quite a bit of speculation about who is to be included here. Some have suggested it's just Simmiias and Cebes, others that he means other Pythagoreans like him. I'll not take a stand on this issue. For arguments in favor of the Pythagorean interpretation see Rowe 1993, 204-204. For an argument against the interpretation see Gottschalk 1971, 191-192.

pound' or 'a *harmonia*.' For that reason, I shall assume they are meant to be synonymous.

Now a *harmonia* is a compound of the material parts out of which the body is composed. These elements—earth, air, fire and water—or better, elemental forces—the hot, cold, wet and dry—were thought to have natural tendencies in opposite directions. These elemental forces form pairs of contraries: the hot with the cold and the wet with the dry. Each member of the pair tends to oppose the work of the other. For instance, the natural tendency of the hot is to dissolve disparate things while the natural tendency of the cold is to draw disparate things together.³ When these elemental forces are put in the proper balance with one another, they combine to form a dynamic whole. That combination is a *harmonia*. So just like the lyre whose strings are pulling against the wooden frame and the frame is opposing that tension, the soul is the *harmonia* of the contrary pulling elemental forces.

In order for the parts of the body to be in such a balance, it is clear why they must be fitted together 'rightly' and 'in due proportion'. Take the case of a lyre. If the wooden frame weren't pulling against the strings with adequate tension, the instrument would be out of tune. If the frame were pulling against the strings with too much force, the strings might break. The same goes for the hot, cold, wet and dry—the parts which jointly compose the body. If the hot is not

³ For an account of natural tendencies of the hot, cold, wet and dry see *Timaeus* 61d5-62b6. This is also how Aristotle understands the nature of these elemental forces. See, for example, *On Generation and Corruption* 2.2329b24-30. For an excellent account of the literal and metaphorical understanding of these elemental forces in Greek philosophy see Lloyd 1964.

adequately opposed by the cold, the parts will not have the proper balance. When these parts are out of balance, Simmias suggests the result will either be sickness or death (86c3-6).⁴

According to Simmias' *harmonia* theory, the soul is destroyed when the parts of the body are not fitted together in the right way. But under what conditions is it right to say that the elements are in the right balance with one another? If we can draw any lessons from the negative case, the parts of the body are combined rightly and with due measure when the person is alive and healthy. Not only must the parts be combined in such a balance that the whole they compose doesn't dissolve, but they must also be combined in such a way that the person is able to function in certain ways. The hot, cold, wet and dry must be combined in such a way that they constitute a healthy, living human being.

Finally, despite the fact that when we hear the word 'tuning' we tend to think of something musical, '*harmonia*' has applications beyond its use in musical contexts. In fact, the use of '*harmonia*' in musical contexts was not even

⁴ In *Philebus* 64d9-e3 Plato explains that measure and proportionality are essential for something to be compound (κρᾶσις):

Any combination (σύγκρασις) which does not have measure (μέτρον) or the nature of proportion (συμμέτρου φύσεως) in any way whatsoever necessarily destroys both its ingredients and, primarily, itself. A thing of this sort is truly no compound (οὐδὲ γὰρ κρᾶσις), but a kind of unblended disaster, a real disaster for things which acquire it.

Without the right proportion of elements, no composition results. Combinations, it seems here, are not the sorts of things that can admit of degrees. Something is either a compound of elements which have been combined with measure and proportionality or that thing fails to be a compound at all, but rather an 'unblended disaster' (ἄκρατος συμπεφορημένη).

the primary meaning of the term in antiquity.⁵ The verbal cognate ‘*harμοζειν*’ usually means ‘to fit together,’ ‘to fasten,’ or ‘to join.’ It is thus a term more at home among stonemasons and shipwrights than among either philosophers or musicians.⁶

Simmiias broadens his use of the term beyond its musical contexts. He claims he could have framed his counterexample in terms of the *harmoniai* in any of the other crafts. According to the argument he imagines, the soul would be destroyed “even if it is most divine, like the other *harmoniai* both in notes and in all the products of craftsmen.” (86c6-8). With this, Simmiias means to show that his argument can be generalized to the *harmoniai* in any of the skilled crafts. Moreover, these *harmoniai* are in the products of the craftsmen’s skill. Now the products of the craftsmen are things like paintings, embroidery, textiles, buildings or furniture—material objects whose parts have been fitted together for a particular purpose.⁷

⁵ Illevski 1993, 24.

⁶ Homer, for example, describes how Odysseus built the raft he used to sail from Calypso’s island this way: “He bored through all [the timbers] and fitted them together (ἤρμωσσε) with treenails and then with cords fastened (ἄρμώζειν) his raft together” (*Odyssey* 5.274-248). In masonry work, the mason is said to fit the stones together (ἄρμώζειν) to make a wall.

⁷ I take this list of crafts from *Republic* 3.400d11-401a8. Plato writes that grace, harmony, rhythm and simplicity can be found in the soul as well as in the produces of the craftsmen: “Now surely painting is full of these qualities, as are all the crafts similar to it; weaving is full of them, and so are embroidery, architecture, and the crafts that produce all the furnishings.”

2.1.3 Conclusion

The *harmonia* theory is more than just a counterexample to the Affinity Argument, it is what Simmias (and presumably others) take the soul to be. But there seems to be a shift in the sort of thing a *harmonia* is when it's offered as a counterexample and when it's given as Simmias' positive theory about the soul. When given as a counterexample, a *harmonia* is described as something incorporeal and divine; when given as an account of the soul, a *harmonia* is described as a compound of material parts. Whether and how these two views fit together is the central concern of the following sections.

2.2 Four Ways to Understand 'Harmonia'

A number of recent scholars have offered just as many different interpretations of Simmias' thesis that the soul is a *harmonia*.⁸ The most comprehensive treatment remains C.C.W. Taylor's paper "The Arguments in the *Phaedo* Concerning the Thesis that the Soul is a *Harmonia*."⁹ In this influential paper, Taylor distinguishes no less than four possible ways of understanding the word '*harmonia*.'¹⁰ Corresponding to these four ways of understanding '*harmonia*' there are four live options he sees as possible interpretations of the *harmonia* theory of the soul. They are the following:

⁸ See, for example, Wagner 2001, 73; Langton 2000, 13; Rowe 1993, 205; Scaltsas 1990, 109-114; Bostock 1986, 122; Taylor 1983, 217-8; Gallop 1975, 148; Hackforth 1972, 97-8 n.1; and Gottschalk 1971, 181-3 and 194-5.

⁹ Taylor 1983, 217-231.

¹⁰ Taylor 1983, 217-231.

- (1) The soul is identical with the *ratio* or *formula* according to which the elements are combined to form the living man.
- (2) The soul is identical with the *mixture* or *combination* of those elements according to that formula.
- (3) The soul is *some entity produced by the combination* of those elements according to that formula, but distinct alike from them and from the formula itself.
- (4) The soul is identical with a *state* of the bodily elements, viz., the state of being combined according to that formula.¹¹

A bit of clarification is necessary. First, option (2) admits of two different readings, as Taylor recognizes.¹² On the one hand, it could mean that the soul is identical to the whole composed of elements which have been mixed or combined. On the other hand, it could mean that the soul is identical to the state of the elements as mixed or combined. The first reading expresses a materialist thesis about the soul—it is just a whole composed of material parts. The second reading collapses into option (4).

Second, Taylor seems to give two ways of understanding option (3). In some places he specifies this alternative saying that the soul is a distinct entity produced by the body just as the music produced by the instrument is a distinct entity from the instrument itself.¹³ In other places he downplays the idea that the elements produce the soul, glossing option (3) as offering a view according to which the soul is “some entity dependent on the possession of that ratio.”¹⁴ But

¹¹ Taylor 1983, 218. My emphasis.

¹² Taylor 1983, 220 and 221.

¹³ Taylor 1983, 220.

¹⁴ Taylor 1983, 222.

the claim that the soul is an entity dependent on the bodily elements when combined in a certain ratio is rather different from the view that the soul is produced by them. Causal consequence is just one among many dependence relations which might obtain between two things or families of things. The soul might be a distinct entity which depends on the combination of the elements without being caused by the combination. The strong reading of (3) holds that the soul is produced by the bodily elements, while a weaker reading holds that the soul depends (in some unspecified way) on the bodily elements. Taylor says things which suggest he endorses the strong reading in addition to the weak one, as we shall see below.¹⁵

I say that Taylor outlines four ‘live’ options because he emphatically dismisses one common Platonic use of ‘*harmonia*’: *harmonia*, the melodic counterpart to rhythm, is a musical mode or scale. In the *Laws* Plato defines rhythm and *harmonia* as follows: “order in movement is called ‘rhythm,’ and order in the vocal sounds—the combination of high and low notes—is called ‘*harmonia*’” (665a2-3). A musical *harmonia* is here described as a pattern of notes and intervals between notes from which one might compose a melody. The parts which compose musical modes or scales are not the material parts which produce the notes, but the abstract musical entities themselves.

¹⁵ It is clear that he endorses the weak reading. One of his conclusions, found on pg. 222 is that Plato failed to distinguish the following ways of cashing out the *harmonia* theory: (i) The soul is a certain ratio; (ii) The soul is the state of body being in a certain ratio; (iii) The soul depends on the body being in a certain ratio.

This, Taylor underscores, is “emphatically not the view of musical *harmonia* that Simmias uses to illustrate his thesis.”¹⁶ He argues that Simmias is trying to establish the following parallel: the soul, like a *harmonia*, is an immaterial entity causally dependent on some material parts. The parts upon which the soul so depends are the hot, cold, wet and dry. The elements upon which *harmoniai* depends are things like wood, strings and pegs. The essential point of Simmias’ *harmonia* theory of the soul, Taylor insists, “is the contrast of the incorporeal product with the physical cause.”¹⁷ In other words, one of the relata is immaterial and the other is material and the two are related such that the former is a causal consequence of the latter.

Harmonia, understood as a mode or scale, cannot therefore be what Simmias has in mind. Taylor thinks this is so because the view so conceived doesn’t have one material and one immaterial relatum. Both the notes which compose the mode and the mode itself, it is agreed, are immaterial entities. Nor do musical modes exhibit the right sort of relation to the notes from which it is composed. The Dorian mode, to take one example, is not caused by the notes from which it is composed, though it certainly does depend on them.

For an exactly similar reason, Taylor eliminates option (2) as the correct interpretation of Simmias’ *harmonia* theory of the soul. After disambiguating (2) we concluded that it is a materialist thesis (if it weren’t, it would not be an alternative distinct from option (4)). The soul, on this view, just is the whole composed of material parts which have been mixed or combined. Taylor’s argu-

¹⁶ Taylor 1983, 219.

¹⁷ Taylor 1983, 219. Note that here it looks he’s offering the strong reading of option (3).

ment against this reading runs as follows. The *harmonia* theory of the soul must establish a relation of causal dependence between an immaterial entity and a material object. It would be absurd to establish this relation and distinguish the two relata in this way if the soul just were the whole composed of material parts. So the soul cannot be the whole composed of material parts which have been mixed or combined. According to option (2) both of the relata are material. Therefore, Taylor concludes, option (2) cannot be the correct reading of the *harmonia* theory of the soul.

He finds the evidence for this interpretation in Simmias' initial presentation of the theory. There Simmias suggests that a *harmonia* is something "invisible, incorporeal, beautiful and divine" while the lyre and strings in which it is found are "corporeal, composite, earthly and akin to what is mortal" (85e5-86a3). If this were all Simmias and Socrates had to say on the matter, Taylor's insistence on one material and one immaterial relatum might be the straightforward reading. There is evidence, however, which suggests a more complex view of the nature of a *harmonia*. I shall investigate this evidence in the following section. But suffice it to say for now that when Simmias initially introduces the *harmonia* of a lyre, he does so as a counterexample to the Affinity Argument. He argues that the tuning of a lyre would have to be indestructible if the Affinity Argument successfully proves that the soul is immortal. Simmias' initial presentation is not a theory about souls.

Having eliminated option (2), Taylor goes on to argue that Plato did not clearly distinguish the remaining three possibilities: the soul as a ratio according to which the elements are combined, a distinct entity produced by the combina-

tion of elements, or a state of those elements. A brief recap of his arguments will show why he thinks so. His general strategy is to line up evidence pro and con for the remaining three options. Because there is no good reason to prefer one piece of evidence over any other, we can conclude that Plato did not distinguish the three options. Taylor's argument runs as follows.

Simmiias describes a *harmonia* as something "beautiful and divine" (85e5-86a1). The music produced by an instrument is something which one might reasonably call beautiful and divine, so maybe option (3) is correct. But Simmiias is a Pythagorean and Pythagoreans were (in)famous for their reverence for numbers, so maybe option (1) is correct. Simmiias, however, claims that the *harmonia* theory of the soul "appeals to most people" (92d2). The view that the soul is a mathematical ratio, Taylor protests, is too obscure a theory to appeal to the majority. The commonsense view he offers is that the soul is immaterial, though dependent on a certain state of the body, such that when that bodily state is sufficiently disrupted, the soul is destroyed. At 86c6-7, however, Simmiias generalizes the *harmonia* theory to include not only the *harmoniai* found in music but also those found "in all the products of craftsmen." In crafts like sculpture, carpentry or painting, the immaterial product of the material parts could only be found in the relation or proportion of the material parts of the statue, chair, or painting. It would be absurd to suggest, Taylor argues, that for each chair there is a corresponding immaterial entity related to the parts of that chair as music is related to the instrument or the soul to the body. This suggests that options (1) and (4), not (3), should be favored. Because the

evidence is unsettled, Taylor concludes that Plato failed to distinguish (1), (3), and (4).

2.2.1 Harmonia as Material Composite

Taylor is too quick to dismiss the materialist interpretation of option (2), however. There is evidence to support the view that the soul, according to the *harmonia* theory, is a whole composed of material parts. As we've seen above, there is evidence that as his positive theory of the soul Simmias identifies the *harmonia* as a 'compound' ($\kappa\rho\tilde{\alpha}\sigma\iota\zeta$). This identification, together with the claim that the parts of which it is a compound are material parts, yields the view that the soul is a material composite.

Twice Simmias indicates that his view about the soul could just as well be called the compositional theory of the soul. First, at 86b9-10 Simmias offers the *harmonia* theory of the soul as his own positive conception of how the soul and the material elements are related. The soul, he claims, is a compound and *harmonia* of the elements which compose the body, i.e., the hot, cold, wet, dry, and things of that sort. Later on in this presentation of his view, Simmias asks Socrates to reply to those who, like himself, take the soul to be "a compound ($\kappa\rho\tilde{\alpha}\sigma\iota\nu$) of material elements" and the first thing to be destroyed at death (86d2-3). So Simmias takes 'compound' and '*harmonia*' to be equivalent.

But what does '*krasis*' mean in this circumstance? According to one standard definition a *krasis* is a blending of things which form a compound.¹⁸ It is neutral, however, about the sort of elements out of which one might form a

¹⁸ See LSJ ' $\kappa\rho\tilde{\alpha}\sigma\iota\zeta$ ' (1).

compound. Water and wine or the vowels of two consecutive syllables are equally good candidates for being the elements which could compose a blending. Important to note is that the *krasis* and the elements out of which it is composed are of the same type. A *krasis* of vowel sounds is itself a vowel sound, for example. Here, a *krasis* is not a ratio or formula according to which the parts are combined. Nor is a *krasis* a state of those elements. Rather it is a whole or composite of the same type as its parts.

One might reasonably think that something similar is going on in the case of the soul. If the soul, as Simmias suggests, is a *krasis* of material elements and a *krasis* is a whole or composite of the same type as its parts, then the soul would be a material composite. This connection is made explicitly in the passages where Socrates identifies *harmonia* with *synthesis*.

Much like ‘synthesis’ in English, ‘*synthesis*’ in Greek has a number of concrete and technical meanings. In its concrete usage the term typically picks out composite entities which have been put together to form a whole. ‘*Synthesis*’ is also a technical term of Greek poetry picking out the composition of syllables and words. The term can be used in mathematics to mean addition, and in logic to indicate the union of two terms in a proposition. A *synthesis* is, in a word, a composite. But simply to call something a ‘*synthesis*’ is not to indicate whether the parts from which it is composed are material or not. Let us now turn to the evidence.

Twice Socrates identifies *harmonia* with *synthesis* and both occurrences fall within his presentation of arguments against the *harmonia* theory of the soul.¹⁹

¹⁹ In the next chapter I deal with these arguments in detail.

First, Socrates identifies *harmonia* with *synthesis* while setting out the metaphysical principles (92e4-93a9) upon which the Opposition Argument²⁰ (94b3-95a2) depends. He asks Simmias: “Does it seem natural for a *harmonia* or any other composite (ἢ ἄλλη τι συνθέσει) to be in a different state from the elements of which it is composed (συγκέηται)?” (92e4-93a1). Just because a *harmonia* is a *synthesis* needn’t imply that it is a *synthesis* of material parts. Poems may be composed of stanzas, minutes may be composed of seconds, arguments may be composed of premises. It is not clear that stanzas, seconds, or premises are material parts and so to say that something is a composite needn’t imply that it is a material composite.

Socrates clarifies the issue with his second identification of *harmonia* with *synthesis*. Within the Priority Argument (91e2-92e3), he recapitulates Simmias’ position asking if he still believes that:

...a *harmonia* is a composite thing (σύνθετον πρᾶγμα), and that the soul is composed (συγκεῖσθαι) out of the things held in tension in the body, for surely you will not allow yourself to maintain that a composite *harmonia* (ἁρμονία συγκειμένη) existed before that from which it had to be composed (συντεθῆναι). (92a7-9)

From this important passage two facets of Simmias’s *harmonia* theory of the soul are revealed. First, he takes *harmoniai* to be composite entities. Second, because he thinks the soul is a *harmonia* he is also committed to the view that the soul is a composite entity. And not only is he committed to the view that the soul is a composite entity, but also that it is composed of material parts. In

²⁰ This and other arguments against the *harmonia* theory (i.e., the Priority Argument (91e2-92e3) mentioned below and the Argument from Degrees (93b1-94b2)) are the subject of the next chapter.

the presentation of the *harmonia* theory of the soul as his own positive view, Simmias claimed that the things held in tension in the body are the material elements (i.e., the hot, cold, wet, dry and things of that sort, 86b7-8). Since the soul is a composite entity which is composed of the material parts, the soul is a material composite.

So, if Taylor is right in concluding that Plato didn't adequately distinguish between options (1), (3) and (4), it seems that we have evidence that he also failed to distinguish option (2) from the lot as well. But if this sort of strategy is correct, then it turns out that Plato was subject to a widespread failure to disambiguate a key term. Although it might be true that Plato failed to notice or appreciate the different ways of understanding '*harmonia*' that Taylor suggests, there is an alternative. In the next two sections I make the case that Taylor was being too fine-grained in the distinctions he draws between the four ways of understanding '*harmonia*.' I argue that if we understand a *harmonia* as a kind of structure—either as the abstract principle according to which a whole of parts is organized or as the organized whole itself—Plato's treatment becomes much more systematic and clear. Since Plato wasn't concerned to distinguish the various species of these two positions, Taylor's criticism is misplaced.

2.3 Two Ways to Think About Structure

Suppose you enter a flower shop, intent on buying a certain arrangement. There are several to choose from. Some are composed of flowers you are fond of. Some are arranged in ways that are aesthetically pleasing, but containing flowers that you don't like. You can imagine asking the florist to take the flowers from

one arrangement and configure them in the way you find aesthetically pleasing. You can even specify that sort of configuration without mentioning flowers at all. You might say that the arrangement has three elements of different heights, arranged vertically. With the florist having made the appropriate changes you buy the arrangement and take it home.

The interchange described here indicates there are two ways of talking about an arrangement. On the one hand, an arrangement is something concrete. It is something we can put in water, that will wilt after while and about which we can sensibly say “Too bad the cat ate the arrangement”. On the other hand, an arrangement is something abstract. It is something that can be specified independently of its components. Flowers, statues, furniture or people might be placed in the same arrangement. The difference between these two ways of talking can be put as follows: an arrangement is what the bunch of flowers *is* or it is something the bunch of flowers *has*.²¹

‘Arrangement’ and ‘structure’ are closely connected terms and are used in similar ways. We can talk about a structure as the principle of organization a whole of part has—call this an *abstract structure*. We can also talk about a structure as the organized whole itself—call this a *material structure*. Let us now try to get clear on the distinction between the two.

2.3.1 Abstract Structure

An abstract structure is the principle according to which some parts are arranged into a whole. What makes such a structure abstract, is that it can be

²¹ Harte 2002, 159. There she describes two ways of talking about ‘structure’.

considered and represented independently of the particular components out of which such a structure might be composed.²² Consider our flower arrangement. I can specify the relative height, position and orientation of the flowers without specifying the varieties I'd like so arranged. Suppose I'd like the tallest stem to be about two or three times the height of the container. Further suppose that the middle element should be about $2/3$ the height of the tallest and the shortest element to be about $1/3$ the height of the tallest. I might also specify that each stem be placed at a slight angle relative to one another. All of this can be worked out before I choose the flowers to be put in that arrangement.

And since the structure has been specified independently of any particular flower, it can be realized by any flowers that are capable of being so arranged. As long as the stems have the proper height and rigidity, they can realize that structure. In other words, an abstract structure is variably realizable. Not only can this abstract structure be realized in different varieties of flowers, it can be realized in any number of things. Pencils in a coffee mug or 2x4s in a barrel can realize the same structure. When thinking about structure as the abstract principle of organization a whole of parts has, what matters is the location and relative orientation of the parts, not the particular parts so located and oriented.

An abstract structure is an interesting sort of property. None of the individual elements have the property, nor is it obviously a summation of all the individual properties the elements do have. It is a property had by the elements collectively. Let us follow Verity Harte in calling this a structural property.²³

²² See Harte 2002, 160 for a similar description of what makes such a structure 'abstract.'

²³ Harte 2002, 161. There she notes that Armstrong 1978, 70-71 distinguishes

Collectively the flowers have the property ‘being arranged in the traditional Japanese *shoka* style’. No single flower could realize that property by itself. Rather, that property is realized by certain parts when they stand in certain relations to one another.

2.3.2 Material Structure

According to the second way of talking about structure, a structure is an organized whole of parts. A material structure is a particular instance of an abstract structure. Suppose that we’re in a restaurant where each table has a flower arrangement composed in the *shoka* style. How many arrangements are there? There is one type, but there are as many tokens as there are tables. Each particular bouquet on each table is a material structure. When each flower is the proper height relative to each other and to the container and each stem is in the proper position and angle relative to the others, the parts can be said to jointly constitute an arrangement. On this way of thinking, the flowers, container and the rest jointly compose the arrangement when they have been configured so that they conform to the specifications described by the abstract structure.

A material structure has different sorts of parts than an abstract structure. The parts of an abstract structure are parts of an account. In the case we’ve been considering, the parts of the abstract structure are the specification of the relative heights of the stems, the position and orientation of the flowers. The parts of the material structure are the flowers which have those heights, posi-

two sorts of structural properties. This sort is an example of his *relationally structural property*.

tions and orientations relative to one another. Understood as a material structure, a flower arrangement is something I could destroy by my clumsiness at the table. By changing the position of the flowers—from tightly grouped and vertically oriented to disorganized and horizontally oriented—I can destroy the arrangement. It makes little sense to speak of destroying the abstract relation by changing the spatial location of its parts.

As we continue, it will be helpful to bear in mind the different ways in which we think and talk about structure. This distinction is particularly important in organizing the wide array of interpretations scholars have given to Simmias' presentation of the *harmonia* theory. I suggest that despite appearances, there are two rival positions that haven't been adequately articulated: either the soul is an abstract structure a whole of parts has or it is a material structure of organized parts.

2.4 Two Ways to Think About Harmonia

Despite the apparent variety of interpretations of the *harmonia* theory that have been taken up in the literature, it seems that almost every interpretation falls into one of the following groups:

- (1) Views that take a *harmonia* to be an abstract structure—the principle of organization a whole of parts has; or
- (2) Views that take a *harmonia* to be a material structure—the organized whole of parts itself.

Although there is no unanimity about the particular view Simmias actually backs, there is a general consensus that his view must fall into the first group. Just how to specify the view is a matter for debate—'*harmonia*' is variously un-

derstood to pick out a proportion,²⁴ a correct arrangement that gives rise to a capacity to do something,²⁵ a state of attunement,²⁶ a ratio or proportion,²⁷ or a “right adjustment”²⁸ of the parts of the body. To be sure, I’m not claiming that all of these views are equivalent. I am claiming that they all take the soul to be an abstract principle according to which the parts of the body are organized.

I’d now like to examine the arguments which have led scholars to such a consensus. In the course of doing this, however, I will try to show that the second sort of view—the soul is a material structure—has been unduly neglected and unfairly criticized.²⁹

2.4.1 Harmonia as Abstract Structure

According to the most widely accepted interpretation of Simmias’ *harmonia* theory, the soul is an abstract structure. It is the principle according to which the parts of the body—the hot, cold, wet, dry and things of that sort—have been organized. This view is an attractive interpretation in large part because of one bit of evidence. Simmias first describes the *harmonia* of a lyre as something “invisible, incorporeal, beautiful and divine” while the lyre itself and strings in which it is found are “corporeal, composite, earthly and akin to what

²⁴ Wagner 2001, 73.

²⁵ Langton 2000, 13.

²⁶ Rowe 1993, 205; Bostock 1986, 122; and Taylor 1983, 217-218.

²⁷ Taylor 1983, 217-218 and Gallop 1975, 148.

²⁸ Hackforth 1972, 97-98 n.1

²⁹ For arguments critical of this sort of view see Wagner 2001, 73; Taylor 1983, 219-220. A less critical account of this view can be found in Gottschalk 1971, 181 and 194-195.

is mortal” (85e5-86a3). Scholars have taken this as sure evidence that any materialist interpretation of the *harmonia* theory must be incorrect.³⁰ Hackforth cites this passage as key support for resisting a materialist interpretation of the view.³¹ He argues that the particular account given here makes the case that a *harmonia* is something immaterial. In some ways, Hackforth is correct. When Simmias first presents the *harmonia* theory he insists that it is “something invisible, incorporeal, beautiful and divine” (85e5-86a1). Something that is incorporeal couldn’t be composed out of material parts.

Ellen Wagner goes even further arguing that the *harmonia* theory of the soul is “necessarily dualist.”³² Apparently following a line suggested by C.C.W. Taylor,³³ she argues that Simmias’ *harmonia* theory means to establish a parallel between one material entity and one “nonmaterial, causally dependent correlate.”³⁴ The relationship between the body and soul is imagined to be like that of a lyre and *harmonia*. In each pair there needs to be one material and one immaterial relatum.

It is clear to me from this passage cited by Hackforth and Wagner that a *harmonia* can be something immaterial—an abstract structure—but it is not necessarily so. Hackforth and Wagner point to a passage where Simmias frames his counterexample to the Affinity Argument (85e3-86b5). In that passage, Sim-

³⁰ See Wagner 2001, 73 and Taylor 1983, 219-220 for example.

³¹ Hackforth 1972, 113.

³² Wagner 2001, 76. I discuss Wagner’s view in more detail in §2.5.3.

³³ Taylor 1983, 219. There he claims that Simmias’ *harmonia* theory essentially involves a contrast between an incorporeal *harmonia* and a corporeal entity upon which it depends.

³⁴ Wagner 2001, 73.

mias never offers a *harmonia* theory of the soul. He simply offers the *harmonia* of a lyre as something “invisible, incorporeal, beautiful and divine” (85e5-86a1). This particular *harmonia* is dependent on the lyre and strings which Plato describes as “corporeal, composite, earthly and akin to what is mortal” (86a1-3).

I agree that when Simmias initially brings up the *harmonia* of a lyre, he has it in mind to provide a case where an immaterial entity is ontologically dependent on a material one. This, after all, is what makes the *harmonia* of a lyre a successful counterexample to the Affinity Argument. Recall Simmias’ argumentative strategy. If the Affinity Argument were successful in proving the indestructibility of the soul on account of its similarity to the forms, it would also wind up proving that the *harmonia* of a lyre is indestructible. Since that *harmonia* is manifestly destructible, the Affinity Argument leads to absurd conclusions and must therefore be rejected.

But at no point in his initial presentation does Simmias ever suggest that what is true of a lyre is true of a human being. His target is the Affinity Argument itself. All he needs to discredit it is one case of something “invisible, incorporeal, beautiful and divine” but also destructible. Simmias never in fact explicitly describes the soul as incorporeal. Still, I agree with the consensus opinion this far at least—it is possible to regard a *harmonia* as something incorporeal, though ontologically dependent on something material. I disagree with the consensus opinion that Simmias is presenting this immaterialist thesis as a view about the soul.

We can *extrapolate* from these facts a possible interpretation of the *harmonia* theory of the soul according to which it expresses an immaterialist

thesis. Because it is possible to regard a *harmonia* as something immaterial, it is possible to interpret the *harmonia* theory of the soul as an immaterialist thesis. But if the soul, understood as a *harmonia*, is something immaterial it's still not clear what exactly it is. Let's now look at those views according to which the soul could be the abstract principle of organization the parts of the body has.

There are two ways to understand this sort of view. On the one hand, it can be understood as a universal³⁵—the soul just is a ratio or proportion itself according to which the parts of the body are combined. Now suppose the proportion of the elements in the body is 7:2:1:3—7 parts earth to 2 parts air to 1 part fire to 3 parts water. This ratio, the mathematical entity, is not something ontologically dependent on any particular material thing. Moreover, the same proportion can be exemplified by anything having units so related to one another. The lengths of sides in a quadrilateral or the numbers of cards in each suit in a hand of bridge might be related according to the same ratio. So if the soul is a *harmonia* and we regard a *harmonia* as something universal, then we are forced to an absurd result: a human being, a plane figure and a hand of cards could have the same soul. For these reasons we ought to reject the interpretation of the *harmonia* theory according to which the soul is an abstract structure understood as a universal.

But there is a second way to understand this view which fares better: the soul is the abstract structure as it is realized by the parts of the body in a living

³⁵ This view is considered and rejected by Wagner 2001, 73-4; Bostock 1986, 122; and Taylor 1983, 222-223.

human being. On this way of understanding the view, a *harmonia* is something particular. It is a state or condition of the elements in the body. The soul is the particular instance of the abstract structure—the structure that the parts of the body *have*.³⁶ This sort of structure is subject to destruction. When the parts of the body revert to their natural places, the particular structure of the body is destroyed. Understanding a *harmonia* as a particular abstract structure satisfies the two important features of Simmias' initial presentation: the soul is something immaterial and it is something destructible.

2.4.2 Harmonia as Material Structure

According to a much maligned interpretation of Simmias' *harmonia* theory, the soul is a material structure. It is the organized whole of parts itself. In this case, the soul just is the living human being which has the hot, cold, wet and dry as its constituent parts. On this interpretation, a *harmonia* is not a property whole of parts has, it *is* a whole of parts. This view is generally regarded as an implausible interpretation because it fails to have one immaterial entity ontologically dependent on a material entity. Although the *harmonia* theory so conceived is a materialist thesis—the soul is a structured whole of material parts—it is not implausible as a reading of the view as it is presented. As I discussed in §2.2, there is good evidence to suppose that the *harmonia* theory does admit of a materialist reading.

³⁶ Perhaps we might wish to compare this difference to the distinction Plato draws between the form “in us” and the form “in nature” (*Phaedo* 103b5). In each case the form is something immaterial, but in the first instance it is something particular and in the second it is something universal.

I won't rehearse all the evidence here. But suffice it to say that when Simmias offers the *harmonia* theory as his own view about the soul, he couches it in materialist terms:

In point of fact, Socrates, I indeed think that you have noticed that we really suppose the soul to be this sort of thing. When our body is strung taut and held together by the hot, cold, dry, wet and things of that sort, our soul is the compound (*κρᾶσις*) and *harmonia* of these very things, whenever they are tempered well and in due proportion against one another. (86b5-c3)

Here the soul is described as a compound and *harmonia* of the hot, cold, wet and dry. As we've seen above,³⁷ Simmias is happy to use the terms 'compound' and '*harmonia*' synonymously. If the soul is a compound of parts and those parts are material, we can conclude that the soul itself is something material. So we can safely say that Simmias' initial presentation of the *harmonia* theory of the soul at least allows the possibility that a *harmonia* is something material. Moreover when the view comes up later in Socrates' arguments against the *harmonia* theory,³⁸ it is precisely how Socrates understands the view as well. He agrees that "a *harmonia* is a composite thing, and that the soul is composed out of the things held in tension in the body" (92a7-9).

Commentators have resisted reading the passage as I have.³⁹ Hackforth, for example, noted that expressions like 'composite thing' (*σύνθετον πρᾶγμα*) and descriptions of the soul as something 'composed' (*συγκεῖσθαι* in 92a9 or *συντεθῆ-*

³⁷ §2.1.

³⁸ Specifically, in the Priority Argument (91e2-92e3). See §3.1.

³⁹ See, for example, Wagner 2001, 76; Rowe 1993, 218; Taylor 1983, 219 and Hackforth 1972, 113.

$\nu\alpha\iota$ in 92b2) “are all likely to suggest something concrete and material.”⁴⁰ But despite this likelihood, he resists the possibility that Simmias regarded *harmoniai* in this way—resting his case primarily on Simmias’ initial presentation.

But the evidence we’ve been through here and above seems to me conclusive against Hackforth and Wagner. Even if Socrates has misunderstood Simmias’ original position, it is clear enough that *Socrates* takes the *harmonia* theory of the soul to admit of a materialist interpretation. A *harmonia* can be a composite of the parts out of which the body is composed. In other words, a *harmonia* can be a material structure.

2.5 Harmonia and Supervenience

In the previous section I said it seems that almost every interpretation of the *harmonia* theory falls under one of two headings. Either the soul is an abstract structure (i.e., the principle of organization a whole of parts has) or the soul is a material structure (i.e., the organized whole itself). To this point, I’ve neglected an interpretation of the theory which doesn’t initially seem to fall into either group. Recall Taylor’s third option is to regard the soul as “some entity produced by the combination of those elements according to that formula, but distinct alike from them and from the formula itself.”⁴¹ I argued above that there were two ways to read this claim. On the strong reading, the soul is a distinct entity produced by the body just as the music produced by the instrument

⁴⁰ Hackforth 1972, 113.

⁴¹ Taylor 1983, 218.

is a distinct entity from the instrument itself.⁴² On the weak reading, the soul is simply some entity dependent on the bodily elements when combined in a certain ratio.⁴³ According to this group of views, the soul is neither the particular abstract principle of organization a living body has nor is it the organized whole itself, but some third thing ontologically dependent on the organized whole. In this section I argue that despite appearances, there is no genuine third alternative.

2.5.1 Harmonia Produced by the Organized Whole

According to the strong reading of Taylor’s third option, a *harmonia* is something produced by the organized whole. On this view the soul is analogous to the music produced by the lyre—the sounded note in a particular mode or tuning. This view does have some evidence recommending it. First, it is an immaterialist thesis—music so described is not composed of material parts. Music, like the forms, is not something material. But if it’s the music produced by a particular lyre, it is subject to destruction (or at least capable of not existing). Second, Simmias describes a *harmonia* as something “beautiful and divine” (85e5-86a1). Such a description seems much better suited for a thing like music than for a thing like an abstract mathematical ratio. But despite the evidence recommending it, it fails as an adequate interpretation of the *harmonia* theory for two reasons.

⁴² Taylor 1983, 220.

⁴³ Taylor 1983, 222.

First, it makes the soul *too* destructible. To see this, let's amplify the analogy a bit. The music produced by a particular lyre exists only as long as the instrument is actually being played, and perhaps not even that long. Each sounded note lasts only as long as the string of the lyre is vibrating. The music is more like something generated from a sequence of such sounded notes. So the only thing that actually exists while the lyre is being played is a particular note (or chord) being sounded at a particular time. During the intervals of time when no note is sounded, the lyre is not *producing* music. So for all those times when the instrument is not actively sounding a note, the *harmonia* of the lyre is destroyed (or less dramatically, ceases to exist). If the soul were like a *harmonia* so described, whenever we go to sleep our souls would cease to exist.⁴⁴

Second, on this interpretation too many things must be capable of generating an immaterial product which is beautiful and divine. When Simmias describes the *harmonia* theory as his positive view about the soul he suggests that the soul is destroyed “even if it is most divine, like the other *harmoniai* both in notes and in all the products of craftsmen.” (86c6-8). I've suggested that the products of the craftsmen are material things whose parts have been fitted together for a particular purpose. Plato does give some examples: paintings, em-

⁴⁴ We might try to offer Plato an Aristotelian response here. If the soul is a set of capacities for carrying out the vital functions of a living human being, when those capacities are not being exercised, the soul doesn't go out of existence—they're just not active. Unfortunately this response is not available to Plato here even if he were to adopt Aristotle's conception of the soul. The way the *harmonia* theory is described here, it is the immaterial product of a material producer. Given the nature of a musical *harmonia*, the product exists only while it is being produced. So it won't help this interpretation to say that the soul is capacity.

broidery, textiles, buildings or furniture are all examples of the products of craftsmen.⁴⁵ Now if a *harmonia* is thought to be the immaterial product of some properly fitting material parts we ought to be able to find such a product in each of the products of the craftsmen. I submit that, in many cases, no such product exists. In the case of painting, perhaps it makes sense to speak of an immaterial product. The sense of wonder or awe one feels when encountering a profound painting might be said to be immaterial. Could the same be said of a piece of furniture or a bolt of cloth? It does seem possible that a bolt of cloth can be the cause of something beautiful and divine like the music produced by the lyre, but it seems unlikely to have such an effect in every case. A large, sturdy and well made warehouse is the product of craftsmen which has parts fitted together for a particular purpose, but one which does not have any “invisible, incorporeal, beautiful and divine” effects. For these reasons, the strong interpretation isn’t a plausible reading of the *harmonia* theory.

2.5.2 Harmonia Theory as Supervenience Thesis

The weak reading of Taylor’s third option has it that the soul is some entity dependent (in some unspecified way) on the bodily elements when they’ve been combined in the proper proportion. This view avoids the pitfalls of the strong reading—we needn’t suppose that the body is actively producing the soul nor that what it produces is beautiful and divine. What matters for Simmias at least is that the soul is something ontologically dependent on the parts of the body—when the parts of the body are destroyed or no longer held in the proper

⁴⁵ *Republic* 3.400d11-401a8.

proportions, the soul no longer exists. The *harmonia* of a lyre depends on the wood, pegs and strings in this way. But if we look closer at the metaphor itself, Victor Caston suggests, we will see that “*it essentially expresses a supervenience thesis.*”⁴⁶ In the remainder of this chapter, I trace the implications of this claim. I argue that supervenience alone doesn’t provide a metaphysically contentful explanation of the relation between the soul and body, but one can be given which preserves Caston’s initial insight.

To get clear on what it means to say that Simmias’ metaphor essentially expresses a supervenience thesis, we need to get clear about what exactly is at stake. David Lewis offers a pithy account of supervenience. “The idea is simple and easy,” he claims, “we have supervenience when there could be no difference of one sort without differences of another sort.”⁴⁷ At its core, supervenience is a *covariation* relation. One thing (whether a property, fact or event or a family of properties, facts or events) covaries with another just in case there are changes in one only when there are changes in the other. But strictly speaking, saying that one property covaries with another says nothing about whether the one is ontologically prior to the other. Property covariation is metaphysically neutral—it doesn’t further imply that one property changes *because of* changes in the other. But supervenience is not just a covariation relation. Firmly rooted in the idea of supervenience are two other components—*dependence* and *nonreducibility*. Jaegwon Kim explains the three desiderata of supervenience as follows:

⁴⁶ Caston 1997, 322; emphasis of the original retained.

⁴⁷ Lewis 2001 [1986], 14.

- Covariance:* Supervenient properties covary with the subvenient, or base, properties. In particular, indiscernibility in respect of the base properties entails indiscernibility in respect of the supervenient properties.
- Dependency:* Supervenient properties are dependent on, or are determined by, their base properties.
- Nonreducibility:* Supervenience is to be consistent with the irreducibility of the supervenient to their base properties.⁴⁸

To say that one property supervenes on another is not just to say that there could be no difference of the one sort without differences of the other sort, but it is also to say that the supervening property *depends on* or *is determined by* the base properties. Kim suggests that the nonreducibility component is meant to be neutral about whether the supervenient properties are or are not reducible to the base properties.⁴⁹ Nonreducibility doesn't entail irreducibility.

The metaphor with which Simmias introduces the *harmonia* theory expresses such a relation. First, a *harmonia* covaries with the material parts of the lyre. The wood, pegs and strings of a tuned lyre are fitted together in such a way that each string has certain tension and that tension is related to the tensions of the others strings according to a particular mathematical ratio. There can be no changes in the *harmonia* of the lyre without changes in its material parts. You can't adjust the tuning of the instrument without adjusting (at least) the tension of a string. Likewise, two lyres which have the very same rela-

⁴⁸ Kim 1990, 9.

⁴⁹ Kim 1990, 8.

tion between their material parts will have the same tuning. Fixing the precise relations between the material parts of the lyre fixes the *harmonia*.

Second, *harmoniai* are dependent on their base properties. This is precisely the reason why Simmias introduces the *harmonia* theory of the soul. He's arguing for a view according to which the soul is subject to destruction. Although it's not subject to destruction through the dissolution of its parts, a *harmonia* is still ontologically dependent on some set of material parts. The tuning depends on well structured wood, pegs and strings; the soul depends on well structured material elements. When those parts are destroyed or not combined "in due measure" the *harmonia* is destroyed.

Finally, consider the nonreducibility component. To say that some property (or family of properties) supervenes on another property (or family of properties) is not to imply that the first *are* reducible to the second. But it is not to imply that the first *are not* reducible to the second either. Can the *harmonia* theory satisfy this requirement? If the theory requires identifying a *harmonia* with the material parts upon which it depends, then it can't—a *harmonia* would be identical to some material parts. So if the theory is to remain neutral about reducibility, minimally the theory must deny the identity of the *harmonia* with the material parts upon which it depends. The theory can accommodate this possibility.

Understood as an abstract structure, a *harmonia* could be taken to be a universal or a particular.⁵⁰ A *harmonia* understood as a universal is *multiply*

⁵⁰ In §2.4.1 I argue that we ought to reject the interpretation of the *harmonia* theory according to which the soul is an abstract structure understood as a universal. That rejection notwithstanding, here all I mean to show is that

realizable. The same tuning—the Dorian mode, say—needn't be realized only in lyres. A wind instrument might have the same tuning. Despite the differences at the level of material constitution, a lyre and a flute can have the same tuning. This suggests that a *harmonia* is not identical to the material parts upon which it depends. If a *harmonia* is not identical to those parts, it needn't be reduced to them.

The same goes for a *harmonia* understood as a particular. Even if the particular tuning is ontologically dependent on the material parts of a particular lyre, Simmias denies that the tuning is identical to those material parts. He describes the tuning as something “invisible, incorporeal, beautiful and divine” in the tuned lyre. Here again, the *harmonia* isn't identical to the material parts of the lyre it is found in.

But the theory also allows for the possibility that all of the causal work of the instrument is done by the material parts (and consequently reducible to or explainable in terms of the material parts). This would allow for the possibility that everything the *harmonia* does is explainable in terms of the causal interaction between wood, pegs and strings. In fact, Plato says as much in the course of providing his arguments against the theory.⁵¹ “It is quite impossible,” he suggests, “that a *harmonia* move or make a sound or do anything else opposed to its parts” (93a8-9). So it seems that *harmoniai* don't act independently of the parts upon which they depend. If that's true, then properties of a *harmonia* are completely determined by the properties and relations among the material parts.

on either interpretation, the *harmonia* theory satisfies the nonreducibility requirement.

⁵¹ These arguments are the concern of the next chapter.

This, together with the fact that a *harmonia* is not identical to those material parts, suggests that the theory satisfies the third component.

The *harmonia* theory of the soul satisfies the three components of supervenience. Therefore I agree with Caston's assessment—the *harmonia* theory does essentially express a supervenience thesis. A *harmonia* covaries with the material parts which compose the lyre, it is ontologically dependent on those parts, and it may or may not be reducible to those parts. But this assessment leaves us wanting. It doesn't tell us what exactly a *harmonia* is which would explain why it supervenes on the material parts it does. I take up this issue in the following sections.

2.5.3 Harmonia as a Supervenient Substance?

Let us pause to take stock. According to the weak reading of Taylor's third option, the soul is an entity dependent on the bodily elements when they've been combined in a certain ratio. On this view, the soul is neither the abstract principle a whole of parts has nor is it the organized whole itself. Rather, it is some third thing ontologically dependent on those parts in that arrangement. One suggestion for what sort of thing that might be has been offered in a recent paper by Ellen Wagner.⁵² She suggests that the *harmonia* theory of the soul is best understood as what she calls a version of 'supervenient dualism' or 'substance supervenience.'⁵³ According to this view, the soul is taken to be an im-

⁵² Wagner 2001, 76-79. Her interpretation is based on that offered by Shields 1988 as an interpretation of Aristotle's views.

⁵³ Wagner 2001, 76.

material substance that supervenes on the body which is material substance. This view, I argue, doesn't work as an interpretation of the *harmonia* theory for three reasons:

- (1) There's no indication in the *Phaedo* that a *harmonia* is a substance.
- (2) A *harmonia* needn't be immaterial and so the theory needn't be dualist.
- (3) It doesn't (and can't) satisfy the nonreducibility component of the supervenience relation.

Let's look at the first (and weakest) objection. I can only offer an argument from silence in support. According to the supervenient dualist interpretation, both the *harmonia* and the material entity upon which it depends are both substances.⁵⁴ Wagner claims that her interpretation draws upon Christopher Shields' account of Aristotle's supervenient dualism.⁵⁵ I will not go into the details of Shields' analysis. Suffice it to say, however, that the view gets off the ground only if both the soul and the body are substances. There is good evidence that *Aristotle* does think of form, matter and the compound of form and matter as kinds of substances.⁵⁶ If the soul and body are both substances, however, they are different kinds of things. For Aristotle, the soul is a substance insofar as it's a form; the body is a substance insofar as it's matter. Because Aristotle claims that the soul and body are both substances, the supervenient dualist interpretation gets a foothold.⁵⁷

⁵⁴ Wagner 2001, 77.

⁵⁵ Wagner 2007, 77 n.27. The paper to which she refers is Shields 1988.

⁵⁶ Many of these passages are controversial, for one of the less controversial see *De Anima* 2.1.412a6-15.

⁵⁷ I'm not suggesting that this is the right way to read Aristotle here. All I wish to claim is that Aristotle does claim that the soul, body and the

Should we suppose that Simmias has this conception of substance in mind when he offers the *harmonia* theory? Wagner claims that the idea of a *harmonia* as a supervening substance is “clearly indicated in the *Phaedo*.”⁵⁸ Although she doesn’t cite any direct textual evidence in support of the view that (according to Simmias) a *harmonia* is a substance, she does claim that Simmias is primarily concerned with entities that are the possessors of properties and not with the properties alone. Simmias, she suggests, “attributes to the soul a set of properties that is contradictory to the properties of the body.”⁵⁹ Presumably, what makes the soul a substance is that it is not a property, but a possessor of properties. What makes the soul a substance *distinct* from the body is that the properties it possesses cannot belong to a single entity at the same time and in the same respect. So what makes a *harmonia* a substance, according to Wagner, is that it’s an entity that possesses properties and not a property itself.

I agree with Wagner in this much at least: Simmias does claim that a *harmonia* has properties. When he introduces the *harmonia* of a lyre as a counterexample to the Affinity Arguments Simmias does note that a *harmonia* is “something invisible, incorporeal, beautiful and divine” (85e5-86e1). But merely having properties is not enough to establish something as a substance and not a property. First of all, following through with Simmias’ thought we find that a *harmonia* is something invisible, incorporeal, beautiful and divine *in the tuned lyre* (86a1). This suggests that (at least when it’s first presented)

composite are all substances.

⁵⁸ Wagner 2001, 77.

⁵⁹ Wagner 2001, 77.

Simmiias understands the *harmonia* to be a property which the musical instrument can have or lack.

Further, in the mythic section with which the *Phaedo* draws to a close, Plato is happy to describe certain properties as themselves having properties. He describes the earth when seen from afar as looking like a multi-colored ball but one whose colors are “much more brilliant and purer” than the colors used by painters (110c2). One part of the earth is “sea-blue and of marvelous beauty” and “the earth is also composed of the other colors, more numerous and beautiful than any we have seen” (110c3-4; 6-7). Here Plato describes the colors of the earth when seen from afar as more brilliant, pure and beautiful than the everyday colors of paintings. Since colors are quite clearly properties of a thing which themselves have certain properties, merely possessing properties is not enough for Wagner to distinguish them from genuine substances. So Wagner’s contention that Simmiias means to clearly indicate *harmoniai* as substances lacks the textual support she needs.

Wagner also argues that the *harmonia* theory of the soul is “necessarily dualist.”⁶⁰ The thesis must be dualist, she claims, because the evidence requires that a *harmonia* be understood as something nonmaterial. She argues as follows. With the *harmonia* theory Simmiias is trying to establish a parallel between two pairs of entities. Each member of the pair has one material and one “nonmaterial, causally dependent correlate.”⁶¹ In one pair you have the lyre and *harmonia*, in the other pair you have the body and soul. Presumably she imag-

⁶⁰ Wagner 2001, 76.

⁶¹ Wagner 2001, 73.

ines Simmias to be arguing that a *harmonia* is like the soul in certain relevant ways—it’s invisible, incorporeal, beautiful and divine. The Affinity Argument would have us conclude that such a thing is also immortal. But what makes Simmias’ comparison effective is that unlike the soul, a *harmonia* is destructible. In order for this comparison to work, there needs to be one immaterial and one material relatum. For exactly similar reasoning, C.C.W. Taylor suggests that the essential point of Simmias’ *harmonia* theory is the contrast he draws between the incorporeal *harmonia* and the corporeal entity upon which it depends.⁶²

As I argue above, this interpretation is right as far as it goes. When Simmias first brings up the *harmonia* of a lyre, he’s attempting to provide a counterexample to the Affinity Argument. In order to do so, he chooses an invisible, incorporeal, beautiful and divine *harmonia* which is also subject to destruction. But the textual evidence which exists outside the presentation as a counterexample points in a different direction. In §2.2 above I’ve shown that when presented as his own theory about the soul, there is good evidence which suggests that a *harmonia* is something composed of material parts. I won’t review all the evidence again, but consider one example. When Socrates is recapitulating the *harmonia* theory he describes a *harmonia* as “a composite thing (σύνθετον πρᾶγμα), and that the soul is composed (συγκεῖσθαι) out of the things held in tension in the body” (92a7-9). Since the body is composed of material parts, a *harmonia* can fairly be understood as something material. Since the in-

⁶² Taylor 1983, 219. Note that here it looks he’s offering the strong reading of option (3).

sistence that in every case a *harmonia* must be immaterial is unjustified, the *harmonia* theory of the soul is not necessarily dualist.

Still, let us suppose that the theory was necessarily dualist (or at least just dualist). Supervenient dualism doesn't adequately account for the *harmonia* theory as a supervenient thesis. If Wagner is right and a *harmonia* is an immaterial substance, then it is hard to see how such a view could satisfy Kim's three desiderata above. According to the supervenient dualist view, the soul is neither the particular abstract principle of organization a living body has nor is it the organized whole itself, but some third thing produced by the organized whole.⁶³ That third thing, for reasons already discussed, must be immaterial. Furthermore, the supervenient dualist denies that the soul is merely an epiphenomenon. The immaterial soul which is produced by the parts of the body having been appropriately organized has genuine causal powers which it doesn't have in virtue of the causal powers of the parts or the relations between them. Wagner affirms that an epiphenomenalist interpretation of the *harmonia* theory is inconsistent with the text. Simmias and Socrates agree, she writes, "that the soul will have a number of *distinct* effects upon the body," citing those passages where the soul is said to rule the body.⁶⁴ Suppose Wagner is right and a *harmonia* is not merely an epiphenomenon 'given out' by the body as a kind of causally inert by-product. This will mean that a *harmonia* has distinct causal powers independent of the causal powers of the material parts upon which that *harmonia* de-

⁶³ Wagner 2001, 75.

⁶⁴ Wagner 2001, 76; emphasis added. The passages she cites are 80a7, 94b4-11, 94c9-d5.

pend. Because of these distinct causal powers, a *harmonia* will be irreducible to the material parts upon which it depends.

Kim's third desideratum of supervenience was nonreducibility. This requirement is supposed to ensure that supervenience doesn't entail the reducibility of the supervenient to the base properties. Kim explains that "nonreductive' is to be understood as indicating a neutral, noncommittal position with regard to reducibility, not as an affirmation of irreducibility."⁶⁵ The supervenient dualist interpretation of the *harmonia* theory thus fails to be supervenient—it entails that a *harmonia* is irreducible to those properties upon which it depends.

Next I would like to argue that we can give an account of the *harmonia* theory which does justice to the insight that the view does express a supervenience thesis in such a way that satisfies Kim's three desiderata. As it turns out, when we understand the kind of supervenience at issue we'll come to see that this is not a genuine third option, but a version of the view according to which a *harmonia* is a material structure.

2.5.4 Harmoniai & Mereological Supervenience

Supervenience is not an explanatory relation. To say that one thing supervenes on another is merely to say that the one covaries with and depends on the other. It does not say why the one covaries with the other or what kind of dependence relation exists between the two. To make supervenience a metaphysically 'deep' relation, we can explain the covariation as a consequence of the kind of dependence there is between the two. Although one thing might supervene on another

⁶⁵ Kim 1990, 8.

because the one is *caused* by the other, this doesn't capture the sort of dependence at stake in the *harmonia* theory. The lyre doesn't cause its tuning. Rather the parts of the lyre—its wood, pegs and strings—determine the properties of the tuning. In short, the relation between the *harmonia* and its parts is one of *mereological* supervenience. We might characterize this view as follows:

One property (or family of properties) mereologically supervenes on another just in case the properties of the whole are fixed or determined by the properties and relations of its parts.⁶⁶

This entails the further claim that two wholes which are micro-structurally identical must exhibit the same macro-structural properties. This is true of *harmoniai*. Two lyres which have identical parts in identical relations will have the same tuning. Fixing the properties of the parts fixes the properties of the whole. This satisfies the covariation requirement. The intrinsic properties of a whole covary with the properties of its parts. There can be no changes at the macro-structural level, without a corresponding change at the micro-structural level. The tuning of the lyre can't change without a change in the wood, pegs or strings.

Not only do micro-structural duplicates have the same macro-structural properties, the same macro-structural property can be realized in things which are very different micro-structurally. The same tuning can be realized in wood, pegs and strings or in brass, valves and stops. As we've seen above, the tuning of an instrument is multiply realizable. Because the tuning is capable of being realized in any number of different material parts and organizations, the tuning

⁶⁶ See Kim 1978, 155-156; Kim 1984, 154; and Kim 2000, 15-19.

cannot be identical to those parts and organizations. So to say that a *harmonia* mereologically supervenes on a set of material parts needn't imply that the properties of the whole are identical to the properties of the parts.

Moreover, mereological supervenience is neutral about whether the macro-structural properties are reducible to the micro-structural. It may be the case that all the properties of the whole can be fully explained by the properties of the parts, but it may not. Suppose fixing the micro-structural properties of a thing fixes its macro-structural properties as well. It might be the case that the macro-structural properties *are not* subject to reduction (i.e., they are genuinely emergent properties.). It might also be the case that the macro-structural properties *are* subject to reduction. Mereological supervenience just doesn't make that determination.

Consequently, if we understand the *harmonia* theory as expressing a *mereological* supervenience thesis, then it turns out that a *harmonia* ought to be understood as a material structure—an organized whole of material parts. So despite first appearances, the *harmonia* theory taken as a supervenience thesis doesn't represent an actual third option.

2.6 Conclusion

Simmiias first presents the *harmonia* of a lyre, not as a view about the soul, but as a counterexample to the Affinity Argument. If that argument could prove that the soul is indestructible because it is invisible, incorporeal, beautiful and divine, it would also prove that the tuning of a lyre is indestructible. If the Affinity Argument works, it casts its net too wide. But more than this, Simmiias

thinks the soul is a kind of *harmonia* of the parts out of which the body are composed. I've argued that there is good textual evidence for understanding '*harmonia*' in two ways: either as the abstract principle of organization a whole of parts has (a particular abstract structure) or as the organized whole itself (a material structure). Mereological supervenience—the view that the properties of the whole are fixed by the properties and relations of its parts—is a relation well suited to explain the relation between a *harmonia* and the parts upon which it depends. Whether understood as a material or as a particular abstract structure, a *harmonia* is subject to destruction. *That* is what makes it a worrisome conception of the soul for Simmias and Cebes.

Chapter 3

Plato's Objections to the Harmonia Theory

Plato offers three arguments against the *harmonia* theory of the soul: (1) the Priority Argument (91e2-92e3); (2) the Argument from Degrees (sometimes called 'Argument B,' 93b1-94b3); and (3) the Opposition Argument (sometimes called 'Argument A,' 92e4-93a9; 94b3-95a2). But before presenting these objections, Plato interrupts the narrative flow of the dialogue and has Phaedo (the narrator) and Echebrates (his interlocutor) reappear (88c8-89b5). Two things result from this abrupt interruption, both of which stress the importance of finding a conclusive reply to the *harmonia* theory. First, Echebrates confesses how convincing he finds the theory: "the claim that the soul is some kind of *harmonia* has a remarkable hold on me, now and always, and when it was mentioned it reminded me that I had myself previously held the view" (88d3-6). But despite having once been a *harmonia* theorist, Echebrates needs a new argument to show him that the view isn't tenable. Second, by breaking off the

narrative Plato introduces an extended warning against becoming a ‘misologue’ or an argument-hater (89d1-91d9). This warning is intended to convince the parties to the conversation (as well as the reader) that philosophical argument can reliably establish a position without being equally capable of establishing its contrary. Misology, Socrates warns, typically arises when those who lack skill in argumentation spend their time dealing with apparently equipollent arguments for and against the same thesis (90b4-c6). This seems to be the case with the arguments about the soul to this point. The Affinity Argument seems to have shown that the soul is indestructible, while Simmias’ initial presentation of the *harmonia* theory seems to have shown that the soul is destructible. But despite this apparent antinomy, philosophical argument in the hands of a skilled practitioner can tell us how things really are. By setting the stage in this way, it is clear how seriously Plato took the *harmonia* theory.

In this chapter I investigate the three arguments Plato uses to refute the *harmonia* theory. In the course of doing so, three questions will be important:

- (1) What is the argument and how does it work?
- (2) What specification of the *harmonia* theory is it directed against?
- (3) Is the argument successful against that specification?

I hope to show that the Priority Argument and the Argument from Degrees successfully refute the theory, but only on one of its interpretations—that according to which a *harmonia* is a whole of material parts. The Opposition Argument is also directed against this specification, but misses its intended target. This doesn’t diminish its overall importance however. It turns out that this argument anticipates (with some important differences) the argument for the tripar-

tition of the soul in *Republic* 4. In the last section of the chapter I examine an important implication of rejecting the *harmonia* theory. If it turned out that Plato's arguments were decisive against every specification of the *harmonia* theory, then it seems he will undermine the theory of the tripartite soul upon which the political and psychological theories of the *Republic* are based. About this point, C.C.W. Taylor colorfully remarked that it is "necessary to attribute extraordinary obtuseness to Plato if one accepts that...the arguments of the *Phaedo* are conclusive against the thesis."¹ I argue that Plato is not extraordinarily obtuse and two of the arguments against the *harmonia* theory are conclusive. However, they turn out to be conclusive *only* against the specification according to which the soul is a *harmonia* of material parts.

3.1 The Priority Argument

The first argument against the *harmonia* theory, the Priority Argument, is perhaps his most straightforward. But at the same time, it requires one to accept some of Plato's most controversial views. Specifically, it requires one to accept the theory that learning is recollection, that forms exist, that we've had prenatal knowledge of them, and that we can realize sensible particulars are inferior instances of those forms. But if one is able to accept all this, the Priority Argument is clear: the theory of recollection implies that the soul exists before birth and so before the parts of the body exist. According to the *harmonia* theory of the soul considered here, the soul is a composite of the parts of the body. But

¹ Taylor 1983, 230.

since no composite can exist prior to the parts from which it is composed, no *harmonia* could exist prior to the parts of the body. Since the soul has a property *harmoniai* lack (namely, the ability to exist prior to the parts of the body) the soul cannot be a *harmonia*.

The connection between the theory of recollection and the prenatal existence of the soul is established earlier in the Recollection Argument (72e3-78b3). Once the conclusion of this argument is established, the rest of the Priority Argument is relatively uncontroversial. Let us now turn to that first step.

3.1.1 The Recollection Argument

The Recollection Argument (72e3-78b3), the second of the *Phaedo's* four central arguments, has received sustained and detailed study.² Plato suffers no pretenses that the argument by itself establishes the immortality of the soul.³ Rather his aim is slightly more modest: to show that the soul must have existed before its embodiment. Although the precise details of the argument are much disputed, the main thread of the argument is simple enough. Socrates claims that we⁴

² For some of the more notable and influential studies primarily about the Recollection Argument as it appears in the *Phaedo* see Gerson 2003, 65-79; Gerson 1999; Scott 1999, esp. 102-118; Osborne 1995; Bedu-Addu 1991; Bostock 1986, 60-115; Ketchum 1979; Gallop 1975, 113-137; Nehemas 1975; Ackrill 1973; Dorter 1972; Gosling 1965 and Hackforth 1955, 65-77.

³ There is some indication, however, that Plato regards the Recollection Argument as one half of an argument for the immortality of the soul. At 77c1-d5 Socrates suggests that the Recollection and Cyclical Arguments may jointly prove the immortality of the soul.

⁴ There is some dispute about who counts as 'we' in the argument—whether it is just philosophers who are present with Socrates, philosophers in general, or as a generic for everyone. I discuss this issue below.

have some knowledge—i.e., knowledge of ‘the equal itself’—which we derive indirectly by means of the senses. When we do so, we recognize that sensible equal things ‘strive’ or ‘desire’ or ‘wish’ to be like the equal itself, but fail to do so perfectly.⁵ This recognition that the sensible equal things fall short of the equal itself couldn’t occur unless we had previous knowledge of the equal itself.⁶ But since we began perceiving at birth, we must have acquired our knowledge of the equal itself sometime before we were born. Since we must have acquired this knowledge before we were born, we must have existed at that time. Although we seemingly forget this knowledge when we are born, later on we can *recollect* this knowledge by using our senses. There are obviously many details which need to be filled in. It is in those details, however, where things get much murkier.

The argument begins with a back-reference in which Cebes “recalls” the argument in the *Meno* for the view that “for us learning is nothing other than recollection” (72e5-6).⁷ The theory of recollection is accepted by all the interlocu-

⁵ The language here is clearly meant to be metaphorical. The equal sticks and stones clearly don’t literally have strivings, desires and wishes.

⁶ There are two streams of interpretation in the literature. Some commentators read this argument as suggesting that the recollection of the forms doesn’t just account for our ability to compare forms with sensible particulars but also the very formation of the concept of equality. Two important defenders of this line are Bostock 1986, 66 ff. and Ackrill 1973, 177-195. Two opponents of this line are Scott 1999; Fine 1993, 137-138; and Fine 2003 [1987], 62-63 n.41. I won’t take a stand on which of our thoughts are best explained by the theory of recollection. What matters for my purposes is that the theory of recollection forces us into positing the existence of the soul before its embodiment.

⁷ See *Meno* 81e ff. Here I don’t mean to be suggesting that the theory of recollection in the *Phaedo* is the same as that presented in the *Meno*. I just mean to point out that there is a reference to the *Meno* at this point

tors. It seems to be given in order for Simmias to “experience that which we are discussing, namely recollection” (73b7). Instead of providing a detailed recapitulation of the proof for the theory of recollection, Simmias is presented with a brief sketch and presumably recalls the argument in full. Once this object lesson in recollection is complete, all the parties to the discussion then take the view as secure.

Plato then outlines four conditions for recollection.⁸ It is not always clear whether each is meant as necessary, sufficient or both.⁹ Since the Recollection Argument derives important conclusions from these conditions, let us spell them out. In order to recollect x by perceiving y :¹⁰

- (1) we must have known x before (73c1-3),
- (2) we recognize y , but also think of x (73c6-8),
- (3) x and y are different objects of knowledge (73c8-9),
- (4) and when recollection is occasioned by an y similar to x , then we also consider whether y is deficient or lacking in relation to x (74a5-7).

which Cebes recalls—an object lesson in how recollection might work.

⁸ Following Gerson 2003, 66-68; Gerson 1999, 2-5; Scott 1999, 103; Gallop 1975, 115-116; Ackrill 1973, 177-195; and Dorter 1972, 198-201. Gosling 1965, 154-156 recognizes only the first three conditions as legitimate. He specifically denies that the fourth is a condition for recollection at all.

⁹ There is a substantial debate about whether and which conditions for recollection are necessary and sufficient. For instance Gosling 1965, 155 claims that they are all necessary and sufficient. Gallop 1975, 115-116 sees little textual evidence for supposing that these conditions are meant to be both necessary and sufficient. He takes the first and the fourth as necessary conditions while the second and third seem to be put forward as sufficient conditions. Whether the conditions are necessary or sufficient will put constraints on what inferences we can draw from them.

¹⁰ This list is a slightly revised version of that found in Scott 1999, 103.

According to the first condition, in order to recollect something we must have known it before. This condition is necessary for recollection to take place, but it is clearly not sufficient. I once knew how to play the recorder. Simply having this knowledge is not enough for me to recall that knowledge.

According to the second and third conditions, we must perceive and recognize one thing and think of something else.¹¹ These conditions seem to be offered as jointly sufficient conditions for recollection to take place. Suppose that on a certain occasion I see my recorder and I come to think not only of the recorder but also of my first music teacher. In order to think of my music teacher, I must have known her before. When this sort of ‘cognitive achievement’¹² takes place, I have recalled my music teacher. It doesn’t make sense to say that upon seeing my recorder I come to recall my recorder. I may come to realize that the object on the music stand is my recorder, but that is not a case of recollection but of recognition.

Finally Plato tells us that recollection can be occasioned either by something similar to or different from that which is recalled. When it is occasioned by something similar, a further necessary condition is added: we must consider whether what we perceive is “lacking something or not in its likeness to that of which one recollects” (74a6-7). This condition is presented as a psychological fact about what happens whenever we perceive a likeness of something and re-

¹¹ Here I’ve collapsed Scott’s 1999, 103 second and third criteria in favor of adopting Gosling’s 1965, 154 third as a separate criterion. But there is not a substantive point being made here. My list and that of Scott and Gosling cover the same ground.

¹² To use Dominic Scott’s expression from his 1999.

call the actual thing. As a matter of course, we see how closely the likeness resembles that thing. Consider a portrait. No matter how precisely the artist paints the portrait, it can never *be* its subject. The likeness will always have (or lack) various properties that the object it represents lacks (or has) and so will fall short of the original. When that likeness causes us to recall its subject, Plato tells us that we are compelled to compare the likeness and that which it represents to see whether and how the likeness is deficient when compared to that which it represents.¹³

Having laid this groundwork, the Recollection Argument begins with the following admission: “We say, I suppose that there exists something equal—I don’t mean a stick to a stick or a stone to a stone or anything else of that sort, but something else beyond all these: *the equal itself*” (ἀλλὰ τὸ ἴσον, 74a9-12). Though the construction ‘the *x* itself’ is typically how Plato describes the forms, in this passage he makes it perfectly explicit that he is talking about the form and not sensible particulars. He writes: “I do not mean a stick equal to a stick or a stone to a stone, but something else beyond all these...” (74a10-11). If a clearer indication were necessary to show that the form is at issue and not the sensible particulars, we need only look at the tenor of Simmias’ response. He admits that *amazingly* (θαυμάστως, 74b1) such a thing exists. Now it is hardly remarkable for there to be particular sensible equal things. If there is something remarkable, it must be the admission *the equal* exists apart from any instance of

¹³ For an excellent discussion of the ways in which sensible particulars are deficient when compared to the forms which we recall see Nehemas 1975. See also Gerson 2003, 68-71; Gerson 1999, 4-6; Scott 1999, 106-107; Ketchum 1979; Gallop 1975, 118-119; Dorter 1972 and Gosling 1965.

equal things.¹⁴ That the equal itself exists and that we have knowledge of it are both assumed before the argument proceeds.

Plato writes that ‘we’ have knowledge of the equal itself. But what group he actually has in mind is unclear.¹⁵ Moreover, it seems like it might make a difference to the ultimate conclusion of the argument *whose* souls exist prior to embodiment. It seems that we have three possibilities for who the referent of the first person plural might be. According to the first and most restrictive sense, the ‘we’ picks out those who are immediately present and the primary interlocutors of the dialogue—Socrates, Simmias and Cebes and the others in the cell. According to the second and less restrictive sense, the ‘we’ picks out any Platonist. According to the third and least restrictive sense, the ‘we’ picks out ordinary people in general.¹⁶

¹⁴ Of course, the degree of amazement will certainly depend on what sort of thing we take the equal itself to be. I am inclined, following Scott 1999, 104, to see this as an indication of something quite beyond such mundane things as sticks and stones. I would be willing to concede a more mundane conception of the forms. In that case Simmias’ exclamation may just be an indication of the moment at which he recollects the knowledge Socrates is prompting him to recall.

¹⁵ For the various possibilities see Bedu-Addu 1991, 39 and 39 n.16; Bostock 1986, 66-69; Gallop 1975, 120-121; Ackrill 1973, 191-192.

¹⁶ The latter two of these possibilities are distinguished by Ackrill 1973, 191. There is a further complication. At 74a9-b1 Plato claims that “we say that there is something that is equal...<namely> the equal itself.” Later at 74b2 he adds the further condition that we know what the equal itself is. Now it’s possible that the first use of ‘we’ is meant to pick out one group (say ordinary people in general) and the second is meant to pick out one of the smaller groups. I don’t think that Plato switches the referent of the ‘we’ in these lines. So whichever group it means to pick out, it does so throughout this passage. My only argument in favor of this position is that which I owe to Ackrill 1973, 192—it would be terribly awkward to switch referents here over only one line of text where the philosophical line of

The distinction here turns out not to make much of a difference. Even if the ‘we’ is used in its most restrictive sense, it doesn’t follow that the doctrine of recollection would restrict the immortality of the soul to only those people. Although very few people *actually* have knowledge of the forms¹⁷ (perhaps only those well-trained in the views of the Academy), it still may be *possible* for anyone to come to achieve that knowledge. If it is possible for anyone to achieve that knowledge, then (as it will turn out) their souls must have preexisted their bodies. So despite the fact that most people wouldn’t maintain that the equal itself is “an eternal, unchanging Form, an independently existing entity”¹⁸ and that sensible equals are somehow deficient in their equality when compared to it, the possibility of coming to that understanding is open to anyone. Even if ‘we’ only picks out a few people, the Recollection Argument still has the possibility of establishing an egalitarian conclusion.

argument is unbroken.

¹⁷ See, for example, *Phaedo* 76b5-76c3 where only Socrates is described as the only person who is able to give a proper account, and consequently knowledge, of the forms. One way of reconciling this suggestion with the possibility of an egalitarian conclusion to the Recollection Argument may be to say that everyone has latent knowledge of the forms which could be recollected, given the right philosophical training; but that very few (and perhaps only Socrates) has occurrent knowledge of the forms.

¹⁸ Ackrill 1973, 192. Scott 1999 and Sedley 2006 consider the possibility that most people might ‘know’ the equal in a mundane sense (for example by saying that equal things have the same measure), but lack the rigorous, philosophical knowledge which would involve the ability to give a definition that involved reference to the form. If that were the case, then one could have a kind of knowledge which wasn’t the result of recollection. Knowledge (or at least the possibility of knowledge) of the latter sort is essential when it comes to understanding the second cognitive achievement—realizing the deficiency of the sensible particulars when compared to the forms.

The next step in the argument is to ask where ‘we’ got that knowledge. It came, Plato claims, “from seeing sticks or stones or some other equal things, from these we came to have that thing [i.e. the equal itself] in mind, it being different from these” (74b5-7). In this compressed passage, Plato suggests that the knowledge of the equal itself is *recalled*. This recollection, moreover, is engendered by sensible equal things (e.g. equal sticks or stones). Further, he claims, these sensible equals are similar to, but different from the equal itself. Sensible equals “sometimes appear equal to one but unequal to another” (74b7-9). The equal itself (or, as Plato puts it here, the equals themselves) never appear unequal in any circumstance. Because the sensible particulars have a property the form lacks, they cannot be identical. So we are able to recall the form not by observing the form itself, but by observing sensible instances of it.¹⁹

In addition to having knowledge of the form, the argument goes on to suggest a second cognitive achievement: we realize that sensible equal things are deficient or inferior compared to the equal itself. Simmias emphatically remarks that sensible equal things are quite deficient when compared to the equal itself (74d8). But in what does this deficiency consist?²⁰ One possibility is that sensible equal things are never *exactly* equal, while the equal itself is. According to this view, the sensible equal things are something like an *approximation* of

¹⁹ See Bostock 1986, 72-85; Fine 2003 [1984], 281-284; Gallop 1975, 121-125; Rist 1964; Bluck 1959, 6 ff.; Ackrill 1958, 106-108; Mills 1958, 40-58 and Mills 1957, 128-147 for discussions of the equal sticks and stones argument.

²⁰ For an excellent overview of the arguments on this point Nehamas 1975, but also see Gerson 2003, 70-72; Gerson 1999, 7; Osborne 1995, 225-228; Bostock 1986, 73-78; Gallop 1975, 95-96; Ketchum 1979; Ackrill 1973; Dorter 1972; Gosling 1965; Rist 1964; Bluck 1959 and Bluck 1957.

something exactly equal.²¹ I think this alternative is unlikely, however. There doesn't seem to be any reason why two things couldn't be exactly equal in some respect or other. It seems that two bits of twine, for example, could be exactly the same length. Instead, the deficiency of sensible equal things is revealed in Socrates' question about sensible equal things. He asks: "Do these seem to us to be equal just like the equal itself or do they fall short of that in respect of being such a thing as the equal or not?" (74d5-7). Socrates seems to be asking whether sensible equal things can be equal in the same way as the equal itself. As they've previously discussed in the equal sticks and stones argument (74a9-c3), sensible equals sometimes appear unequal while the form never appears unequal.²² It's not that two things couldn't be equal to each other in some respect (e.g. by having exactly the same length). Sensible equal things, however, will always be unequal in some respects as well.²³ One two-inch piece of twine might be equal to another, but unequal to one three inches long. The equal itself, however, never appears equal to one but unequal to another. Forms do not suffer the compresence of opposites. The large itself is never small when compared to one thing, but large when compared to another. The deficiency of the sensible

²¹ Gallop 1975, 95-96 seems to hold the approximation view. See also Nehemas 1975, 105-106 for references to others before 1975 who hold the approximation view. See especially Bostock 1986, 86-87 for an excellent refutation of the view—my argument against sensibles as imperfect approximations follows in large part from Bostock's refutation.

²² See §1.3.

²³ Here my view lines up with Gerson 2003, 71; Gerson 1999, 7; and Rowe 1993, 170-171 but they don't then explicitly connect this with the compresence of opposites.

particulars consists in the fact that they suffer compresence of opposites, but forms do not.²⁴

Plato then takes these two cognitive achievements—our knowledge of the equal itself and our recognition that sensible equals are deficient when compared to it—and goes on to show that they jointly imply that our souls must have existed before birth. This stage of the argument begins with the claim that we must have already had knowledge of the equal itself “when we first came to have it in mind when seeing equal things that they strive to be like the equal but are deficient in this” (74e9-75a3). When we first come to realize that sensible equal things are deficient compared to the equal itself, we must already have knowledge of the form with which to compare the sensible equal things. When might we come to have this knowledge? It seems that only after some amount of Academic training or Socratic cross-questioning would this knowledge be recalled. So it is only after this point when one would have recalled the knowledge of the form in order to say that sensible equals are inferior to the form itself.²⁵

²⁴ Thus I disagree with those like Ketchum 1979 and Gosling 1965 who understand the deficiency of the sensible particulars simply to consist in the fact that sensibles are not identical to the forms. While I do agree that sensibles are not identical to the forms, it is the fact that the sensibles suffer compresence and the forms do not which accounts for their deficiency—not being identical is a consequence of this difference in properties.

Here I’m suggesting that the imperfection of the sensibles turns on their suffering from compresence, although sensibles do suffer from the succession of opposites as well. But in this passage, Plato seems primarily concerned with compresence. See §1.3 for the types of change at issue in the Affinity Argument.

²⁵ One might object that since the knowledge of the form required to make this comparison requires Academic training it is a rather high-level which very few people enjoy. Following Scott 1999, 106-107 I’m inclined to see

This first premise begins to push back the time when one could come to acquire knowledge of the form.

In the second premise, that time begins to be pushed back even further. We can only come to have the form in mind, however, by seeing or otherwise perceiving (75a5-8). This does not mean that we come to acquire new knowledge of the form by perceiving, for example, equal things and come to derive our knowledge of the equal itself. The theory of recollection has it that we can recall our knowledge of the form by perceiving one thing and calling to mind another. Here, what we perceive is simply a necessary condition for our calling to mind the form. These perceptions, moreover, are the impetus for us to make the comparison between sensible equal things and our newly recollected knowledge of the form (75a11-b2), but not that from which our knowledge of the form is acquired.

From these premisses Plato feels licensed to conclude that “before seeing and hearing and having other perceptions we must have had knowledge of the equal itself” (75b4-6). With this in hand, the conclusion easily follows. We began to perceive as soon as we were born (75b10-11). So we must have knowledge of the equal itself before we were born. If we have knowledge of the form before we

this knowledge as restricted to a very few people. First, because the ‘we’ who recognize that the sensibles are deficient most likely refers to Platonists (see above). Second, it seems reasonable to think that most people take the material world to be what is real and would deny the existence of the forms. My thought here is guided by the analogy of the cave in the *Republic*, but there seems to be some evidence in the *Phaedo* in favor of such a view. See, for instance, passages like 81b4-5. There Plato describes the soul which has become polluted by corporeal elements by its constant association with the body and says that “nothing seems to exist for it but the physical...”

were born, we must have existed before we were born. If we existed before we were born, the soul must have existed at that time.

There are two difficulties with this last stage of the argument. First, it's not clear why, given what has been established to this point in the argument, Plato feels he can conclude that we must have had knowledge of the equal itself before we were born. Second, the argument as it stands is invalid. It seems possible that we might have simply been born with knowledge of the forms so there is no need for us to have existed before that time. Plato directly addresses only the second of these.

Following C.J. Rowe, Dominic Scott offers one suggestion for how to deal with the first difficulty.²⁶ They claim that if Plato's argument is going to work, he needs to implicitly assume that the very same perception which prompts us to have the form in mind also, at the same time, prompts us to realize that what we are perceiving is inferior to that form. Now suppose for *reductio* that we acquire our knowledge of the form by perception. (Here I mean that we genuinely acquire new knowledge of that form, we don't simply recall knowledge previously had.) If the same perception prompts us to new knowledge of the form *and* to a comparison between what we perceive and the form, then Plato would be forced into a contradiction. Remember that he previously insisted that when we first realize sensible particulars are inferior to the form, we must already have knowledge of that form. The very same perception could not do both things at the same time. If one perception prompts us to realize that what we're perceiving is inferior to the form, we must have had *previous* knowledge of that form. In

²⁶ Scott 1999, 109 following Rowe 1993, 172-173.

other words, the same perceptual act could not simultaneously bring us to new knowledge of the form *and* to a comparison between what is perceived and that form.²⁷

Scott and Rowe claim that Plato implicitly assumes that the same perception couldn't be the impetus for new knowledge of the form and for the realization that sensible particulars are inferior. But beyond this, they also need Plato to assume that these cognitive achievements happen *simultaneously* and I simply see no reason for Plato to make that further claim. It seems perfectly reasonable that the very same perception could *first* prompt us to new knowledge of a form *and then* prompt us to realize that the sensible particulars just perceived are inferior examples of that form. The solution Scott and Rowe suggest will only work with this addendum and there is no evidence that Plato endorses it.

There is a simpler solution which doesn't require saddling Plato with this tendentious assumption, however. In the equal sticks and stones argument (74a9-c3), Plato concluded that the equal itself is different from any sensible equal things. Sensible equal things, as we've seen, are deficient instances of the form. They are deficient insofar as they suffer the compresence of opposites—they are both equal (in some respect or respects) and unequal (in other respects). Plato claims that the equal itself is never unequal. Thus the equal itself couldn't be perceptible since perceptible equal things will also be unequal.

²⁷ For this reason, I don't think that we could acquire new knowledge of the form for the first time when we explicitly consider that sensible equals are inferior to the form. In order to make the comparison imagined here one must *already* have knowledge of the form and so the knowledge of the form couldn't have been acquired from such a comparison (since it assumes it).

We can never have perceptual access to the equal itself, but can only bring the form to mind by contrasting it with imperfect sensible instances of the form. No sense perception could give us direct access to the form, yet we have knowledge of that form and are able to compare what we perceive with the form. If this is right, then Plato can conclude that we must have had knowledge of the form before we began to perceive. Unlike Scott and Rowe's suggestion, Plato need only assume that we cannot acquire new knowledge of a form by perceiving imperfect instances of that form.

In addition to commentators' worries about the Recollection Argument, Plato explicitly acknowledges a second difficulty: the argument is invalid. From the claim that we couldn't have acquired new knowledge of the forms after we were born, Plato concludes that we must have had that knowledge before we were born (75b4-c6). But this doesn't account for the possibility that we acquire that knowledge at the moment of birth and not some time before or after. Having concluded that "our souls previously existed apart from the body, before having human form and had wisdom" (76c11-12), Simmias responds with this alternative: Socrates' conclusion would be secure "unless, of course, we receive that knowledge at the same time as we were being born" (76c13-14).²⁸

Socrates' response is less than satisfactory, for in defending his position he invokes the very theory Simmias challenges. Taking Simmias' point that we might have acquired knowledge at the moment of birth he asks "at what other

²⁸ I'm not sure how plausible this third alternative is. But it is surely a logically possible third alternative. We could acquire new knowledge either before birth, after birth or at the moment of birth. Perhaps Simmias is just attempting to ensure the argument is exhaustive.

time did we lose it? We are not born having this knowledge, as we just agreed, so do we lose it at the very time we get it or at some other time?" (76d1-4). Simmias immediately admits that he must have been "talking nonsense" and concedes his point, but he would have been better off sticking to his guns. Although both parties to the debate accept the theory of recollection, Simmias is trying to present an alternative view to Socrates' one of prenatal existence. Perhaps we don't exist somewhere before we are born, but at the moment of birth we (somehow) acquire knowledge of the forms. Socrates insists that this view is impossible in part because one cannot gain and lose knowledge at the very same time. Here Socrates assumes a certain phenomenology of forgetfulness that is unwarranted. Simmias needn't insist that acquiring and losing knowledge happen simultaneously. It might be the case that at the moment of birth we acquire and then immediately lose that knowledge. Anyone who has walked out of a lecture unable to recall certain details is well aware how quickly one can forget what one once knew. This forgetfulness isn't simultaneous with the acquisition of knowledge, but it is near enough.

But Simmias might have also responded in another way. The knowledge we have at the moment of birth need only be latent knowledge. Instead of having knowledge of the forms 'before one's mind' and then forgotten, it might be that such knowledge lies latent in the soul until it is uncovered by proper philosophical training. In this way Simmias could still accept the theory of recollection while severing the implication of the soul's prenatal existence. Even so, Simmias has already accepted the claim that we acquire knowledge of the forms before we

were born (74c4-5). Once he admits this, the Recollection Argument can press on to the conclusion that our souls must have existed before birth.

3.1.2 Harmonia as Material Structure

Having made the connection between the theory of recollection and the prenatal existence of the soul, the argument centers on the claim that “a *harmonia* is a composite thing” (σύνθετον πρᾶγμα, 92a7-8). Since this claim is at the heart of the Priority Argument, it is worth having another look at the whole passage in which it appears:

But you must change your mind my Theban friend, said Socrates if you still believe that a *harmonia* is a composite thing (σύνθετον πρᾶγμα), and that the soul is composed (συγκεῖσθαι) out of the things held in tension in the body, for surely you will not allow yourself to maintain that a composite *harmonia* (ἁρμονία συγκειμένη) existed before that from which it had to be composed (συντεθῆναι). (92a6-b2)

As I’ve argued above,²⁹ this passage reveals a view according to which a *harmonia* is a material structure—an organized whole of material parts. The parts of which the *harmonia* is composed are “the things held in tension in the body.” When Simmias first presented the *harmonia* theory as his own positive view about the soul, he claimed that the things held in tension in the body are material elements like the hot, cold, wet and dry (86b7-8). The view being presented here is one according to which the soul is a composite material thing whose parts are the elements—in other words, a material structure.

²⁹ §2.2 and §2.4.

3.1.3 Priority & Plausibility

The rest of the Priority Argument falls out from the two premises now established: (1) the soul exists prior to the body; and (2) a *harmonia* is a composite of material parts. Tracing the consequences of the second premise, Plato claims that a composite *harmonia* cannot exist prior to the parts from which it is composed. This addition seems like it's on relatively sure footing. Just as a brick building cannot exist before the bricks which compose it, so it is that a composite *harmonia* cannot exist before the material parts which compose it. This premise pits the *harmonia* theory of the soul squarely against the implications of the theory of recollection. As we've seen above, Plato was at great pains to show that the theory of recollection implies that the soul existed before its embodiment. If we accept the Recollection Argument, the soul does exist before the parts of the body. No material composite, however, could exist prior to the parts out of which it is composed. Plato has put his finger on a property that souls have, but *harmoniai* lack—the ability to exist prior to the parts of the body.

Simmias is then faced with a choice. He must either reject the theory of recollection and its implication that the soul preexists the body or he can reject the materialist interpretation of the *harmonia* theory. He opts for the later on the grounds that he accepted the *harmonia* theory “without proof, because of a certain likelihood and plausibility” (92c11-d2). Against these sorts of arguments, Simmias warns: “I know that arguments based on likelihood are impostors (ἀλαζόσιν), and if one doesn't guard against them they will completely deceive”

(92d2-5).³⁰ The argument about recollection and learning, however, was derived from “a hypothesis worthy of acceptance” (92d6-7). Neither Simmias nor Socrates explicitly say what makes the theory of recollection worthy of acceptance. We must presume, given Simmias’ indictment of arguments based on likelihood, its status as a hypothesis must imbue it with a firmer footing.

3.1.4 Conclusion

With this, Simmias is brought around to Socrates’ point of view. Simmias concludes “that I cannot allow myself nor anyone else to say that the soul is a *harmonia*” (92e2-4). The soul has a property—being able to exist prior to the parts of the body—which no *harmonia* of parts could have. Thus the *harmonia* theory is to be rejected. The argument works given two standing conditions.

First, one must accept the Recollection Argument. To do this, one must not only accept the idea that learning is recollection but also that ‘we’ have knowledge of the forms and realize that sensible particulars can only be inferior instances of those forms. If one were to give up any of those views, the prenatal existence of the soul wouldn’t be established and the Priority Argument wouldn’t go through. It seems that one must have clear Platonist sympathies in order to accept the Priority Argument.

Second, the Priority Argument explicitly deals with a materialist version of the *harmonia* theory. As we’ve seen, a *harmonia* is taken to be a composite of

³⁰ There is a bit of irony here, for Simmias is also indicting Socrates’ Affinity Argument as well. Parts of that argument explicitly trade on likelihoods (81c8-82b8) as is well noted by Rowe 1993, 219.

the parts of the body. But the argument may also work if we regard a *harmonia* as a particular abstract structure—the abstract principle of organization a whole of parts has. The particular structure a whole of parts has cannot exist prior to the parts which are so organized. Above, I’ve given arguments for rejecting the interpretation of the *harmonia* theory according to which the soul is an abstract structure understood as a universal.³¹ The Priority Argument gives us one further reason to reject it. If we regard a *harmonia* as a universal abstract structure, the argument wouldn’t work. Such a structure, say the ratio 7:2:1:3, is capable of existing prior to any material parts being arranged according to it. But despite this possibility, all the textual evidence suggests that the argument is only explicitly directed against the view of a *harmonia* as a material structure.

3.2 The Argument from Degrees

The Argument from Degrees (93a11-94b3) has received the most critical attention of any argument Plato directed against the *harmonia* theory and for good reason. The particulars of the argument are difficult to make out. Most of the critical attention has centered around one question: Can *harmoniai* admit of degrees? It may seem obvious that they do. One lyre can be more or less in tune than another. But what is troubling is that Plato says things in the course of this argument which suggest both a positive and negative answer. Instead of trying to determine which answer Plato must have accepted, I read the Argu-

³¹ §2.4.

ment from Degrees as structured around a central dilemma: either *harmoniai* admit of degrees or they don't.³² If they do admit of degrees, the soul couldn't be one since souls don't admit of degrees. From there the argument proceeds by disjunction elimination. If *harmoniai* don't admit of degrees, the moral differences between souls couldn't be accounted for. So on either horn, it turns out that the soul cannot be a *harmonia*. Let us now turn to the details of this difficult argument.

3.2.1 A Rocky Start

The argument begins with a self-consciously obscure question. Socrates asks: “Isn't it natural for each *harmonia* to be a *harmonia* in whatever way it has been harmonized?” (93a11-12). After Simmias admits that he doesn't understand what the question means, Socrates attempts to clarify:

Isn't it the case that if it's been harmonized more and to a greater extent (μᾶλλον...καὶ ἐπὶ πλέον), if indeed it's possible to allow this (εἴπερ ἐνδέχεται τοῦτο γίγνεσθαι), it will be more and to a greater extent a *harmonia* and if <harmonized> less and to a lesser extent (ἐττον τε καὶ ἐπ' ἕλλατον), it will be less and to a lesser extent <a *harmonia*>? (93a14-b3)

Despite Simmias' positive reply, this revised question is far from clear. Three questions immediately arise. First, Socrates speaks of harmonizing a *harmonia*. Following Gallop's lead, we need to determine what sense we can make of such a claim. He writes that “it is not easy to attach sense to an attunement's being

³² That is, because in the course of the argument Plato seems to say both that *harmoniai* admit of degrees and that they don't which leads me to think that the argument is dilemmatic.

tuned in different degrees, or even at all.”³³ Is there any substantive philosophical point being made by speaking of harmonizing a *harmonia* or is it merely the Greek grammatical tendency to group words of the same root?

Second, Socrates claims that a *harmonia* which has been harmonized “more and to a greater extent” seems to be more and to a greater extent a *harmonia*. The same goes for the other direction. A *harmonia* that has been harmonized “less and to a lesser extent” seems to be less and to a lesser extent a *harmonia*. Here we need to determine whether each pair are meant simply as synonyms or whether there is meant to be a difference between each pair of terms.

Third, and perhaps more important for the argument, is to determine what might be intended by the phrase “if indeed it’s possible to allow this.” Three options seem available. Socrates might be (1) affirming that *harmoniai* could admit of degrees; (2) denying that *harmoniai* could admit of degrees, but assuming so for the sake of argument; or (3) neither affirming nor denying the possibility that *harmoniai* could admit of degrees.

Let us respond to the first question: What sense can be made of Socrates’ suggesting that a *harmonia* can be harmonized? Despite Gallop’s claim to the contrary, there is a perfectly reasonable sense in which a *harmonia* can be said to be harmonized. Again let us enlist the distinction between an abstract and a material structure.³⁴ An abstract structure is the principle of organization a whole of parts has, while a material structure is the organized whole of material parts. With this in hand, it is clear that we can sensibly talk about the struc-

³³ Gallop 1975, 160.

³⁴ See §§2.3-4 above.

ture of a structure—the abstract structure which a material structure has. Take, for example the ratio 2:1 and a particular molecule of water. The molecule (itself a material structure) has been organized according to the ratio (an abstract structure). So there’s a reasonable sense in which we talk about the structure of a structure. The same can be said of a *harmonia*. We can speak of the abstract *harmonia* which a material *harmonia* has. To take a pertinent example: A lyre is and has a *harmonia*. It is a *harmonia* insofar as it is an organized whole of parts. It has a *harmonia* insofar as those parts have been fitted together according to an abstract principle of organization. If we keep this distinction in mind, it is quite sensible to harmonize a *harmonia*.

Now for the second question. When Socrates claims that one *harmonia* can be harmonized “more and to a greater extent” than another, does he mean something different by ‘more’ and ‘to a greater extent’? Taking their cues from Olympiodorus, R.D. Archer-Hind and John Burnet both argue that Plato means to mark a distinction here.³⁵ Archer-Hind suggests that ‘more’ refers to the degree of completeness according to which the composite is accomplished, while ‘to a greater extent’ refers to the character of the composite itself.³⁶ To say that something is more or less of a *harmonia* is to say that each note which composes that *harmonia* has a pitch which more or less closely approximates some ideal pitch. To say that something is a *harmonia* to a greater or lesser extent is to say something about the number of tones which compose that *harmonia*. An octave, for example, consists of eight notes occupying the (inclusive) interval be-

³⁵ Archer-Hind 1894, 79 and Burnet 1911, 95.

³⁶ Archer-Hind 1894, 79.

tween two notes. A fifth consists of the five notes occupying such an interval, while a third consists of three notes. On this reading, the octave is a *harmonia* to a greater extent than the fifth and the fifth to a greater extent than the third because each extends over more elements than that to which they are compared.

Although it is certainly possible that ‘more’ and ‘to a greater extent’ are meant to represent distinct alternatives, I think they are more reasonably taken as synonyms. Either these expressions are meant to mark genuine alternatives or they are not. If they don’t mark genuine alternatives, then we needn’t go any further—they are merely synonyms used for rhetorical effect. If they do mark genuine alternatives, the distinction is made and then immediately dropped. Here’s why. This distinction is meant to be applied to the view that the soul is a *harmonia*. As we’ve seen in the last chapter, such a *harmonia* can either be something material or immaterial. If the soul is understood as something material, it will be composed of the same range of elements—“the hot, cold, dry, wet and things of that sort.” If the soul is something immaterial, it will also be composed of the same number of elements.³⁷ No soul could extend over more elements and so no soul could be a soul “to a greater extent” than any other. So when applied to the soul, it will be a distinction without a difference. For this reason, I suggest that it be dropped and the terms taken as synonyms.

³⁷ Just how many such elements there are is wide-reaching issue. There is generally thought to be three choices: (1) The soul is simple, composed of only one part; (2) The soul is composed of a rational and appetitive part; or (3) The soul is composed of a rational, spirited and appetitive part. For the moment, we can leave to one side which of these views is a the correct interpretation of the *Phaedo*. Plato doesn’t argue that some souls have more or fewer parts than any others.

The third question about this opening passage is the most important and the most controversial: Does Plato mean to indicate that *harmoniai* can or cannot admit of degrees? Although he seems to suggest that one *harmonia* can be “more and to a greater extent” a *harmonia* than another, he immediately adds the following proviso: “if indeed it is possible to allow this” (εἴπερ ἐνδέχεται τοῦτο γίγνεσθαι, 93b1). This addition can be read in three ways. Socrates might be affirming his belief that *harmoniai* can admit of degrees, but expressing some doubts about how firmly he holds that belief. Second, he might be denying the possibility of degrees of attunement, but tracing out the consequence of such a belief for the sake of argument. On this view, we might best render the proviso as ‘*per impossible*.’ Third, Socrates may not be taking as stand on the issue and neither affirming nor denying the possibility that *harmoniai* can admit of degrees.

In his note on this line, Burnet opts for the second interpretation.³⁸ He translates the proviso as ‘supposing this is possible.’ This, he argues, is “a plain indication that it is not possible” for a *harmonia* to admit of degrees.³⁹ Socrates is just tracing the implications of saying that one *harmonia* might be more a *harmonia* than another. It is clearly absurd, he claims, for one *harmonia* to be more tuned than another. A string is either in or out of tune. Burnet argues that a *harmonia* is a kind of limit (πέρας) and not something subject to degrees. He draws support for this view from a passage in the *Republic*. Socrates claims that no musician “wants to outdo another musician in tuning his lyre and in

³⁸ Burnet 1911, 95. See also Rowe 1993, 221

³⁹ Burnet 1911, 95.

tightening and loosening the strings” (*Republic* 1.349e10-13). The thought here seems to be that any two (competent) musicians will aim at precisely the same tuning and so will tighten and loosen their strings to hit that mark. Once the mark is hit, one cannot make the lyre more in tune by tightening or loosening the strings any further. Since musicians aim at tuning their instruments to exactly the same degree, Burnet concludes that it makes no sense to speak of degrees of *harmonia*.⁴⁰

Despite apparent support from the *Republic*, Burnet’s claim doesn’t fit the rest of the passage we’ve been examining. Recall how the passage is structured. Socrates begins with an obscure question—Isn’t it natural for each *harmonia* to be a *harmonia* in whatever way it has been harmonized?—that Simmias fails to understand. This is followed by Socrates’ attempt to elucidate that question by asking another: “Isn’t it the case that if it’s been harmonized more and to a greater extent, if indeed it’s possible to allow this, it will be more and to a greater extent a *harmonia* and if <harmonized> less and to a lesser extent, it will be less and to a lesser extent <a *harmonia*>?” (93a14-b3). If Burnet were right, then Socrates wouldn’t be explaining his initial question in greater detail

⁴⁰ It is worth noting that in *Philebus* 31c-d Plato seems to allow for degrees of *harmonia*. In that passage he explains that pleasure and pain correspond to the restoration and destruction of the nature of a thing. Further he explains that the *harmonia* is the nature of the thing. Thus pain is the slackening or destruction of the things *harmonia* which is contrary to its nature. There he also seems to distinguish different levels or different types of *harmoniai*: that which arises between the parts of the soul is called a ‘*harmonia*’ but also health and the living animal itself. It seems that depending on the sort of *harmonia* one has in mind the more or less likely it is to think that it could admit of degrees.

but rather making a completely new point.⁴¹ Having asked for clarification of Socrates' initial question, Simmias would certainly be disappointed if Socrates simply were to move on and claim that degrees of *harmoniai* were impossible. For this reason, we ought to drop the view that here Socrates means to deny the possibility of degrees of attunement.

That leaves us with two possibilities: either he accepts (with reservations) the possibility that *harmoniai* admit of degrees or he's neutral about it. I think there is little to adjudicate between these two possibilities. If Socrates provisionally accepts the view, he clearly does so with reservations. If he has reservations, then he's at least open to the possibility that the view is false. And if he's open to the possibility that the view is false, then in either case he's open to both the possibility that *harmonia* admit of degrees and the possibility that they don't. So whether he provisionally accepts the idea that *harmoniai* admit of degrees or whether he remains neutral cannot be determined by the evidence we have available here. If it is possible to decide which of these alternatives is correct, we have to see what use Socrates makes of this premise later in the argument.

3.2.2 A Connection With the Soul

In the next stage of the argument Socrates connects his views about *harmoniai* with those about the soul. As we've just seen, Socrates is open to the possibility that *harmoniai* admit of degrees. He is not, however, open to that possibility

⁴¹ Hicken 1954, 19 followed by Gallop 1975, 159.

with regards to the soul. Drawing on the possibility that *harmoniai* admit of degrees he asks:

And so (οὐδὲν) is this the case in relation to the soul, such that one soul is to a greater extent and more <a soul> than another, or to a lesser extent and less itself, <namely> a soul? (93b5-7)

Simmius replies with an unconditional “in no way whatsoever” (93b8). Here Socrates is clearly suggesting that no souls—at least in so far as they are souls—will admit of degrees. That is, one soul cannot be more or less a soul than any other.

Does this give Socrates enough to conclude that the soul cannot be a *harmonia*? Some of Plato’s earliest commentators have read this passage as offering a self-contained argument against the *harmonia* theory of the soul. Themistius, for example, offers this tidy reconstruction in his commentary on Aristotle’s *De Anima*: “[Plato argued]...that a *harmonia* admits of more and less (μᾶλλον καὶ ἕττον), whereas the soul does not.”⁴² We might describe this as an argument based on a simple application of Leibniz’ Law. *Harmoniai* have a property (i.e., admitting of degrees) that souls lack, hence the soul couldn’t be a *harmonia*.

There are two apparent difficulties with this view. First, we’ve seen above that Plato hasn’t definitively established the first premise of this little argument. He either accepts (with reservations) the possibility that *harmoniai* admit of degrees or he’s not yet taken a stand on the issue. If this little argument is to

⁴² Themistius, *In Libros Aristotelis De Anima Paraphrasis* 24.25-26. He takes this to be one of five arguments Plato’s uses to combat the *harmonia* theory. See also Philoponus, *In Aristotelis De Anima Libros Commentaria* 142.22-26.

work, we need to say that Socrates assumes—at least provisionally—that *harmoniai* admit of degrees. But if he only provisionally accepts the first premise, he can only provisionally reject the *harmonia* theory itself. Second, even if we take this as a self-contained, albeit provisional, argument it’s technically invalid. Socrates needs to supplement the first premise by claiming that *all harmoniai* admit of degrees. Without this addition, there might be some *harmoniai* that don’t admit of degrees and so there might be some souls that could be *harmoniai*. If that is possible, the proposed conclusion of the argument—the soul is not a *harmonia*—could not be validly inferred from the established premises.⁴³

I neither agree with Themistius that Plato has established a self-contained argument against the *harmonia* theory, nor with Philoponus that the inference he suggests is invalid. The overall structure of the argument is a *reductio ad absurdum* of the claim that the soul is a *harmonia*.⁴⁴ The view is reduced to absurdity, as I’ll show in greater detail below, using a dilemma. On the first horn, Socrates assumes that *harmoniai* admit of degrees; on the second, he assumes they don’t. Since either assumption leads to the conclusion that the soul cannot be a *harmonia*, the conclusion is secure.

For the moment let me assert without argument that what we have in the passage under scrutiny is the first horn of this dilemma. If this is right, the ar-

⁴³ This objection first noted by Philoponus *In Aristotelis De Anima Libros Commentaria* 143.32-38.

⁴⁴ I agree, therefore, in this much at least with Wagner 2001, 79; Gallop 1975, 161; Taylor 1983 [1970], 230-231. Their reconstruction of the rest of the argument is, however, quite different.

gument to this point will look like this: Assume that *harmoniai* admit of degrees. Souls, insofar as they are souls, do not differ in degree. Therefore the soul cannot be a *harmonia*. This reading does justice to Themistius' insight that Plato is presenting a complete argument here. Although it does result in the conclusion that the soul is not a *harmonia*, it is only half of the story. The second horn of the dilemma will be dealt with later.

But still, the inference contained in this sub-argument might be invalid. Philoponus' worries that the simple admission—*harmoniai* admit of degrees—might be quantified in such a way that the argument comes out invalid, as we've just seen. He's right to argue that if some *harmonia* admit of degrees and others don't the argument will be invalid. But Plato doesn't quantify the premise in this way. In fact, he doesn't explicitly quantify it at all. I think there is little to recommend Philoponus' position, however. When we're faced with an unquantified assumption of an argument, e.g., 'Assume bears eat fish,' the natural way to take this claim is to understand it to contain an implicit universal quantifier and not to read it as the claim 'Assume some bears eat fish.' Much the same thing is going on in the passages under question. If we're being asked to assume *harmoniai* admit of degrees, I think it is more natural to read this as the claim that all *harmoniai* admit of degrees. Despite Philoponus' worries, I think we can safely regard this as a valid argument despite Plato's failure to be entirely explicit. Of course, much more work needs to be done in order to establish my main claim that the Argument from Degrees primarily consists of a dilemma. Let us leave it here as, at least, an open possibility.

3.2.3 Moral Implications of the Harmonia Theory

Having just agreed that souls don't admit of degrees, Socrates blurts out an exclamation marking a shift in the argument: "Come on, by Zeus! One soul is said to have intelligence, excellence and goodness while another is said to have ignorance, depravity and evil, are these things well said?" (93b9-c1). The point he's driving at is that there is a perfectly reasonable sense in which souls *do* admit of degrees. Some have more intelligence than others, some are in a better moral condition than others. They don't differ in the degrees to which they are souls, but it seems they can differ in the degree to which they are, say, virtuous. Socrates continues to press this point, challenging the friend of the *harmonia* theory to explain how he would account for such moral differences between souls:

And so among those who have posited that the soul is a *harmonia*, what will anyone say these things in the soul are, [e.g.] excellence and evil? Are they some other *harmonia* or disharmony? And is it harmonized, i.e., the good soul, and does it have in itself, being a *harmonia*, another *harmonia*, while the other <bad soul> is itself unharmonized and doesn't have another *harmonia*? (93c3-8)

Although Simmias has distanced himself from the *harmonia* theory of the soul by this point, he still agrees that the *harmonia* theorist must say something like this. The main point of Socrates' suggestion is clear. Since they've previously agreed that no soul differs from any other insofar as it is a soul, they need some way to account for the moral differences between souls. If good and bad souls are equally souls, they must be different with respect to their excellence and evil.

These moral characteristics are also assumed to be *harmoniai*. So the good soul is a *harmonia* and contains a further *harmonia*, namely excellence.

This account of the virtuous soul seems, in some important ways, to anticipate that presented in the *Republic*. There Plato will define virtues like justice (430e3-4) and moderation (431e7-8) as kinds of *harmoniai* comprised by the three parts of the soul. Consider his description of the just person's soul:

[The just person] puts himself in order, is his own friend, and harmonizes the three parts of himself like three limiting notes in a *harmonia*—high, low, and middle. He binds together those parts and any other there may be in between, and from having been many things he becomes entirely one, moderate and harmonious. (443d4-e2)

Having already argued that there are three parts of the soul—the rational (439d), the non-rational or appetitive (439d), and the spirited (439e)—he characterizes justice in terms of a right relationship between those parts. When those parts have been properly fitted together such that each part does its own work and doesn't interfere with the functioning of any other, the soul is just. The soul of the just person is “entirely one,” a unified whole of parts. Here justice is a kind of *harmonia* of the parts of the soul. Although the just soul and the unjust soul won't differ in the degree to which they are souls, they will differ in the way their parts have been fitted together.

Now consider Socrates' description of the vicious soul in the *Phaedo*. One might have expected a parallel account of the vicious soul like the following. As the passage at 93b5-7 indicates, Socrates and Simmias have agreed that one soul is *not* more and to a greater extent a soul than any other. The excellent and evil soul shouldn't differ in the degree to which they are souls, but they do differ

inasmuch as the former has a second *harmonia* among its parts while the latter lacks that *harmonia*. But that's not the account we get. Socrates does claim that the evil soul lacks this second *harmonia*, but he also appears to claim that the evil soul is itself disharmonious (93c3-8). Read in this way, the passage under consideration would yield the following two premises in the Argument from Degrees: (1) the excellent soul is a *harmonia* and has within it an additional *harmonia*; and (2) the evil soul is not a *harmonia* and lacks any additional *harmonia*. Socrates seems to have set the *harmonia* theorist up as a straw-man.⁴⁵ Simmias shouldn't have agreed that the evil soul is itself a disharmony. And indeed, in the very next line of the argument they reiterate their agreement that souls don't differ in the degree to which they are souls.

3.2.4 A Fallacy in the Argument?

The next step in the argument brings with it an apparent fallacy. The standard modern interpretation has it that Socrates establishes a fallacious equivalence between *harmoniai* and souls. Here's what he actually says:

But it was previously agreed, he said, that one soul is neither more nor less a soul than another, and this is the agreement, one *harmonia* is neither more and to a greater extent nor less and to a lesser extent a *harmonia* than another. (93d1-4)

It is quite clear that claims about the soul are meant to be parallel to claims about *harmoniai*. But the claim that souls don't admit of degrees is not, without further assumptions, equivalent to the claim that *harmoniai* don't admit of

⁴⁵ I don't really know what to say here. The claim that the evil soul is not a *harmonia* is clearly not something any friend of the *harmonia* theory of the soul would accept—it is the basic tenet of that position.

degrees. Following C.C.W. Taylor we might try what seems to be the most logical choice for filling in that gap—the assumption for the *reductio* that the soul is a *harmonia*.⁴⁶ On this strategy, Socrates would be establishing the equivalence by simple substitution. If the soul is identical to a *harmonia*, that would seemingly allow one to substitute ‘*harmonia*’ for all instances of ‘soul’ in the argument. This strategy will work, however, only if everything true of the soul is true of a *harmonia* and vice versa. Here’s why. The premises—(1) the soul is a *harmonia* and (2) no soul admits of degrees—don’t imply that no *harmoniai* admit of degrees. There might be some *harmoniai* that are more and to a greater extent *harmoniai* than others, despite the fact the *harmonia* that the soul is does not admit of degrees. Thus the two claims ‘souls don’t admit of degrees’ and ‘*harmoniai* don’t admit of degrees’ are not equivalent.

But Taylor offers a quick fix—introduce the claim that *harmoniai* don’t admit of degrees as a new premise in the argument.⁴⁷ Taken this way, the argument wouldn’t depend on a fallacious equivalence. But despite Taylor’s helpful suggestion, he doesn’t trace its implications. Recall that the Argument from Degrees opened with quite a different assumption. At 93a14-b3, Socrates tentatively accepted the view that *harmoniai* admit of degrees. As a consequence of this assumption, there seemed to be a difference between souls and *harmoniai*: souls don’t admit of degrees but *harmoniai* can. But this puts the argument in a bind. Either the argument relies on a fallacious equivalence or it introduces the negation of the assumption which opens the argument. Accepting the former al-

⁴⁶ See Taylor 1983 [1970], 225.

⁴⁷ Taylor 1983 [1970], 227.

ternative is less than desirable, but accepting the latter requires some further explanation.

Above I suggested the possibility that the Argument from Degrees might be organized around a central dilemma—either *harmoniai* admit of degrees or they don't.⁴⁸ Now we have good reason to take this view seriously. As we've seen, if Socrates doesn't introduce the claim that *harmoniai* don't admit of degrees as a new assumption, the argument will depend on a fallacious equivalence. But if that claim is so introduced, we need to explain why he appears to open the argument by assuming just the opposite. If the argument is structured around a dilemma, this is easy to do. Perhaps Plato hasn't made up his mind whether *harmoniai* admit of degrees. The argument is structured in such a way that this doubt is neutralized. If it turns out that *harmoniai* admit of degrees, Socrates can show that the soul is not a *harmonia*. But if it turns out that they don't admit of degrees, the next stage in the argument will also show that the soul is not a *harmonia*. Before we turn to that step, we need to look more closely at the claim that *harmoniai* don't admit of degrees.

3.2.5 Do Harmoniai Admit of Degrees?

Many commentators have argued that it just seems wrong for Socrates to say that *harmoniai* don't admit of degrees.⁴⁹ Hicken puts the point strongly: “the statement that attunement does not admit of degrees appears to be nothing but

⁴⁸ See §3.2.2.

⁴⁹ See Wagner 2001, 80-82; Bostock 1986, 128-130; Gallop 1975, 164-166; Taylor 1983 [1970], 225-230; Hicken 1954 *passim* and Archer-Hind 1894, 80-81.

an embarrassment to the argument.”⁵⁰ Surely one instrument could be more in tune than another or more to the point, some souls are more or less virtuous than others. If one *harmonia* can be more of a *harmonia* than another, what should we make of Socrates’ claim to the contrary?

The first way of diagnosing the problem is to suggest that Plato failed to distinguish two kinds of *harmoniai* one of which admits of degrees and one which doesn’t.⁵¹ Roughly the idea is that there are different sorts of *harmoniai* corresponding to the different sorts of elements of which they are *harmoniai*. The soul is a *harmonia* of the four physical elements—the hot, cold, wet and dry. A *harmonia* of this sort is a physical *harmonia*, what we might call a ‘ φ -*harmonia*.’ It is in virtue of the relation between these physical elements that the soul exists, but the soul has its own psychological parts namely reason, spirit and appetite. As we’ve seen, virtues like justice and moderation can be understood as a *harmonia* of the three parts of the soul. A *harmonia* of these psychological parts is what we might call a psychological or ‘ ψ -*harmonia*.’⁵² No soul is more of a φ -*harmonia* than any other. Insofar as each soul exists, there must be the right kind of structure among the material elements of the body. But it seems clear that souls can be more of a ψ -*harmonia* than others. Souls differ in degrees of virtue. Some are governed by reason, others by appetite. Those governed by reason would be more harmonized than those which constantly yield to

⁵⁰ Hicken 1954, 20.

⁵¹ This diagnosis is offered by Taylor 1983 [1970], 225-230 in slightly different terms.

⁵² I won’t attempt to explain the way in which the *harmonia* of physical elements ‘generates’ the psychological elements for it would take us too far afield.

appetite. On this diagnosis, Socrates' claim that *harmoniai* don't admit of degrees is false because souls can differ in the degree to which they are ψ -*harmoniai*.

The second way of diagnosing the problem is to suggest that Plato failed to draw a distinction between two ways something might be said to be a *harmonia*.⁵³ To use Gallop's terms, there are two types of *harmoniai*: an 'attunement₁' is something whose parts have been structured to some degree or other, while an 'attunement₂' is something whose parts have been correctly structured according to some ideal. Take, for example, a poorly tuned lyre. The instrument is a *harmonia*, an attunement₁, because its parts meet some minimum standard of organization. A lyre without strings would fail to be a *harmonia* at all. Although a poorly tuned lyre might be an attunement₁, its strings aren't in an ideal tuning. A lyre which has been tuned according to that ideal would be an attunement₂. Of course, instruments can more or less closely approximate that ideal. The degree to which one instrument more closely approximates that ideal than another, it is more of an attunement₂. But both the perfectly tuned lyre and the poorly tuned lyre are still attunements₁ to the same degree—both have met some minimum standard of organization among their parts. On this diagnosis, Socrates' claim that *harmoniai* don't admit of degrees is false because *harmoniai* can differ in the degree to which they are attunements₂.

⁵³ This strategy is adopted by Bostock 1986, 129-130 and Gallop 1975, 164-165.

Both of these subtle diagnoses, however, miss their mark. The strategy of the Argument from Degrees is to trace the implication of claiming either that *harmoniai* admit of degrees or *harmoniai* don't admit of degrees. On the first assumption the argument was this: *harmoniai* admit of degrees but souls don't, so the soul cannot be a *harmonia*. We'll examine the argument given the other assumption below. But suffice it to say that no matter what the argument turns out to be, attacking its guiding assumption is the wrong sort of criticism. On the second horn of the dilemma, Socrates will assume for the sake of argument that *harmoniai* don't admit of degrees. To challenge this by suggesting that there are some *harmoniai* which do admit of degrees is to miss the point of structuring the argument as a dilemma. So let us look at the strategy of the second horn.

3.2.6 The Second Horn & Endgame

Operating under the assumption that *harmoniai* don't admit of degrees, Socrates goes on to show why the soul couldn't be a *harmonia*. The moral differences that exist between souls—some being more excellent or more evil—cannot be accounted for if *harmoniai* don't admit of degrees. Socrates and Simmias run through a series of connections from 93d6-94b3 which wind up at this conclusion:

That which is neither more nor less a *harmonia* has been harmonized neither more nor less, isn't that right? —It is.

And does that which has been harmonized neither more nor less have a share in *harmonia* to a greater or lesser extent, or equally? —Equally.

And so since no soul is neither more nor less itself, i.e. a soul, than any other, it is neither more nor less harmonized. —That’s right.

Having come to be in this state, would it have more a share in disharmony or *harmonia*? —No.

And having come to be in this state, could one soul have more a share of evil or excellence than another, if evil is disharmony and excellence *harmonia*? —No.

Rather following right reason, Simmias, no soul will have a share in evil, if indeed it is a *harmonia*; for certainly a *harmonia* is completely itself, a *harmonia*, and would never have a share of disharmony. —No indeed!

Certainly the soul, being completely a soul, wouldn’t <have a share in> evil. —How could it?

It follows from this argument that the souls of all living things will be equally good, if indeed souls are naturally this very thing, namely souls. —It seems so to me.

Does this seem acceptable and the argument would have this happen to it if the hypothesis were correct that the soul is a *harmonia*? —Not in any way.

In order to account for the moral differences between souls, the friend of the *harmonia* theory had established a corollary view: the good soul is a *harmonia* and has a second *harmonia*, excellence, which the bad soul lacks. Souls clearly have greater and lesser degrees of excellence. So as a result of this addendum to the theory, it should turn out that souls do have greater and lesser degrees of *harmonia*. But this view turns out to be at odds with the assumption governing this horn of the dilemma—*harmoniai* don’t admit of degrees. One consequence of this assumption is that each *harmonia* will “have a share in” or “participate in” (μετέχειν, 93d10; e5; 94a2; a4) *harmonia* equally. Since no soul is more of a

soul than any other, no soul can have more a share of *harmonia* than any other. If that's right, it will turn out that all souls will be equally good (or bad), since no soul can have more a share in excellence (or evil). But according to the moral corollary, good souls will have more a share in *harmonia* than bad souls. The argument is brought to a contradiction and so the soul cannot be a *harmonia*.

The only difficulty in understanding the argument against the second horn of the dilemma is that Plato now speaks of one *harmonia* "having a share in" or "participating in" (*μετέχειν*) *harmonia*. Two explanations have been attempted. Hackforth explains the difference as follows:⁵⁴ The good soul, which is itself a *harmonia*, will have or contain a second *harmonia*. Since the good soul will have two *harmoniai* where the bad soul will just have one (or perhaps none at all), the good soul might be said to have more a share in *harmonia* than the bad soul. Gallop⁵⁵ suggests that Plato means to mark a distinction between 'being in a state of attunement' and 'being an attunement.' He claims that 'being an attunement' means that something's parts have been structured to meet some minimal standard. 'Being in a state of attunement' means that something's parts have been *correctly* structured according to some standard. On this view, two souls cannot differ in the degree to which they are souls; but they can differ in the degree to which they approach the correct state of attunement, i.e., the state resulting in virtue.

⁵⁴ Hackforth 1955, 119.

⁵⁵ Gallop 1975, 163-164.

Neither suggestion is successful, however. On Hackforth's account, souls won't differ in the degree to which their parts have been 'harmonized.' Rather the good soul will be a *harmonia* and have another, the bad soul will simply fail to have a second *harmonia* at all. This might help explain the difference between a morally excellent person and someone who is morally depraved, but it won't help explain how there could be a range of moral conditions between those two extremes. Gallop's suggestion seems to allow for a range of moral conditions—souls can more or less approximate some standard. This means that all souls which have met some minimal standard of organization are equally souls, but some are more correctly organized than others. But what makes something a soul on the *harmonia* theory? The correct arrangement of the material parts of the body—the hot, cold, wet and dry. In order for one soul to be in a morally better condition, those material parts would have to be more correctly arranged. It seems reasonable that the better or worse arrangement of the parts of the body could account for why one person is healthier than another, but it is not clear how it could make one soul more excellent.

To explain this distinction, let me now enlist one of the conclusions from the previous chapter. There I made the case that there are two ways to understand what it is to be a *harmonia*. A *harmonia* can be an abstract structure—the principle of organization a whole of parts has; or a *harmonia* can be a material structure—the organized whole of material parts. The basic difference between these two types is that a *harmonia* can be something a whole of parts has or it can be what a whole of parts is. This seems to be what is at issue here when Plato speaks of a *harmonia* 'participating in' or 'having a share in' *harmonia*.

The soul is a material structure, an organized whole of parts which has an abstract structure, a principle according to which its parts are organized. Since no soul is more or less a soul than any other (93d12-93e2), no soul is more or less a material structure than another. But if that is right, then the parts of each will have been ‘harmonized’ or structured according to the same principle of organization. The moral differences between souls, however, are determined by the different ways the parts of the soul are organized. If the parts of every soul have the same principle of organization, then every soul will have the same moral characteristics. Since this is absurd, the soul cannot be a *harmonia*.

This brings the Argument from Degrees to a close. Whether or not *harmoniai* admit of degrees, Plato has shown that the soul cannot be one. There are two features Plato attributes to the soul which makes this clear. First, no soul is more or less a soul than any other. Second, some souls are morally better or worse than others. If *harmoniai* admit of degrees, then the soul couldn’t be one since souls don’t admit of degrees. If *harmoniai* don’t admit of degrees, then all souls will have the same principle of organization and consequently it will turn out that all souls are equally virtuous. But since it’s clear that souls are not all virtuous to the same degree, the soul cannot be a *harmonia*. Since on either horn, the soul cannot be a *harmonia* Socrates is licensed to reject the theory.

3.3 The Opposition Argument

The Opposition Argument (94b4-95a3) actually begins before the Argument from Degrees. Plato first outlines a series of metaphysical principles about the

relation between a *harmonia* and the parts out of which it is composed (92e5-93a10). In the argument proper (94b4-95a3) he argues that the soul has a power that a *harmonia* lacks, namely the ability to oppose the parts out of which it is composed. The soul can oppose the desire of the body for drink, but no *harmonia* would be capable of opposing its parts. The soul, he concludes, cannot be a *harmonia*. As I hope to show, there are some important problems with this argument. In particular, it fails to address Simmias' original presentation of the *harmonia* theory of the soul. Still I hope to show that, despite the differences between the two, the Opposition Argument is an important forerunner of Plato's argument for the tripartition of the soul in the *Republic*.

3.3.1 Metaphysical Principles Regarding Harmoniai

At 92e5-93a10 Socrates and Simmias outline four metaphysical principles concerning whether *harmoniai* or other composite objects can act, be acted on, or be in different states than the parts out of which they are composed. These principles represent Plato's most abstract reflections in the *Phaedo* about the nature of the relationship between composite objects and their parts. It is worth it to have them in front of us:

- (1) Does it seem to you that a *harmonia* or any other composite (ἡ ἄλλῃ τινὶ συνθέσει) can be in any other state than that which the things from which it is composed are in? —Not at all.
- (2) Nor, I presume, to act or be acted on in some way other than the way they act or are acted on. —He assented.
- (3) Therefore (ἄρα) a *harmonia* doesn't lead those things from which it is composed, but follows them. —He agreed.

- (4) Therefore (ἄρα) it is quite impossible for a *harmonia* to move in the opposite direction, make a sound or to otherwise be opposed to its parts. —Quite so.

The first thing to note about this passage is that not all the principles are on equal footing. The last two are derived from or implied by the first two. The conclusion of this mini-argument is that no *harmonia* has the power to oppose the parts from which it is composed.

The second thing to note, and we've seen this above,⁵⁶ is that Plato understands a *harmonia* to be a composite object. This passage, together with that in the Priority Argument,⁵⁷ constitutes the best evidence that a *harmonia* is a whole of material parts. Recall Socrates' question to Simmias— whether he still believes “that a *harmonia* is a composite thing (σύνθετον πρᾶγμα), and that the soul is composed out of the things held in tension in the body” (92a7-9). The things held in tension in the body are the elements: the hot, cold, wet and dry. In the Priority Argument it is clear that a *harmonia* of such parts would be something material. When giving these metaphysical principles, however, the position is put quite generally: *harmoniai* can't act contrary to their parts, whatever those parts might be.

Third, these metaphysical principles point to an important admission about how Plato understands the causal powers of composite objects. In the last chapter,⁵⁸ I argued that the relation between a *harmonia* and its parts is best characterized as one of mereological supervenience. This view, best articulated by

⁵⁶ §2.5.

⁵⁷ See §3.1 above.

⁵⁸ §2.5.

Jaegwon Kim, has it that a whole mereologically supervenes on its parts just in case the properties of the whole are determined or fixed by the properties of and relations between its parts.⁵⁹ The intrinsic properties of a whole will covary with the properties of its parts. There can be no changes in the whole without corresponding changes in the parts. One important result of this is that a whole will have no causal powers which have not been determined by the causal powers of its parts. If a whole has a causal power which wasn't determined by those of the parts, then the whole could act without a corresponding change in the parts. This situation isn't possible for a *harmonia*. A *harmonia* can't be "in any other state than that which the things from which it is composed are in" (92e4-93a2). In other words, a *harmonia* mereologically supervenes on its parts. If a *harmonia* has any causal powers, it has them in virtue of the causal powers of its parts. For this reason a *harmonia* couldn't act differently than, let alone oppose, its parts.

There's an obvious counterexample to this principle, however. When first introducing the *harmonia* theory, Simmias claims that the *harmonia* of a lyre is destroyed long before its wood, pegs and strings. One might slacken the strings of the instrument to the point where its *harmonia* is destroyed. This seems to be a straightforward case where the *harmonia* is affected differently than its parts—the former is destroyed while the latter continue to exist.⁶⁰ This objec-

⁵⁹ See Kim 2000, 15-19; Kim 1984, 154; Kim 1978, 155-156. See also van Inwagen 1987, 27. This view comes to the fore here in the Opposition Argument because it is here that Plato specifically articulates how the causal powers of *harmoniai* are related to the material parts of which they are composed.

⁶⁰ This objection is articulated by Gallop 1975, 167.

tion misses the asymmetry of the dependence relation, however. A *harmonia* and its causal powers fundamentally depend on the parts out of which it is composed. Those parts, however, don't depend on the *harmonia*. Earth, air, fire and water can exist whether or not any *harmoniai* exist, but no material *harmonia* can exist without earth, air, fire and water. We might put the principle underlying this view as follows: a *harmonia* is in the state it's in and has the powers it has because the parts out of which it is composed are in the state they're in and have the powers they have.

Let us now see how Plato makes use of these principles in the argument proper.

3.3.2 The Argument Proper

The Opposition Argument proper (94b4-95a3) spells out the implications for the soul given Plato's general metaphysical principles about *harmoniai* and their parts. Though the argument is the simplest of the three and so has garnered little attention from the commentators, it anticipates Plato's influential argument for the division of the soul in *Republic* 4.⁶¹ But despite its status as a forerunner of that argument, it is different in some rather important ways from its more fully developed counterpart. But before we can examine the differences between those arguments, we need to get the Opposition Argument on the table.

The argument begins with the claim that the soul, especially if it is a wise (*φρόνιμος*) soul, rules (*ἀρχειν*) the body (94b4-5). Plato immediately explains what this means: the wise soul doesn't follow the affections of the body (*τὸ*

⁶¹ *Republic* 4.435d-441c.

σῶμα πάθεισιν), but rather opposes those affections (94b7-8).⁶² The claim that the wise soul rules the body made its first appearance in the course of the Affinity Argument. There (79e9-80a5) Plato argues that the soul is like the divine while the body is like the mortal. The divinity of the soul consists in the fact that, like other divine things, the soul rules and leads (ἄρχειν τε καὶ ἡγεμονεύειν). But as we've discussed, this view is not unproblematic.⁶³ The soul doesn't always rule and lead the body. There are times when bodily desires can adversely influence the soul. Plato's example was that the desire for wealth can sometimes make us too busy to practice philosophy (66c8-d3). The desire for wealth, here understood as a bodily desire, can "rule" the soul. So the soul doesn't always succeed in ruling the body.

There are two ways to get around this difficulty. First, we might qualify the view that the soul rules and leads the body by saying that the soul naturally has the ability to rule and lead the body, even if it sometimes succumbs to it. Second, we might put special emphasis on the fact that Plato claims that the *wise* soul rules the bodily affections.⁶⁴ Perhaps the wise soul is one whose desires are

⁶² Presumably the wise soul doesn't oppose *all* the affections of the body, just those affections which run contrary to reason.

⁶³ §1.5.

⁶⁴ Bostock 1986, 131-134. There he challenges the notion that the soul is here opposing bodily affections, but rather affections of the soul. He argues that since the soul retains many of these desires when it is in a disembodied state the affections discussed here couldn't be bodily. Some disembodied souls, he claims "fear Hades (81c11), they retain their desires for things bodily (81e1), and they keep their characters as virtuous or vicious, social or anti-social, mild or cruel, temperate or gluttonous, and so forth (81e-82)." But it is clear that the souls who retain bodily affections after death haven't practiced philosophy in the right way and have been 'shot-through' with material parts (see §1.4). So it may still be the case that

all properly ordered such that the affections of the body will never swamp those of the wise soul. The trouble with this claim is that there will be very few, if any, examples of such a soul. All the argument needs, however, is the weaker claim that the soul is naturally able to rule the body since the contrast is with a *harmonia* which cannot oppose the parts from which it is composed.

The evidence Plato cites for this possibility will be familiar to anyone who knows the *Republic*. There are occasions when the body is hot and thirsty and the soul draws the person to not drinking or occasions when the body is hungry and the soul draws the person to not eating (94b7c1). Plato also cites a passage from the *Odyssey* when, in attempting to overcome his anger and fear Odysseus “struck his breast and rebuked his heart saying, ‘Endure, my heart, you have endured worse than this.’”⁶⁵ In the *Republic*, this evidence is used to show that these opposed desires must have originated in different parts of the soul.⁶⁶ In the *Phaedo* passage, however, desires for food or drink or emotions like anger and fear are taken to be bodily affections rather than affections of the soul. The conflict between the desire to drink and the refusal to drink is thus taken to be a conflict between the body and the soul. Since the soul is able to oppose the bodily desire for drink *et al.*, the soul can be said to rule the body.

Plato next invokes the conclusion from the metaphysical principles established earlier. If the soul were a *harmonia*, “it wouldn’t make a sound opposed to the tensions, slackenings, pluckings, or any other affections of its components,

these affections are still attributable to the influence material parts which remain with them.

⁶⁵ This is *Phaedo* 94d5-e1 where Plato cites *Odyssey* 20.17-18.

⁶⁶ *Republic* 4.441b6 ff.

but would follow and never lead” (94c3-7). This gives him what he needs to finish off the *harmonia* theory. The soul has a property—the ability to oppose the affections of the body—which a *harmonia* couldn’t have. Rather than opposing their own empirical evidence or the divine poet Homer, Socrates and Simmias conclude “in no way is the view that the soul is a *harmonia* well held” (94e8-95a1).

There is a disconnect between the original presentation of the *harmonia* theory, the metaphysical principles regarding *harmoniai* and the conclusion of the present argument. According to one of the metaphysical principles established above, no *harmonia* can move in an opposite direction to the parts out of which it is composed. When we first encounter the *harmonia* theory of the soul, Simmias said that the soul is a *harmonia* of “the hot, cold, dry, wet and things of that sort” (86b9-c2). In the Opposition Argument, however, the soul is not said to oppose the bodily elements but the affections (*παθημᾶτα*) of the body. These affections are things like hunger and thirst, fear and anger. So Plato is warranted only in concluding that the soul is not a *harmonia* of bodily affections.⁶⁷ The argument appears to be unsuccessful against the theory first presented by Simmias which held that the soul is a *harmonia* of bodily elements.

If in fact Socrates had missed the target, it is curious that Simmias doesn’t express any concern about the *ignoratio elenchi*. So what connection is there between the structure of the parts of the body with the desires and affections of those parts so structured? The *Phaedo* is silent about this connection, but perhaps we might speculate. Above I’ve suggested that a *harmonia* mereologically

⁶⁷ This objection is suggested by Bostock 1986, 132 and Gallop 1975, 167.

supervenes on its parts—the causal powers of a *harmonia* are determined or fixed by the causal powers of and the relations between its parts. So if a *harmonia* has any causal powers, it will have them in virtue of the causal powers of its parts. If a *harmonia* is able to oppose the affections of the body like hunger, thirst, anger and fear, that ability ultimately derives from the powers and relations of the elements. But this means that the same composite of elements would be responsible for two opposed desires, say, the desire to drink and the opposition to that desire.

Now for the speculative part—perhaps Plato has in mind something like the principle of opposition which will be featured prominently in the arguments for the tripartition of the soul in the *Republic*.⁶⁸ Roughly this principle has it that the same thing cannot do opposite things with the same part, in relation to the same thing and at the same time. Suppose something like this is going on in the *Phaedo*. Plato has good evidence that we sometimes undergo opposites—the desire to drink and resistance to drinking for example. On the view proposed by the *harmonia* theorist, the very same composite of material elements will be ultimately responsible both for the desire and its opposite. But if Plato thinks that the same thing can't undergo opposites in that way, then the same *harmonia* couldn't be responsible for both desires. If we take it as an empirical fact (as seems reasonable) that we do undergo such opposites, the *harmonia* theory won't be able to account for this fact and so must be rejected.

This is certainly not an airtight defense. The friend of the *harmonia* theory still has several moves open. He might claim that opposing desires must issue

⁶⁸ For some examples of this principle see 436b, 436e-437a, and 439b.

from different parts of the body. He might also reject the principle of opposition altogether and give some other way to account for conflicting desires. Suffice it to say, however, that although the Opposition Argument seems to miss its intended target, it paves the way for one of the most important arguments in Plato's middle period—the tripartition of the soul.

3.4 Implications of Rejecting the Harmonia Theory

The implications of rejecting the *harmonia* theory are pointedly summarized by C.C.W. Taylor. He writes: “It is necessary to attribute extraordinary obtuseness to Plato if one accepts...that the arguments of the *Phaedo* are conclusive against the thesis.”⁶⁹ Taylor's words are so biting because if it turns out that Plato successfully defeats the *harmonia* theory, he will have defeated the theory of the tripartite soul upon which the political and psychological theories of the *Republic* are based. However if Plato's arguments don't successfully defeat the *harmonia* theory, then roughly a third of the *Phaedo* will merely be an academic exercise. It seems that Plato is stuck. If these arguments work, they undermine the central claims of the *Republic*. If they don't work, the worries Plato expresses about the view will be disingenuous. Neither of these alternatives are ideal. But once we recognize that the parts of the soul in the *Republic* are quite a different sort than the parts of a *harmonia* discussed in the *Phaedo*, we needn't have to claim that Plato is being “extraordinarily obtuse” in rejecting the *harmonia* theory.

⁶⁹ Taylor 1983 [1970], 230.

Two strategies for getting around this dilemma present themselves. First we might make the case that, despite appearances, the view of the soul in the *Republic* is not one according to which it is a *harmonia* of three parts but rather that the soul has only one part.⁷⁰ There is little doubt that Plato argues for the tripartition of the soul in *Republic* 4. But *Republic* 10 seems to present a different picture. There Plato at least opens up the possibility that the disembodied soul is simple, having only one part. He distinguishes the way the soul is manifest “in its truest nature” or “as it is in truth” from the way it appears “when it is immersed in human life” that is, when it is embodied (*Republic* 10.611b1; 611b10; 612a5). He makes it clear that while it is embodied, the soul appears to be “composed from many parts” and “not most finely fitted together” (611b5-7). But like the sea god Glaucus whose true nature is obscured by shells, seaweed and stones, the true nature of the soul might be obscured by corporeal accretions (611c7-d8). Proper philosophical training is meant to help one to get rid of the corporeal accretions and would allow us to see what the true nature of the soul is and we’d “be able to determine whether it has many parts or just one” (612a3-4). This is certainly not definitive evidence that the true nature of the soul consists of only one part, but Plato does allow that this is a genuine possibility.

But even if there were an airtight argument in the *Republic* according to which the soul is composed of only one part, the soul as it is presented in the *Phaedo* and in the first nine books of the *Republic* is the soul as it appears to us—embodied. The view of the embodied soul in the *Phaedo* is clearly different

⁷⁰ I’ve mentioned this possibility above in §1.2.

than the view of the embodied soul in the *Republic*. The embodied soul in the *Republic* is composed of (at least) three parts.⁷¹ Since the embodied soul is presented as a composite of three parts in the *Republic*, our first strategy for dealing with the dilemma won't work. We can't simply deny that the view of the soul in the *Republic* is one according to which it is a *harmonia* of three parts.

There is a second and less controversial strategy, however. We can claim that the kind of *harmonia* rejected in the *Phaedo* is different than that accepted in the *Republic*. If this is the case, then the arguments against the *harmonia* theory in the *Phaedo* won't simply be academic—they can fruitfully reject one specification of the theory. Likewise, Plato won't be arguing at cross-purposes with his views of the embodied soul in the *Republic* since there he will be claiming that the soul is a different sort of *harmonia*. But is this true? The arguments of the *Phaedo* are arguments against a materialist interpretation of the *harmonia* theory. According to this interpretation, the soul is a structure composed of the four elements when fitted together appropriately. The parts of the soul in the *Phaedo* are, therefore, the hot, cold, wet and the dry. If Plato meant the arguments of the *Phaedo* to be decisive against a materialist conception of a *harmonia*, others might be left unscathed. The picture of the soul presented in the *Republic* 4 is one in which the soul is a composite of parts. The parts of the soul are not the elements, but reason (439d), spirit (441a) and appetite (439d).

⁷¹ I say 'at least' because there is some indication that Plato allows for the possibility that there are parts other than the rational, spirited and appetitive parts. When he defines what justice is for an individual he claims that the three parts of the soul "and any others there may be in between" are fitted together properly (*Republic* 4.443d).

But the trouble is that Plato is relatively silent about the (im)materiality of these parts. He never positively claims that they are material, however. So if the arguments of the *Phaedo* are not going to undermine those of *Republic* 4, the three parts cannot be material.

By rejecting the *harmonia* theory of the soul in the *Phaedo*, Plato has not necessarily undermined his view of the embodied soul in the *Republic*. He has, however, restricted it. If the soul is a *harmonia* in the *Republic* it must be something immaterial. This doesn't mean, however, that the soul of the *Republic* is an abstract *harmonia*—the principle of organization the parts of the soul has. The soul may be a contentful structure of reason, spirit and appetite. But to quarantine Plato's conception of the soul in the *Republic* from the arguments of the *Phaedo*, those parts must be immaterial.

3.5 Conclusion

Plato presents three arguments against the *harmonia* theory—the Priority Argument, the Argument from Degrees and the Opposition Argument. The first two successfully refute a materialist version of the *harmonia* theory. The third argument is also aimed at a materialist conception of the view, but misses its intended target. (Though it does remain an important precursor to the argument for the tripartite soul in *Republic* 4.) Despite the overall success of these arguments in refuting the *harmonia* theory, they leave open the possibility that Plato could endorse a version of the view. I have suggested, in fact, that the view presented in *Republic* 4 is one according to which the soul is a *harmonia* of non-material parts.

Recall that above, I distinguished two ways to understand what a *harmonia* is in the *Phaedo*.⁷² A *harmonia* is the principle of organization a whole of parts has (i.e., an abstract structure) or it is an organized whole of material parts (i.e., a material structure). If the arguments against the *harmonia* of the *Phaedo* are successful, they are successful against the view that a *harmonia* is a material structure. It remains possible that the soul is a structure whose parts are immaterial. It is also striking that none of the three arguments is explicitly directed against the view that the soul is the principle of organization the parts of the body have. This view, as it turns out, will be of great importance for Aristotle who argues that the soul is the form of a certain sort of body. Let us now turn to Aristotle's investigation of the *harmonia* theory.

⁷² §2.4.

Part II

Aristotle on the *Harmonia* Theory

Chapter 4

A Ratio or Composite

Book 1 of Aristotle's *On the Soul* might best be described as a review of the literature. In it, he collects and examines the views earlier philosophers held about the soul in order to “accept what they got right and to avoid what they got wrong” (1.2.403b23-34). In chapter 4 of this book Aristotle focuses his attention on two views in particular. He first considers the view that the soul is a *harmonia* (1.4.407b27-408a34) and then the view that the soul is a self-moving number (408b30-409a30). In connection with his criticism of the *harmonia* theory of the soul, Aristotle does three things. First he describes what the view is and offers a rather anemic argument on its behalf (407b27-32). He then provides a series of arguments against the theory (407b32-408a18). He concludes with an explanation of why, despite its shortcomings, the *harmonia* theory remains a highly plausible view (408a24-29). In this chapter I examine the first and last of these moves—I'll leave my discussion of the arguments against the *harmonia* theory for the next two chapters.

The first thing one notes about the *harmonia* theory is the remarkable unity of opinion among many of Aristotle's most important commentators. Generally the commentators remark how similar Aristotle's own view is to the *harmonia* theory he rejects. Themistius, in his commentary on *On the Soul*, writes that those arguing that the soul is a *harmonia* are "none too close, nor yet too far, from the truth."¹ These sentiments are echoed by modern commentators as well. R.D. Hicks reports that the *harmonia* theory is "the one which approaches most nearly to his own formula that the soul is a form...of a natural body capable of life."² Jonathan Barnes agrees, but goes even further. He says that the best sense he can make of Aristotle's claim that the soul is an "*entelecheia* of a potentially living body" is to read it as a version of the *harmonia* theory.³

What has led these various commentators to this consensus? Aristotle has surprisingly little to say when it comes to the *harmonia* theory. The only place where he directly addresses it is in *On the Soul* 1.4 and he does so there for only a few paragraphs. It will be my task to pull together strands from his various other works in order to complement the presentation he does provide.

Simply put, the *harmonia* theory is the view that the soul is a *harmonia* of the parts of the body. But Aristotle decrees, with very little explanation in support, that a *harmonia* is either "a ratio of the things mixed or a composite" (407b32-33). The theory of the soul therefore admits of two specifications depending on what one takes a *harmonia* to be. The soul is either a ratio or a

¹ Themistius *On Aristotle's On the Soul* 25, 23.

² Hicks 1907, 263. This remark is repeated, with positive endorsement, in Ross 1961, 195.

³ Barnes 1982, 491-492.

composite. In the end, Aristotle argues against both specifications. But before we can examine the arguments against the theory, it is important to do two things. First, we must clarify what Aristotle means when he claims that a *harmonia* is either a ratio or a composite. Second, we need to show why one might be motivated to accept either of those alternatives. Satisfying these two demands will be the primary aim of this chapter.

4.1 The Harmonia Theory Introduced

Aristotle introduces the *harmonia* theory in *On the Soul* 1.4.407b27-33. He begins by noting the provenance of the theory, but says only that it is a view that has been handed down. Still he claims that it was a theory “no less persuasive” than any of the other traditional views he has dismissed by that point in the book. This remark is a bit of Aristotelian litotes. As I shall argue, the *harmonia* theory bears a marked similarity to Aristotle’s own view; a fact he surely must have recognized. But whether or not he was aware of the similarity he was aware that it was a view criticized in what he calls “the popular discussions.”⁴ Perhaps because Aristotle took the view to be a popular one, he assumed that his audience was familiar with the *harmonia* theory and for that reason only gestures at an argument one might give on its behalf (407b30-32). After providing this argument, such as it is, he distinguishes between two ways of understanding what a *harmonia* is (407b32-33). He claims that a *harmonia*

⁴ We can only speculate what these popular discussions were. The most intriguing of the possibilities mentioned in the literature is that Aristotle is referring to his own dialogue, the *Eudemus*, which exists now only in fragments. For a collection of these fragments see Rose 1863, 52-67.

is either a ratio of the parts which compose the body or it is a composite. In the remainder of this section, I sketch the argument he offers in defense of the theory and the two alternatives he provides for how one might understand what a *harmonia* is.

4.1.1 The Pro Argument

After noting the provenance and popularity of the *harmonia* theory, Aristotle reports an anemic argument given on its behalf (407b30-32). This argument has two premises: (1) a *harmonia* is a combination and composite ($\kappa\rho\tilde{\alpha}\sigma\iota\nu$ καὶ σύνθεσις) of opposites; and (2) the body is composed of opposites. It seems that the most ambitious conclusion one might draw from these premises is that there is a *harmonia* of the body. Since neither premise mentions the soul, we are left to assume what connecting tie exists between the *harmonia* of the parts of the body and the soul. Without this connecting tie, there is not yet enough information available to yield the conclusion that this *harmonia* of opposites and the soul are *identical*. Aristotle leaves it to his audience to fill in the gap.

Two strategies for how this might be done suggest themselves.⁵ Simmias, the friend of the *harmonia* theory in the *Phaedo*, offers two possibilities and endorses the second (85e-86d). First, he claims that a *harmonia* is something invisible, immaterial and divine. These are all properties Socrates also attributed to the soul. (Recall that what made the *harmonia* counterexample compelling is that both souls and *harmoniai* seem to share the properties which suggest that such things are immortal.) One way to explain why souls and *harmoniai* are

⁵ I discuss these two strategies in §2.1.

both invisible, immaterial and divine is to suppose that the two are identical. But this supposition is on shaky ground. Because two things share some properties in common it needn't be the case that they share *all* their properties—similarity doesn't imply identity.

Simmiias's second strategy, the one he endorses, seems better-off. Aside from using the *harmonia* theory as a counter-example to Socrates' view, Simmiias also claims to believe that the soul *is* a *harmonia* (“we really do suppose the soul to be something of this kind...” 86b5-c8). The soul, he claims, is a combination of the material parts out of which the body is composed. The body is ultimately composed of the four elements or elemental qualities—the hot, cold, wet and dry—which have natural tendencies in opposite directions. When these elements or elemental qualities are put in the appropriate structure (i.e., the natural motions of each are directed to pull against the others), they combine to form a dynamic whole. Elements that have this structure are said to be combined “rightly and in due proportion.” The soul is the *harmonia* of these contrary pulling elemental forces.

4.1.2 Two Alternatives

Aristotle next considers two possible interpretations of what it is for something to be a *harmonia* (*On the Soul* 1.4.407b32-33). He presents these alternatives twice. In his initial presentation, he suggests that a *harmonia* is either:

- (1) A ratio of the things mixed (λόγος...τῶν μιχθέντων); or
- (2) A composite (σύνθεσις).

He argues that since the soul is neither a ratio of the things mixed, nor a composite, the soul cannot be a *harmonia* (407b34). Of course, for such an argument to work these two options must exhaust the possibilities. Aristotle assumes that they do, but what evidence is there that he might be right?

If the Greek word ‘*harmonia*’ is used like the English word ‘structure,’ then a case can be made that the two options Aristotle presents do exhaust the possibilities. I’ve argued that a structure is either something a whole of parts *has* or it’s something a whole of parts *is*.⁶ Using the word in the first sense, we say things like “The boy needs more structure in his day.” By this we mean that the activities which jointly compose the boy’s day need to be arranged or organized in some more principled way. Using the word in the second sense, we say things like “Westminster Abbey is a beautiful structure.” Here ‘structure’ picks out the building itself, not an abstract principle of organization. If a *harmonia* is either the structure a whole of parts has or the structured whole itself, then we’ve got an exhaustive disjunction.

There is reason to think that Aristotle had something like this disjunction in mind. After his initial presentation of the two alternatives, he suggests that the word ‘*harmonia*’ has two applications:

the most proper pertains to magnitudes which have motion and position, where it [i.e., the *harmonia*] is a composite of them...; then there is also a *harmonia* as a ratio of the things mixed. (408a6-9)

Though it certainly depends on what a magnitude is, what Aristotle says here seems to constitute *prima facie* evidence that he thinks a *harmonia* could ei-

⁶ See §2.3.

ther be a whole of material parts organized in a particular way or the abstract principle of organization those parts have. Moreover, he claims that the most proper application of the term ‘*harmonia*’ is that which picks out an organized material composite. The remainder of this chapter will be devoted to clarifying how exactly Aristotle conceives of these two alternatives.

4.1.3 Logos and Form

Before moving on, it is important to note how nearly the *harmonia* theory approaches Aristotle’s own view about the soul. Aristotle identifies the soul with a certain sort of form. According to one definition of the soul he gives, he takes it to be “the form of a natural body having life potentially” (2.1.412a19-21). Just how near the *harmonia* theory is to this view can be seen by looking closely at how Aristotle uses the word ‘λόγος.’ On some occasions he uses the term simply to mean ratio or proportion, but on other occasions he uses the term to mean *form*.

For present purposes, there are two passages where Aristotle explicitly identifies the soul with a sort of λόγος which are particularly important.⁷ The first passage is found immediately following his canonical definitions of the soul in *On the Soul* 2.1. There he attempts to clarify just what sort of form the soul is: “the soul is not the essence and λόγος of this sort of body [i.e., a body like that of an axe] but of the specific sort of natural body that has in itself a princi-

⁷ Some other passages (which I won’t discuss) where Aristotle treats form and λόγος equivalently can be found in *Physics* 2.3.194b27; 2.9.200a35; *On the Soul* 2.1.424a24, 27, 31; *Parts of Animals* 1.1.639b15; 642a20.

ple of motion and rest” (412b15-17). Here Aristotle is explaining an instance of his principle of homonymy. A body without a soul is a body in name only. The soul is not the form of any old body; rather, the soul is the essence and λόγος of a *living* body. As it is expressed here, it seems clear that ‘λόγος’ is most reasonably rendered as ‘form.’

This identification of form and the λόγος of a living body is also made in *On the Soul* 2.2 where he is making much the same point as the preceding passage. The soul is not the form of any old body, but rather one that is potentially alive.⁸ He summarizes this position as follows: “the soul is a certain actuality and λόγος of what has the potentiality to be of this sort [i.e., living]” (414a27-28). Here also Aristotle explicitly identifies the soul with a certain λόγος.

Given Aristotle’s willingness to treat ‘λόγος’ and ‘form’ as equivalent and given his definition of the soul as the form of a natural body having life potentially, he seems committed to the view that the soul is the λόγος of this sort of body. But if this is correct, then the positive view he endorses stands perilously close to the *harmonia* theory he will so vigorously criticize.

The similarity between these two views has not escaped the notice of Aristotle’s commentators, as I’ve mentioned. Jonathan Barns puts it most pointedly. The account of the *harmonia* theory he develops “constitutes as good an ac-

⁸ There is much to be said about what sort of body a “potentially living body” is. But I think the debate is settled in Irwin 1988, §152. In part because Aristotle claims that the body which survives the loss of the soul is neither actually nor potentially alive (412b25-26), Irwin concludes that “the only body that is potentially alive seems to be the one that is actually alive” (§152, p. 285).

count as I can give of Aristotle's thesis that 'the *psuche* is an *entelecheia* of a potentially living body.'⁹ Barnes bites the bullet and accepts that, on his account of the *harmonia* theory, Aristotle is a *harmonia* theorist about the soul. We'll return to this issue below and see how faithful Barnes' interpretation is to Aristotle's aims. For now, let this much suffice: Aristotle denies that the soul is a *harmonia*. On account of this denial, he's committed to the view that the soul is not a λόγος of the things mixed together. But he is committed to the view that the soul is some sort of λόγος. It will be part of our task in what follows to distinguish the sort of λόγος Aristotle thinks can be identified with the soul from that which cannot. Otherwise, Aristotle's arguments directed against the *harmonia* theory will inadvertently be directed against his own account of the soul.

4.2 Chemistry 101: A Ratio of the Things Mixed

Aristotle's own view has it that the soul is the form, or λόγος, of a natural body having life potentially. His opponent, the *harmonia* theorist, takes the soul to be a λόγος of "the things mixed together." So in order to disentangle Aristotle's view from the *harmonia* theory he rejects, we need to take a closer look at what he has to say about mixtures. Aristotle's fullest treatment of mixtures is found in *On Generation and Corruption* 1.10, so let us now turn our attention to that chapter.

⁹ Barnes 1982, 491-492.

4.2.1 Two Skeptical Arguments about Mixtures

Aristotle organizes his discussion of mixtures around two skeptical arguments which purport to show that mixtures are, in fact, impossible. The first argument (327a34-327b10) has to do with the existence of the ingredients once they have been combined. The argument runs as follows: Imagine the combination of two ingredients. When these ingredients have been combined, one of three things might happen. First, both ingredients might continue to exist, unaltered, in the resulting combination. In this case the ingredients haven't been mixed because there has been no change (other than spatial) in the ingredients at all. Without a change in the ingredients (more than merely spatial), you've not got a case of mixture. Second, one or the other of the ingredients might be destroyed. Again, this is not a case where two ingredients have been *mixed*, but rather it's a case where one ingredient has gone out of existence. Third, both ingredients might be destroyed. Here again we have a case of destruction, not mixture. So since the ingredients of the purported mixture either exist unaltered or are destroyed, the skeptic concludes that mixture is impossible.

The second argument (327b31-328a18) has to do with the distinction between composition ($\sigmaύνθεσις$) and mixture ($\muίξις$). The skeptic supposes that mixture is just a type of composition, but a type of composition that is "relative to perception" (327b32-33). Aristotle primes our skeptical intuitions by appealing to ordinary language. We say that some wheat and barley have been mixed, for example, when the grains of wheat and the grains of barley have been juxtaposed with one another. Though Aristotle admits that this use of 'mixed' is a

bit loose perhaps if the ingredients were divided into small enough parts and then combined, mixture (properly speaking) might then be possible. Aristotle imagines two limiting cases of this sort of division. In the first case, the ingredients are divided and combined just enough so that they are no longer perceptually distinguishable in the resulting combination—the combination looks uniform. In the second case, the ingredients are divided into their smallest ultimate constituents, their atoms, and these atoms are juxtaposed with one another in the resulting combination.

Mixture, the skeptic presses, is not possible on either scenario. Take the first case. Suppose that two ingredients have been divided into parts which could be (but aren't) further divided and these parts are combined in such a way that the resulting combination *appears* uniform. Now suppose that I have particularly poor eyesight and the mixture appears uniform to me. But with your vision, which is much sharper than mine, you are able to clearly distinguish the original ingredients in the combination. We might ask: Have the two ingredients been mixed? If mixture is just composition relative to perception, then according to my dull perceptive faculties we have a case of mixture but according to your acute perceptive faculties no mixture has occurred. This is an absurd result. Two ingredients cannot be said to be mixed *for me* while they remain unmixed *for you*—there must be some fact of the matter (not relative to perception) which settles whether two ingredients have been mixed or not.

Now take the second case according to which the ingredients have been divided into parts which are no longer further divisible and then those parts are combined such that they are juxtaposed with one another. Mixture is also im-

possible in this case. Mixture is impossible because, Aristotle asserts without argument, such division is impossible—something cannot be divided into its atoms. For clarity’s sake, we might supplement this with a bit of argument. Something cannot be divided into atoms, we might imagine, because at some point the division won’t cut up the ingredient into smaller pieces (e.g., dividing a cup of barley into a half-cup of barley) but will actually *destroy* the ingredient. What remains after dividing a grain of barley into its atoms are not smaller grains of barley but atoms. But if the ingredient is destroyed, then we’re thrown back onto the first skeptical puzzle. If the ingredient is not destroyed, then we have not divided it up into its constituent atoms. So again the skeptic concludes that mixture is impossible.

4.2.2 The Characteristic Features of Mixtures

Aristotle doesn’t think that we must, on account of these skeptical worries, be saddled with the skeptical conclusion. Mixtures are possible. He concludes *On Generation and Corruption* 1.10 as follows: “Therefore it is clear from what has been said that mixture exists, what it is, why it happens and what sorts of things are mixable” (328b14-16). So instead of demonstrating that mixtures are impossible, these two skeptical arguments are invoked for another purpose—they are meant to pinpoint the characteristic features any mixture must have.¹⁰

¹⁰ In this section I make no claim to have exhausted the criteria which any mixture must meet—there are more than I will discuss. Rather, my aim is to show what criteria are derived by rejecting the skeptical arguments which organize *On Generation and Corruption* 1.10.

The first skeptical argument—mixture is impossible because the ingredients either exist unaltered or are destroyed—highlights two features a mixture must have. First, the elements from which mixtures are formed must react with one another altering the properties of each (327b1-2; 328b23). The result of this mutual alteration is that a mixture is something different than any one of the elements or a mere juxtaposition of all the elements (327b3-8; 9-10). The result of mixing certain ingredients—earth, air, fire and water—is some third thing and not merely the juxtaposed elements.

Second, the elements of a mixture exist potentially, but not actually, in the mixture (327b24-26). The ingredients which jointly compose the mixture are not *destroyed*, as the skeptic worried they might be; rather they are *demoted* to the level of existing only potentially in the mixture. This requirement of mixtures is, perhaps, the most problematic and difficult to understand. It is clear that Aristotle wishes to distinguish demoting an ingredient to potential existence from the destruction of that ingredient. In support of that distinction, he provides a very curious example. When a drop of wine is added to an immeasurably large amount of water, the result is not a mixture of wine and water (admittedly a very dilute mixture) but the destruction of the wine.¹¹ The wine is *transformed* into water and the result of this transformation is that there is a bit more water than there once was. This is not mixture, but the destruction of one of the ingredients.

In a proper mixture none of the ingredients are destroyed. Rather they come to exist potentially in the mixture. So what could Aristotle have in mind here?

¹¹ *On Generation and Corruption* 1.10.328a26-28.

He does provide some evidence in support of this view. The ingredients in a mixture, he claims, can be re-separated from the mixture. He writes that “the things that are mixed...also can again be separated out from the compound” (*χωρίζεσθαι*, 327b27-28). The idea that the ingredients that went into the mixture can be separated out again suggests that there are no temporal gaps in the existence of the ingredients. Because they never go out of existence (they’re merely demoted in ontological status), Aristotle needn’t say that the ingredients are *reconstituted*. One way we might think of the potential existence of the ingredients in a mixture is this: the ingredients have the potential to exist separated from the mixture, though while mixed they aren’t so separated.

This gets us a bit closer to understanding the potential existence of the ingredients in a mixture, but Aristotle has more to say on the matter. The constituents exist in the mixture and are not destroyed because “their *δύναμις* is preserved” (327b31). Now in one sense of the term ‘*δύναμις*’ this claim is trivially true. In certain contexts ‘*δύναμις*’ is commonly rendered as ‘potentiality.’ To say that an ingredient that exists in potentiality is one whose potentiality is preserved might be true, but it is certainly not explanatory. But this is not the only way to render ‘*δύναμις*.’ Understood more broadly, something’s *δύναμις* is its power to act or to cause something to happen; in short, a *δύναμις* is one of that things’ causal powers.¹² So what gets preserved in the mixture are (some of) the causal powers of the ingredients. Consider bronze mixed with some tin.

¹² In *Metaphysics* Δ.12 and θ Aristotle distinguishes a variety of sorts of potentiality and actuality. The primary meaning of ‘*δύναμις*’ in both places is “that which originates a change or alteration either in another thing or *qua* another thing” (Δ.12.1019a15-32; cf. θ.1.1046a10-11).

(This is an example Aristotle uses as a case of mixture where one of the ingredients is *nearly* destroyed.) He explains that when it is mixed with the bronze, the tin nearly disappears imparting only its color to the bronze.¹³ Since Aristotle takes this to be a genuine case of mixture,¹⁴ we shouldn't be led to believe that the tin is destroyed. Instead he explains that the tin is *almost* destroyed "behaving as if it were an immaterial property of the bronze" (328b12). The causal power of the tin to appear a certain color is actually preserved in the mixture, the tin itself existing only potentially.

Elsewhere Aristotle explains that in a mixture the elements interact with one another, tempering their extremes such that no element any longer "exists in complete actuality" (*On Generation and Corruption* 2.7.334b10). When fire and earth combine in a mixture, the elemental heat of the fire is tempered by the elemental cold of the earth and *vice versa*. The result is something cool (for fire) or hot (for earth)—the mixture is in an intermediate state between the two extremes; it is neither hot nor cold. Fully actualized heat, that which exists in elemental fire, has a number of related powers. Most obviously it has the power to impart heat to other objects, but it also has the power to solidify and melt things depending on what those things have been composed out of.¹⁵ Fire is also light and rare, having a natural tendency to move up towards the periphery.

¹³ *On Generation and Corruption* 1.10.328b12-13.

¹⁴ For this to be a genuine case of mixture, however, we must take Aristotle to be speaking loosely here. Strictly speaking, mixture only occurs at the elemental level. See Joachim 1907.

¹⁵ *Parts of Animals* 2.2.648b30-31. Fire has the power to melt thing which are made primarily of water and to solidify those things made primarily of earth.

These powers still exist when elemental fire and earth have been combined in a mixture, but they do not exist fully actualized. The fire in the mixture is responsible for the warmth of that mixture as well as its ability to solidify, melt and move towards the periphery; but these powers are tempered by the presence of other elements in the mixture. Thus the ingredients of a mixture can be said to exist potentially, but not actually, in the mixture.

The second skeptical argument—mixture is a sort of composition of parts too small to be distinguished with the senses—highlights the most important feature of mixtures and, fortunately, one that is much easier to understand. A mixture is not something which has parts of different sorts juxtaposed with one another, no matter how small those parts are. Rather the alteration which takes place between the elements of a mixture results in something whose smallest parts are of the same character as the whole (*On Generation and Corruption* 1.10.328a5-10), something homoeomerous. “It must be the case,” Aristotle writes, “that if something is mixed, the mixture is homoeomerous just like any part of water is also water” (328a10-11). This further emphasizes the need for the ingredients of the mixture to exist potentially. Were the elements of a “mixture” actually present, there would be bits of earth, air, fire and water juxtaposed with one another. Thus the smallest part of this combination would not be of the same character as the whole, it would not be homoeomerous. Here again Aristotle is highlighting the fact that a mixture is really something different, a *tertium quid*, in which the elements exist merely potentially.

4.2.3 The Ratio of the Mixture

A mixture is something homoeomerous whose ingredients remain potentially, but not actually, in the mixture. A further question then arises: Can any ingredient be mixed with any other or are there restrictions on what sorts of things can be mixed? All of the homoeomerous compounds Aristotle considers in *On Generation and Corruption* are mixtures of all the four elements—earth, air, fire and water.¹⁶ Aristotle writes: “All the mixed things which exist around the region of the center [i.e., Earth], are compounds of the simples” (2.8.334b32-34). So all homoeomerous compounds (at least all those on Earth) have the same constituents. What distinguishes one from another, blood from bone for example, is the ratio or proportion of each element in that compound. Bone has proportionally more earth in it than blood has; blood has proportionally more water in it than bone has; but blood and bone are both composed of all four elements. The definition of a homoeomerous compound, the formula that expresses what it essentially is, must then express the ratio or proportion of the elements in the mixture. So we can conclude, following Joachim, that the definition of a homoeomerous compound is the ‘λόγος τῆς μίξεως’ of its constituent elements.¹⁷

This expression should be familiar. This is the same expression Aristotle uses to describe the first possible alternative of the *harmonia* theory in *On the Soul*. He presented the first alternative as follows: a *harmonia* is “a ratio of the things mixed together” (λόγος...τέν μιχθέτων, *On the Soul* 1.4.407b33). But

¹⁶ Joachim 1907, 75.

¹⁷ Joachim 1904, 76.

later on in the chapter when he is criticizing the view, he says that it is absurd to argue that the soul is “the ratio of the mixture” (τὸν λόγον τῆς μίξεως, 408a14). From this we can conclude that the first interpretation of the *harmonia* theory Aristotle offers amounts to this: the soul is the ratio according to which the four elements are combined in the homoeomerous parts of the body.

4.3 Physics 101: A Composite

Let us now turn to the second interpretation of the *harmonia* theory—the view that a *harmonia* is a composite (σύνθεσις). Although it’s clear from the preceding section that Aristotle takes mixtures and composites to be different sorts of things, we need to sort out the ways he thinks they’re different.

As we’ve seen in §4.1, Aristotle presents two ways one might understand the term ‘*harmonia*’—either as a ratio of the things mixed or a composite—and he does this twice. He presents this choice first at 1.4.407b32-33, but he returns a bit later on (408a6-9) and expands the initial presentation of the two alternatives. In this expanded presentation he claims that the most proper application of the term ‘*harmonia*’ is to “magnitudes which have motion and position” (τῶν μεγεθῶν...ἔχουσι κίνησιν καὶ θέσιν, 408a6-7). The term is used in a derivative or secondary sense to pick out the ratio of the things mixed (408a8-9).¹⁸

¹⁸ We might speculate why Aristotle thinks term ‘ἁρμονία’ is most properly applied to things which have motion and position. Recall from chapter 1 the etymological connection between the terms ‘ἁρμονία’ and ‘ἁρμόζειν.’ The word ‘ἁρμόζειν,’ meaning ‘to join or fit together,’ is a term which was originally more at home among shipwrights than among mathematicians or

Questions of terminological primacy aside, it remains to be seen what this sort of magnitude is. In a recent paper Ellen Wagner takes this issue to be cut and dried: “The first alternative [i.e., a *harmonia* is a certain magnitude with motion and position] is clearly a straightforward materialist thesis...”¹⁹ I’m inclined to agree with her that this alternative does express a materialist thesis, but it will take a bit more than mere assertion to show why this is the case. To see why the strict and proper application of the term ‘*harmonia*’ is materialist we need to take care to parse the expression “magnitude with motion and position.”

The first thing to note is that the word which gets rendered ‘magnitudes’ is the genitive plural ‘τῶν μεγεθῶν.’ This use of the genitive appears to be partitive, indicating that Aristotle means to imply a distinction between those magnitudes that have motion and position and those that don’t.²⁰ That is, among the

musicians. Aristotle was no doubt aware of this connection. This use, as we’ve seen, is attested by Homer in *Odyssey* 5.248 and elsewhere. Homer describes how Odysseus fitted together timbers to build a boat in order to escape Calypso’s island this way: “Calypso...at that time came back bringing him an auger, and he bored through them all and fitted them together (ἤρμωσε) with dowels, and then with cords he lashed his raft together.”

This concrete use of the verb ‘ἄρμόζειν’ might be its primary application because its use is less abstract, closer to perception and, to use an Aristotelian expression, “better known by us.” Things that are closer to perception are, according to Aristotle, “prior and better known by us” (*Posterior Analytics* 1.2.72a2-3). Since the fitting together of timbers is more concrete and closer to perception than the abstract construction of a ratio or mathematical proportion between parts, the primary application of the term ‘*harmonia*’ is to a composite which has motion and position.

¹⁹ Wagner 2001, 75.

²⁰ Ross 1961, 196 and Hicks 1907, 267-268.

class of things which count as magnitudes there are some that have motion and position and some that don't and Aristotle means to restrict his discussion to the first lot. Hicks offers as evidence of this distinction certain claims Aristotle makes about mathematical objects which, he takes it, are examples of magnitudes without motion or position.²¹ In *Physics* 4.1, for example, Aristotle writes: "Such mathematical objects have no place, still, in respect of their position relative to us, they have a right and left...not having these various characteristics by nature" (208b22-25). On one way of thinking about mathematical objects, Aristotle admits they are spoken of as if they have a position, but this is only a position relative to one another and to us. Mathematical objects, which are not material, don't themselves have any position. Whether the details of Hicks' account are right, whether there are in fact magnitudes which don't have a position, needn't worry us here. For Aristotle is restricting his discussion to those magnitudes which *do* have motion and position.

So what, if anything, is being added when claiming that a magnitude has motion and position? For Aristotle, magnitude, motion and position are defined in terms of one another. Let's take position first. To say that something has a position is to say that it is located in a certain place. Aristotle investigates what it means to say that something has a place or is in a place in *Physics* 4.1-5. Place, he explains, "has three dimensions—length, breadth and depth—the dimensions by which all bodies are bounded" (4.1.209a5-6). If something has a position, it has a place. If something has a place, it is bounded by three dimensions. So it seems that if something really has a position (not just the sort of

²¹ Hicks 1907, 268.

quasi-position mathematical objects have), then that thing is bounded by three dimensions. Something with a position is, therefore, a *spatially extended* object.²²

Motion, moreover, is defined in terms of position. “Motion,” Aristotle writes in the opening paragraph of *Physics* 4.1, “in its most general and proper sense is a change of place which we call ‘locomotion’” (208a29-31). In order for something to move, that thing must first be in one place and then in another. Since locomotion requires something to *change* place, *a fortiori* it requires that it be located in a place. Therefore in order for something to move locally, that thing must be located in a place and so bounded by three dimensions. If the argument in the preceding paragraph is right, this means that only spatially extended objects are capable of locomotion.²³

More than this, Aristotle’s expanded presentation not only adds that the term ‘*harmonia*’ is most properly applied to magnitudes having motion and po-

²² Someone might object that immaterialists about the soul, Descartes for example, nevertheless speak of the soul as if it has a location. Infamously, Descartes talks of the soul interacting with the pineal gland which presupposes that the soul (or at least part of the soul) can be located in and around this region of the brain. I think this objection can be defused, or at least deflected using parts of Aristotle’s account of mathematical objects. We speak as if these things have a spatial location, but really they don’t.

²³ More precisely the argument has to do with the kinds of motion souls and magnitudes can undergo. Every magnitude can be moved in itself ($\alpha\lambda\theta$ $\alpha\acute{\upsilon}\tau\acute{\alpha}$, i.e., directly, *On the Heavens* 1.2.268b15-16; *Physics* 8.6.258b24-26). The soul can only be moved on account of something else being moved ($\alpha\lambda\theta$ $\xi\tau\epsilon\rho\omicron\nu$, i.e., indirectly, *On the Soul* 1.3.405b31-406b25). So the soul cannot be a magnitude. The distinction between direct and indirect motion is an important one, but the distinction doesn’t make a difference for the present argument.

sition, but also that these magnitudes “are fitted together such that nothing of the same kind is admitted” (μηδέν συγγενές παραδέχεσθαι, *On the Soul* 1.4.408a8). This requirement has seemed so curious to some, that they’ve suggested that the manuscript ought to be emended. Steinhart conjectures that this condition ought to read “such that nothing not of the same kind is admitted” (μηδέν <μη> συγγενές παραδέχεσθαι).²⁴

But a passage from elsewhere in the *Physics* tells against Steinhart’s conjecture.²⁵ In *Physics* 6.1 Aristotle outlines three ways magnitudes might be arranged. Two or more magnitudes of the same kind might be arranged such that they are united into a single, larger magnitude (231a22). Such magnitudes, distinguishable only by their position, are said to be *continuous* (συνεχῆ). Two or more magnitudes are *contiguous* (ἀπτόμενον) if they are merely touching (231a23). Finally, two or more magnitudes are arranged *successively* (ἐφεξῆς) if “they have nothing of the same kind between them” (μηδέν μεταξὺ συγγενές, 231a24). Though the idea that some magnitudes are arranged successively when nothing of the same sort comes between them might sound curious at first, an example shows that it is not odd at all. Suppose the letters ‘A,’ ‘B’ and ‘C’ are arranged A-B-C. Further suppose that we also put the numbers ‘1’ and ‘2’ between the letters such that the following arrangement results: A-2-B-1-C. The fact that the letters are arranged in succession is not disturbed by the intrusion of the numbers, but would be if something of the same kind (i.e., another letter) came between—for instance the arrangement A-2-B-1-Z-C.

²⁴ See Ross 1961, ap. crit. note 8 on line 408a8.

²⁵ Hicks 1907, 268.

From this we can see what the claim that a *harmonia* is a composite amounts to: a *harmonia* is the composite of spatially extended objects in a particular arrangement that admits no other spatially extended object of the same type. In §4.5 below we'll examine just what the "criterion of correctness" is for this sort of arrangement. But for now let this much suffice: the most proper application of the term '*harmonia*' is that which picks out a whole of spatially extended (i.e., material) parts having a particular arrangement.

4.4 Biology 101: A Hierarchical Model of Composition

In both *Parts of Animals* 2.1 (646a12-24) and in *Generation of Animals* 1.1 (715a8-15), Aristotle distinguishes (at least) three types of composition ($\sigma\upsilon\nu\theta\epsilon\sigma\iota\zeta$). In these passages he appears not to use the term in the strict, chemical sense of the word discussed above. Rather the term is used for composition in general, whether mixture ($\mu\tilde{\iota}\zeta\iota\zeta$) or composition ($\sigma\upsilon\nu\theta\epsilon\sigma\iota\zeta$). And, as we shall see, Aristotle arranges these three types of composition hierarchically in order of increasing complexity. At the highest level there are composite objects like living animals and at the lowest level are the four elements or elemental qualities from which all material objects are composed.

At the lowest level on the hierarchy we find two types of composite, what I shall call *organic* and *inorganic* composites.²⁶ Let's begin with what these two types of composition have in common. Organic and inorganic composites are composed of the four elements—earth, air, fire and water (*Parts of Animals*

²⁶ Although Aristotle makes the distinction between these two sorts of composites, the names are my own.

2.1.646a12-13). Although these elements can be analyzed in terms of the four elemental powers (*δυνάμεις*), the hot, cold, wet and dry, Aristotle seems to speak indifferently about the elements and the elemental powers.²⁷ I shall follow his lead. When the elements or elemental powers have been mixed, the result, as we've seen in §4.2 above, is a homoeomerous composite whose smallest parts have the same character as the whole.

But Aristotle distinguishes those homoeomerous composites which are, or can be, parts of animals from those which aren't, or can't be. Let us call the former organic and the latter inorganic homoeomerous composites. An inorganic homoeomerous composite is something like gold, bronze or honeyed wine. But things like flesh, bone and blood are also homoeomerous composites. I've called these parts 'organic' because they are, or can be, parts of a living animal. For present purposes, we can leave to one side the inorganic composites and focus on the hierarchical structure of composition which results in a living animal.

At the next level on the hierarchy are those parts which result from combining the homoeomerous parts. The non-uniform or *anhomoeomerous* parts are those which are not divisible into smaller parts which have the same character as the whole. Unlike water, the smallest parts of which are still water, a hand, toe or the face are not divisible into smaller parts of the same character as the whole. The smallest part of a toe is not a toe. The anhomoeomerous parts are composed of homoeomerous parts. To take one example, a hand is composed of flesh, bone and sinew—all of which are homoeomerous parts.²⁸

²⁷ See, for example, *On Generation and Corruption* 2.7.334b17—a passage spotted by Joachim 1907, 76.

²⁸ See *History of Animals* 1.1.486a12-15.

At the highest level on the hierarchy are living animals which are composed of both homoeomerous and anhomoeomerous parts (646b11-13). The mixture of elements or elemental powers results in flesh, bone and the other organic homoiomerics. The composition of these parts result in the organs and limbs and the other anhomoiomerics. The whole living animal is composed of both homoeomerous and anhomoeomerous parts.

4.4.1 The Trouble with Transitivity

Aristotle's hierarchical model of the composition of a living animal looks rather uncontroversial. I think that this is how we typically think of complex composite objects. They are composed of parts, which are composed of parts, which are ultimately composed of elements. But this is where the ancient and modern mereologies part company. For Aristotle has a view about the ontological status of parts which seems out of step with contemporary mereology. I take it that a key feature of contemporary mereology is the idea that parthood is transitive.²⁹ In David Lewis' book *Parts of Classes*, he offers three axioms he takes as the basic axioms of mereology:³⁰

<i>Transitivity:</i>	If x is some part of y , then x is part of y .
<i>Unrestricted Composition:</i>	Whenever there are some things, then there exists a fusion of those things.

²⁹ Transitivity is widely held as a characteristic of the part-whole relation. Although widely held, it is not universal. For a dissenting viewpoint see Rescher 1955.

³⁰ Lewis 1991, 74.

Uniqueness of Composition: It never happens that the same things have two different fusions.

The least controversial of these axioms, it seems to me, is *Transitivity*. He stated this axiom more clearly earlier in the book claiming that “a part of a part of something is always a part of it.”³¹

Given the hierarchical model of composition I’ve sketched above, one might have expected a part of a part of an animal to be a part of that animal. But it is not entirely clear that Aristotle has a concept of the transitivity of parthood that goes “all the way down.” That is, although the elements are part of the homoeomerous composites and the homoeomerous composites are parts of the animal, Aristotle does not seem to view the elements as parts, straightforwardly, of the animal.

We’ve seen in §4.2 how Aristotle solves the first skeptical puzzle presented in *On Generation and Corruption* 1.10. The elements from which mixtures are formed exist potentially, but not actually, in that mixture (327b24-26). These ingredients are not *destroyed*, as the skeptic worried they might be; rather they are *demoted* to the level of existing only potentially. Although this view allows Aristotle to evade the skeptical criticism, it leaves us, as modern interpreters, at a loss. The parts of the parts of Socrates—the elements which compose his flesh, blood, bone and other homoiomerics—are potentially, but not actually parts of Socrates.

Something has to give. One cannot, it seems, simultaneously claim that the lowest level parts of mixtures are potentially, but not actually present in the

³¹ Lewis 1991, 3.

mixture while claiming that parthood is transitive. These claims are incompatible, however, only if the transitivity of parthood requires that the parts of parts have the same ontological status as the whole. I think this is the ordinary way we would think of things, but it is not the only way. By adopting the notion of potential, but non-actual, parts Aristotle is not denying that parts of parts *exist*. Rather, in order to solve the first skeptical puzzle about mixtures he must insist that the parts continue to exist in the mixture (parts that don't exist obviously can't be mixed). So Aristotle needn't be seen as denying the transitivity of parthood. Instead he is merely qualifying what, at the lowest level of composition, it means to say that x is a part of a part of y . The elements are still a part of the composite animal, though they exist only potentially.

4.4.2 The Criterion of Correct Arrangement

You will recall that at the end of §4.3 I issued a promissory note. There I claimed that since Aristotle thinks of a composite as something with magnitude and position, he thinks of it as a spatially extended object. But more than this he claims that the parts which compose such a spatially extended object are “fitted together such that nothing of the same kind is admitted” (*On the Soul* 1.4.408a7-8). Although this addendum seemed odd at first, Aristotle explains that things fitted together in this way are arranged successively or in order (ἐφ’ ἑξῆς, *Physics* 6.1.231a24). The parts of a composite are arranged correctly, then, when they are arranged in order. What counts as the correct arrangement of the homoeomerous and anhomoeomerous parts of a living animal? The standard

the parts must meet in order to count as a composite and so to count as a *harmonia* is the criterion of correct arrangement.

To determine what this criterion of correct arrangement is, let us follow Jonathan Barnes and consider Plato's example of the harmonious arrangement of the parts of a lyre. The wood and strings of the lyre have been arranged correctly when the strings have been properly tensioned and the wood adequately opposes this tension. In addition, the strings have been properly tensioned when they have been tuned to a particular musical mode. The parts of a lyre, then, have been harmoniously arranged when the lyre is able to be *played*. As Barnes notes, the *harmonia* or attunement of the lyre consists in "its aptitude for performance."³² The parts of the lyre are correctly arranged when the lyre can perform its function. Shifting to the case at hand: the parts of the body (both homoeomerous and anhomoeomerous) are correctly arranged when they have been fitted together so that the body can perform *its* function.

But now this begins to sound very much like Aristotle's own view about the nature of the soul. The "vital functions" of the body are things like nutrition, perception, locomotion and perhaps thought. So if the parts of a human body are correctly arranged, the body will be able to carry out these functions. Aristotle's definition of the soul, the one he endorses, is that the soul is the "first actuality of a natural organic body" (*On the Soul* 2.1.412b5). One might even say that this first actuality is the correct arrangement of the parts of a natural organic body. So long as one is not speaking homonymously, a natural organic body is one that is composed of parts able to carry out the vital functions of the

³² Barnes 1982, 491.

organism. Such parts are the homoeomerous and anhomoeomerous parts of the body, as we've seen. So perhaps it could be said that the first actuality of a natural organic body is the arrangement according to which the homoeomerous and anhomoeomerous parts of the body are capable of carrying out a certain set of vital functions. If Barnes is right and the criterion for the correct arrangement is the capacity for the parts to carry out the vital functions of a living organism, then Aristotle's view is in real danger of collapsing in to a version of the *harmonia* theory.³³ We will return to this issue in chapter 6.

4.5 Restating the Alternatives

We're now in position to do part of what we set out to do at the beginning of the chapter. But first a brief recapitulation is in order. Looking at Aristotle's views about how mixture and combination work in chemistry yielded an important distinction: parts can combine into a whole either as a composite ($\sigma\upsilon\nu\theta\epsilon\sigma\iota\varsigma$) or as a mixture ($\mu\tilde{\iota}\zeta\iota\varsigma$). When speaking strictly, a composite is a whole whose smallest parts are not of the same character as the whole. A composite is an anhomoeomerous compound. A mixture is a whole whose smallest parts *are* of the same character as the whole just as the smallest parts of water are water. A mixture is a homoeomerous compound. The $\lambda\acute{o}\gamma\omicron\varsigma$ of such a mixture is the ratio or proportion according to which the four elements have been combined in it.

³³ Recall that in §4.1 it looked like Aristotle's positive view was in danger of collapsing into the specification of the *harmonia* theory according to which the soul is the ratio of the parts of the body that are mixed. But now it looks like his positive view is in danger of collapsing into the specification of the theory according to which the soul is a composite.

Aristotle's *Physics* suggests that understanding a *harmonia* as a σύνθεσις is to see it as a composite of spatially extended parts. As he explained in *On the Soul* 1.4.408a6-7, the most proper application of the term '*harmonia*' is to magnitudes which have motion and position. In order for a magnitude to have a position (a necessary condition something must satisfy in order to be capable of locomotion) that magnitude must be in a place. A place is bounded by three dimensions. So a magnitude having motion and position is bounded by three dimensions, in other words, it's spatially extended. In addition to being spatially extended, such parts must be arranged in order.

Looking at Aristotle's views about the composition of animals in the biological works has suggested a way of fitting all these claims together. An animal, as a whole, is composed of homoeomerous and anhomoeomerous parts. The anhomoeomerous parts are, in turn, composed of the homoeomerous ones. So to simply say that a *harmonia* is a composite is ambiguous; for composition can occur on two levels. At one level, the homoeomerous parts combine to yield anhomoeomerous composites like hands, ears and eyes. At one level higher up in the order of complexity, the anhomoeomerous and the homoeomerous parts combine to yield a composite organism. At this level on the hierarchy the parts are correctly arranged when they can carry out a certain set of vital functions.

Now recall Aristotle's initial presentation of what it is for something to be a *harmonia* (407b32-33). He claims that a *harmonia* is either:

- (1) A ratio of the things mixed together (λόγος...τῶν μιχθέντων); or
- (2) A composite (σύνθεσις).

We are now in a position to restate these two alternatives with a bit more precision. A *harmonia* is either:

- (i) The ratio or proportion according to which the four elements in the homoeomerous parts of the body have been mixed; or
- (ii) The composite of spatially extended parts yielding either (a) the anhomoeomerous parts of the body or (b) the body of an organism capable of carrying out a certain set of vital functions.

But these present two problems for Aristotle, neither of which should be new. In §4.1 above, we've seen that Aristotle's strategy to defeat the *harmonia* theory was this: first he spells out the two ways the theory could be specified and then he argues that it is not possible for the soul to be a *harmonia* on either specification. For this strategy to be successful, the alternatives presented need to be exhaustive. I think it is clear, however, that the choice between (i) and (ii) does not constitute an exhaustive disjunction. There are ways of being a *harmonia* which do not fit either description. Recall, for instance, Plato's specifications of the *harmonia* theory. He described a *harmonia* as either the abstract principle of organization a whole of parts has or as a material structure. But the parts of the body are organized according to a variety of abstract principles; they are arranged (more or less) symmetrically, for example. Second, even if we suppose that (i) and (ii) did comprise an exhaustive disjunction, (ii)(b) now looks strikingly like Aristotle's positive view about the soul.

4.6 More Positive Considerations

The *harmonia* theory has more going for it than mere similarity to Aristotle's own view. *On the Soul* 1.4, the chapter where the theory is discussed (and rejected), contains a virtual admission that anyone who rejects the theory will be faced with an uphill battle. Spelling out what the *harmonia* theory has going for it will clarify the difficulties that will arise for anyone, Aristotle included, who rejects it.

First, one of Aristotle's main complaints regarding the views his predecessors held about the soul is that they failed to explain the relation of the soul to the body. He writes:

[M]ost accounts of the soul have an absurd result, since they attach the soul to a body and place it in a body, with no further determination about the cause of the attachment or the condition of the body. (*On the Soul* 1.3.407b13-15)

This is one thing the *harmonia* theory does particularly well. Suppose the soul were a *harmonia* in the first sense—a ratio or proportion of the parts mixed together. The soul is 'attached' to the body insofar as it is the proportion of the elements in the homoeomerous parts out of which the body is composed. Now suppose the soul were a *harmonia* in the second sense—a composite of the parts of the body. According to this alternative, the soul is a certain sort of body. It is a body whose parts have been arranged so as to carry out the vital functions of a living organism. On either alternative, then, there is a good reason why the soul is 'attached' to the body. Any other account of the soul, including Aristo-

tle's own, must do at least as good a job of explaining why the soul is 'attached' to the body.

Moreover, anyone who rejects the *harmonia* theory must have a good explanation of what happens at death. Near the half-way point of *On the Soul* 1.4 Aristotle poses two questions which must be asked of anyone rejecting the *harmonia* theory. The first is this:

Q1: [I]f the soul is different than the mixture, why is it that the what it is to be flesh and that for the other parts of the animal are destroyed at the same time? (408a24-26)

There are textual problems with these these lines.³⁴ Consider the protasis. Strictly speaking, Aristotle never considers an interpretation of the *harmonia* theory according to which it was the mixture itself. Rather, he considers the view that a *harmonia* is the ratio or proportion of the elements in a mixture. This has led some commentators to emend the text, substituting 'τῆς ἁρμονίας' for 'τῆς μίξεως' for the result: "If the soul is different than a *harmonia*..."³⁵ This emendation certainly makes sense, but it is superfluous.

We can see that the change is unnecessary for two reasons. First, Aristotle is often a bit loose with the way he uses the terms 'σύνθεσις,' 'μίξις,' and 'κρᾶσις.' When Aristotle uses the terms in a technical sense, they pick out a specific sort of chemical composite. A *σύνθεσις* is, strictly speaking, a composite whose parts are not of the same character as a the whole—something anho-

³⁴ I'm indebted to T.H. Irwin for bringing this to my attention. The text of the lines in question as printed in Ross 1961 run as follows: "εἰ δ' ἐστὶν ἕτερον ἢ ψυχὴ τῆς μίξεως, τί δὴ ποτε ἅμα τῷ σαρκὶ εἶναι ἀναιρεῖται καὶ τὸ τοῖς ἄλλοις τοῦ ζώου;" I've underlined the troublesome words.

³⁵ Philoponus, in his lemma, makes this change.

moeomerous. A *μίξις* is a composite of the four elements whose smallest parts, as a result of chemically altering one another, are of the same character as the whole. When he uses ‘*κρᾶσις*’ technically the term picks out a mixture of liquids.³⁶ Although a composite is technically something whose smallest parts aren’t of the same characters as the whole—like a blend of grains of wheat and barley—a *σύνθεσις* is sometimes popularly called a *μίξις*. For instance, in *On Generation and Corruption* 1.10.328a2 Aristotle writes that wheat and barley are “said to be mixed” (*μεμίχθαι*). So he allows that in the vernacular wheat and barley are mixed, although strictly speaking they form a *σύνθεσις*.

I think this is what is going on in the protasis of the conditional above. Aristotle is using the term ‘*μίξις*’ loosely, not to indicate a homoeomerous composite made up of the four elements which chemically combine. Rather he seems to be using the term as a synonym for ‘*σύνθεσις*’ simply to indicate a composite object whose parts are physically extended. Aside from the fact that Aristotle allows this usage, the contrast between this question and the second makes better sense if we take him to be speaking loosely. The protasis of the second question that must be answered by anyone who wishes to reject the *harmonia* theory is this: “If the soul is not the ratio of the mixture...” (408a27). This second question invites a comparison with the two formulations of the *harmonia* theory which began the chapter. A *harmonia*, as we’ve seen above, is either a composite or a ratio of the things mixed. It would make sense if Aristotle, wishing to

³⁶ For an excellent discussion of Aristotle’s views about mixture see Joachim 1907.

echo this distinction, showed the difficulties for one rejecting both formulations of the theory.

Let us then take Aristotle to be using the term ‘*μῖξις*’ loosely in the protasis. The manuscripts and the ancient commentators are still divided over the text of the question itself. The great Aristotelian commentator Alexander of Aphrodisias influenced later commentators like Philoponus and Simplicius all of whom suggest two similar ways of interpreting the question.³⁷ According to the first interpretation, Aristotle’s question is this: “If the soul is not a mixture, why, is <the being> for the other parts of the animal destroyed at the same time as the being for flesh?”³⁸ Perhaps we could put the worry a bit more perspicaciously. Aristotle noticed that when an organism dies the ‘what it is to be,’ i.e., the essence or form, of its flesh is destroyed. But when the soul departs and the form of flesh is destroyed, the forms of the other parts of the body perish along with it. This might be taken as *prima facie* evidence that there is not a multiplicity of forms—one for each part of the body—but rather a single form which unifies all the parts of the body. When this form, i.e., the soul, is destroyed all of the parts which it informed are destroyed at once. This is easy to explain if all the parts of the body are informed by a single soul, but difficult to explain if each part had its own soul.

If Aristotle is using the term ‘*μῖξις*’ loosely, as I’ve suggested, the *harmonia* theory has a neat explanation of why the essence of flesh and all the other parts

³⁷ This fact was noted both by Hicks 1907, 271-272 and by Ross 1961, 197.

³⁸ Reading ‘*τῷ*’ at line 25 and ‘*τὸ*’ at line 26 and is compatible with reading ‘*τὸ*’ in both places. Reading ‘*τῷ*’ at line 25 as a dative of accompaniment yields this translation.

are destroyed simultaneously. Taking ‘μίξις’ loosely means that we can use it as a synonym for ‘σύνθεσις,’ or composite. We’ve seen in §4.3 and §4.4 that the sort of composite at issue is the body of an organism capable of carrying out a certain set of vital functions. Both Aristotle and the *harmonia* theorist agree that, at death, this functionally organized body is destroyed. But according to one specification of the view, the *harmonia* theorist can claim that the soul *just is* the functionally organized body. So the simultaneous destruction of all the parts of the body is easy to explain. At death, the body is no longer able to carry out its vital functions. So the parts which were once parts of a functioning body are parts of a corpse. The simultaneity of their destruction is, therefore, a simple matter—the fate of the parts of the body is tied to the fate of the body. When the body dies, the parts (as the sorts of parts they are) are destroyed simultaneously. There is nothing peculiar about that.

On the second reading, Aristotle is asking two related questions: “If the soul is not a mixture, why is it destroyed when the flesh is destroyed; and so too with the other parts of the body?”³⁹ On this interpretation, the worry is not about why the destruction of parts occurs simultaneously, but rather why the soul and the flesh (or any of the other parts) seem to share the same fate. Here Aristotle is making two assumptions. The first is that the soul is destroyed when an organism dies and the second is that the soul and flesh are destroyed together.

Against the first assumption, Aristotle occasionally leaves it open whether some part of the soul might continue to exist after the death of the organism. It is a matter of debate, for example, when Aristotle seems to allow that the active

³⁹ Reading ‘τῶ’ at lines 25 and 26.

intellect is separable from the other parts of the soul whether he has it in mind that this part of the soul is capable of separated existence. In a much disputed passage in *On the Soul* he describes the agent intellect in this way: “Only when it has been separated is it exactly what it is, all by itself. And this alone is immortal and everlasting.” (3.5.430a22-24). If the active intellect is immortal and everlasting, then the entire soul is not destroyed, but only parts of it. This issue is clearly too big to be settled here. Suffice it to say, however, that there are places where Aristotle seems to allow that part of the soul is not destroyed at death. We should, therefore, take him not to be speaking of such parts here.

Against the second assumption, he sometimes says that flesh and bone are what remain after the death of an animal. For instance in the *Metaphysics* he writes: “And this is why a clay statue is destroyed into clay, or a bronze sphere into bronze, or Callias into flesh and bones, and even a circle into its segments” (Z.10.1035a31-34). But sometimes he claims that flesh is only homonymously flesh after an animal dies. We find evidence for this in the *Generation of Animals* among other places. “There is no such thing as face or flesh without the soul in it,” Aristotle writes, “it is only homonymously that they will be called ‘face’ or ‘flesh’ if the life has gone out of them, just as if they had been made of stone or wood” (2.1.734b25-31). In the question above, his intent seems clear. Aristotle is taking flesh to be something which no longer exists when the animal dies.

But why is this the case? The *harmonia* theory has the resources to answer this challenge. Flesh and all the other parts of an animal, including its functionally organized body, are *harmoniai*. When the animal dies, these *harmoniai*

are destroyed. Flesh is a certain sort of *harmonia*, a mixture. So when the *harmonia* is destroyed, so too is the flesh. The same goes for the other parts of the animal and, as we've seen above, the whole functionally organized body of the animal.

The second question that must be answered by anyone who reject the *harmonia* theory is this:

Q2: In addition, if indeed it is not the case that each of the parts has a soul, if the soul is not the ratio of the mixture, what is it that perishes when the soul departs (ἀπολειπούσης)? (408a27-28)

This question begins with a back-reference to the first horn of Aristotle's final argument against the *harmonia* theory. He argues that the soul cannot be the ratio of the mixture because there is not one ratio out of which the body is composed. There is a different ratio of the elements which make up bone, for example, than that which makes up flesh. Aristotle's claim is that if the soul were a ratio of the elements which make up these parts, the organism would have as many souls as parts. He takes this to be an absurd result and so concludes that the soul cannot be the ratio of the elements which make up the parts of the animal.⁴⁰

But we need to be clear. There are two circumstances in which a ratio might be destroyed or perish. Consider a molecule of water. On the one hand, the 2:1 ratio according to which the hydrogen and oxygen are composed is not something that can be destroyed the way a particular molecule of water can be. A ratio is an abstract mathematical entity which is not destroyed when the mol-

⁴⁰ We'll return to this argument in §5.6.

ecule is; rather it fails to be instantiated. And if Aristotle thinks it impossible for universals to exist uninstantiated, it is only with the destruction of the last thing to instantiate the 2:1 ratio that the ratio itself will perish. On this view, in typical cases a molecule of water won't be destroyed because the *ratio* is destroyed. Instead, the molecule will be destroyed because the atoms which compose it fail to be combined in the right ratio. On the other hand, we might take the ratio according to which the hydrogen and oxygen are composed to be a particular instance of the ratio 2:1. The particular instance of that ratio might be said to be destroyed when the atoms are no longer combined in this way. In either case, the *harmonia* is destroyed when the molecules fail to be combined in the right ratio.

This argument is bought for a price, however. Suppose that the soul were the ratio according to which the elements of the parts of the body were composed. When the soul departs at death, the parts of the body are no longer combined according to the right ratio. Since they're no longer held together in the right proportions, the body disintegrates. The *harmonia* theory does a good job of accounting for this phenomenon. Any alternative theory will have to explain what is destroyed or what departs when an organism dies. A *harmonia* theorist has a ready answer: either the body fails to be the right sort of composite or the ratio according to which the parts of the body are combined is destroyed.

4.7 Conclusions

Aristotle is right to be concerned with the *harmonia* theory of the soul. As we've seen, the theory bears more than a superficial resemblance to the view about the soul Aristotle actually endorses. A look at parts of his chemistry, physics and biology reveals that the *harmonia* theory is more nuanced than it might have first appeared. A *harmonia* is either the ratio according to which the four elements are mixed in the homoeomerous parts of the body or it is a composite of spatially extended parts. As a composite of spatially extended parts a *harmonia* is either one of the anhomoeomerous parts of the body or (and this is what's crucial) the body of an organism capable of carrying out a certain set of vital functions. This subtlety comes at the price of proximity to Aristotle's own view that the soul is the "first actuality of a natural organic body" (*On the Soul* 2.1.412b5). Moreover, the *harmonia* theory of the soul is attractive because it is well equipped to explain what happens to an organism at death. On either of its specifications, the *harmonia* theory offers an explanation of why the soul is 'attached' to the body and why the soul and body seem to share the same fate.

Chapter 5

Aristotle's Objections to the Harmonia Theory

In the previous chapter, we've looked at the two options on the table: the soul is either a ratio of the things mixed together or a composite. Having spelled out these two specifications of the *harmonia* theory, Aristotle launches into a multifaceted attack on it in *On the Soul* 1.4.407b32-408a18. He deploys a number of arguments against the theory, but it is not always clear where one argument ends and another begins. What he says is compressed and sometimes cryptic. In order to determine what arguments Aristotle does in fact intend to levy against the *harmonia* theory—and against which specification of the theory they're intended—we first need to find the natural joints of the text. To do this it is worth seeing the passage as a whole:

And yet a *harmonia* is a certain ratio of the things 407b32
mixed or a composite, and it is not possible that the soul
is either of these.

Further, a *harmonia* is not a mover, but practically everybody assigns this attribute to the soul more than any other. And it is more harmonious to speak of a *harmonia* in the case of health (and generally of the bodily excellences) than in the case of the soul. This would be most clear if someone tried to assign the affections and actions of the soul to a particular *harmonia*; for it is difficult to harmonize.

Further, if we use the word ‘*harmonia*’ we do so according to two applications: the most proper is about magnitudes that have motion and position, a *harmonia* is a composite of them whenever they’ve been so fitted together that they admit nothing of the same kind; and then there is the ratio of the things mixed together—in neither case is it reasonable to apply the term to the soul, and the application according to which the soul is a composite of the parts of the body is exceedingly easy to refute.

For there are many composites of parts and they are variously composed. And so what composite of which parts ought one take the mind to be? How is it composed? And what about the faculty of perception or appetite? And it is similarly absurd for the soul to be a ratio of the mixture; for the mixture of elements in flesh is not the same as that in bone. And so it would follow that the body has many souls all over, since all its parts are composed of elements mixed together and the ratio of the mixture is a *harmonia*, that is, a soul.

In this passage, I’ve marked the major textual joints by indicating a new paragraph. These are indicated where Aristotle begins a sentence with ‘ἐτι δε’ which I’ve translated as ‘further.’ Aristotle commonly indicates the beginning of a new thought or argument with this phrase. Within each paragraph, however, Aristotle makes remarks which might seem to constitute a new argument. I’ve indicated those places by citing the Bekker numbers along the right side.

This series of arguments strikes one as being remarkably terse. Aristotle seems to be piling argument on top of argument in succession, sometimes only alluding to an argument spelled out in more detail somewhere else. Many of these arguments are only a line or two; only the argument from 408a5-18 is given with any detailed support. But for the rest of this passage, it is left to the reader to determine where Aristotle means to indicate an argument (either by providing a compressed version of an argument or by referring to arguments made somewhere else) and then to determine what those arguments are. It is curious that he is so quick to dismiss an argument which, as we've seen in the preceding chapter, bears such a striking similarity to the view he actually endorses.

Fortunately Aristotle does leave some clues. At the beginning of *On the Soul* 1.4 he reminds his readers that the *harmonia* theory has been “scrutinized in the popular discussions” (407b30). Just what he's referring to by ‘the popular discussions’ is a matter for debate. It might refer to Plato's dialogues, and the one that seems a particularly likely target is the *Phaedo*. But it might also refer to Aristotle's own dialogue, the *Eudemus*, which was likely intended for a popular audience. Or he might simply be referring to the court of public opinion. Perhaps the *harmonia* theory was a view that enjoyed some measure of current popularity. I don't think we can say definitively what the referent is; but by using the *Phaedo* and the *Eudemus* as resources we can better see where, in the passage above, an argument might be found. Simplicius, a sixth century Neoplatonist Aristotelian commentator, reports that Aristotle calls ‘the popular discussions’ “those proposed by the many who inquire perhaps also hinting at those in the *Phaedo*, but he means also those written by him in the dialogue *Eudemus*

in refutation of the *harmonia* <theory of the soul>.”¹ So by looking back at what remains of the *Eudemus*, we might elaborate on what Aristotle has presented us with in *On the Soul*.

Besides Aristotle’s own words, we can also solicit the services of Aristotle’s ancient and medieval commentators who have attempted to make sense of this passage. Simplicius’s commentary is important in this regard, but so also are the paraphrases of Themistius. Themistius’s commentary on *On the Soul* is our earliest extant commentary. There was an earlier and influential commentary by Alexander of Aphrodisias which is now lost.² Alexander’s own *On the Soul* survives and this is also an important source which can be brought to bear on our passage. These commentaries and paraphrases can be supplemented by one that is much later but even more influential—Aquinas’s first Aristotelian commentary *In Aristotelis Librum De Anima Commentarium*.³ Aquinas’s commentary on the first book of *On the Soul* is profoundly influenced by Themistius’s. “Hardly a chapter goes by,” Robert Pasnau claims, “without his using, verbatim and without acknowledgment, Themistius’s *De Anima*.”⁴

¹ Simplicius, *In Libros Aristotelis De Anima Commentaria* 53.1-4. See also Philoponus, *In Aristotelis De Anima Libros Commentaria* 414.22 and Sophonias, *In Libros Aristotelleis De Anima Paraphrasis* 25.4-8. The citations of these commentators will be given in the following way: Author, title, page number in Diels (ed.) *Commentaria in Aristotelem Graeca*, line number on the page.

² See Themistius 1996, 1.

³ Aquinas’s commentary was completed in 1268. The approximate dates of the other important commentaries are as follows (all dates are of the common era): Alexander of Aphrodisias fl. ca. 205; Themistius fl. late 340s-384/5; John Philoponus ca. 490-570s; Olympiodorus ca. 495-565; Simplicius post 529; and Sophonias late 1200s-early 1300s.

⁴ Aquinas 1999, *xiv*.

Though these commentators don't always agree about where the arguments begin and end, they do help to show where the text might be divided.

In addition to these commentators and Aristotle's own dialogue we can evaluate the possible arguments from our own point of view to determine which are philosophically defensible and which are not. After carving up the text where there appears to be a joint, we can see whether what remains can stand up as an argument against the *harmonia* theory of the soul. But before we attempt to find, reconstruct and evaluate the arguments Aristotle presents in *On the Soul* 1.4, let us first take a look back at the *Eudemus*, a dialogue within which he first grapples with the *harmonia* theory.

5.1 Eudemus or On the Soul

Among Aristotle's earliest writings was a one-book dialogue called *On the Soul*.⁵ It was dedicated to Eudemus of Cyprus, Aristotle's friend and fellow member of Plato's Academy, who was killed in the battle of Syracuse around 354 BC.⁶ The dialogue produced in memoriam is often referred to by its subtitle, the *Eudemus*, so that it not be confused with his later treatise of the same name. Most of the *Eudemus* is lost. Its fragmentary remains are preserved as quota-

⁵ Diogenes Laertius, *Lives of the Philosophers* 5.22.

⁶ See Cicero, *De Divinatione ad Brutum* 1.25.53—Fragment 1 (R2 32,R3 37,W1). This numbering convention is following Ross 1952. The number following 'R2' is the fragment number in Rose 1863 edition, the number following the 'R3' is the fragment number in Rose 1886 edition, and the number following the 'W' is the fragment number in Walzer 1934. The facts about Eudemus' death are described in Dancy 1996, 255; Guthrie 1981, 66; Chroust 1973, 39 and Jaeger 1948, 39.

tions and allusions in commentaries that have survived.⁷ But from these fragments and other ancient reports, the main lines of the philosophical position expressed therein are beyond doubt—the soul exists before it is embodied, its natural state is separated from the body and it, or some part of it, exists eternally once it is disembodied. These themes echo those expressed in another *consolationis mortis*, one written in honor of Socrates: the *Phaedo*. Not surprisingly, then, it was written while Aristotle was still a member of the Academy.⁸ Moreover, it is the only dialogue for which we find a counterpart in Aristotle's later doctrinal works. Important arguments about the nature of the soul are first publicly broached in the *Eudemus* and some are refined, reinterpreted or rehearsed in *On the Soul*. The earlier dialogue and the later treatise overlap in several places, but the most important occurs where Aristotle argues against the *harmonia* theory of the soul. About the theory Philoponus reports:

For a while in this work [i.e., *On the Soul*] he only rehearses this belief, but after a bit he echoes also the arguments on account of which they established this opinion. Already in another work he argued against this opinion, I mean in the dialogue *Eudemus*, and before him, Plato in the *Phaedo*.⁹

So perhaps taking a cue from his teacher, Aristotle took issue with the *harmonia* theory of the soul while he was at the Academy. The passages where

⁷ For collections of these fragments see Rose 1863 and 1886; Waltzer 1934; and Ross 1955.

⁸ There is much dispute about the precise date the dialogue was composed. The consensus seem to be that the dialogue was likely written around 352 BC.

⁹ Philoponus, *In Aristotelis De Anima Libros Commentaria* 141.35-142.4. Fragment 7 (R2 41, R3 45, W7).

he argues against the view are the best attested of all the *Eudemus* fragments.¹⁰ Philoponus, Simplicius, Themistius, Olympiodorus and Sophonias all report arguments (either the arguments themselves or reports that such arguments existed) from the dialogue which purport to show that the soul cannot be a *harmonia*.¹¹ In the *Eudemus* Aristotle deploys two main arguments directed at the thesis that the soul is a kind of *harmonia* of the parts of the body. Let us now turn to those arguments.

5.1.1 The Soul has No Contrary

Philoponus, apparently quoting directly from the dialogue, records the first argument: “There is a contrary to a *harmonia*, disharmony, but to the soul there is no contrary. Therefore, the soul is not a *harmonia*.”¹² Brief as it is, this argument is revealing.

First it should be noted that this argument is, in Aristotle’s strict logical sense of the term, a syllogism. According to the schema presented in the *Prior Analytics*, the argument has the structure of a second figure syllogism where the major premise is a universal affirmative and the minor premise a universal negative.¹³ The argument form is as follows: All the *F*s have a certain property.

¹⁰ What accounts for the popularity? XXX

¹¹ These fragments are found in Ross 7 (R2 41,R3 45,W7). Ross’ fragment 7 is composed of passages from Philoponus, *In Aristotelis De Anima Libros Commentaria* 141.22-147.10.; Simplicius, *In Libros Aristotelis De Anima Commentaria* 53.1-4; Themistius, *In Libros Aristotelis De Anima Paraphrasis* 24.13; Olympiodorus, *Commentarius in Phaedonem* 173.20; and Sophonias, *In Libros Aristotelis De Anima Paraphrasis* 25.4-8.

¹² Philoponus, *In Aristotelis De Anima Libros Commentaria* 144.24-25.

¹³ *Prior Analytics* 1.5.26b34-27a2.

None of the *G*s have that property, therefore no *F* is a *G*. Since the inference pattern is a proper syllogism, the truth of the conclusion should be guaranteed by the truth of the premises. But is it?

The rule of inference on which the argument's validity rests, is something akin to Leibniz' Law. To argue for numerical identity, in this case between the soul and a *harmonia*, one must show that the soul and a *harmonia* share all and only the same properties. In other words, if *F* and *G* are identical, then every property of *F* is a property of *G*. If there is a property had by one, but not by the other, one can usually conclude that identity cannot obtain between them. The property at issue in this argument is 'having a contrary.'

One might worry, however, that using this property as litmus is an improper application of Leibniz' Law. 'Having a contrary' is, after all, a relational property. (I'm taking a non-relational property of *F* to be any property which *F* might have in a universe consisting only of *F* and nothing else.) Failures of Leibniz' Law when applied to relational properties abound. Consider the relational properties having to do with what one knows or believes. Suppose I know that Cicero wrote the *Tusculan Disputations*, but not that he could also be identified by his family name 'Tully.' In that case Cicero has a property 'being known by me to be the author of the *Tusculan Disputations*' that Tully lacks. Tully is not known by me to be the author of the *Tusculan Disputations*. Applying Leibniz' Law yields the conclusion that Cicero is not identical to Tully. But we know this isn't true; Cicero *is* Tully. Leibniz' Law, therefore, is illegitimately applied in cases that operate like this.

Although the property ‘having a contrary’ is relational, it operates differently. Consider the property ‘being the brother of a poet.’ This property is clearly relational; no one could have this property in a universe consisting of one, and only one person. But Leibniz’ Law can be legitimately applied to show that two people are not identical. Consider Jon and Ian. Suppose that Jon has the property ‘being the brother of a poet’ but Ian doesn’t. Since Jon has a property Ian lacks, the two cannot be identical. Here we have a case where a relational property can be used as litmus for cases of identity. I submit that the property ‘having a contrary’ works in the same way. It is a relational property to which Leibniz’ Law can legitimately be applied.¹⁴

Second, the first premise of the argument—there is a contrary to a *harmonia*—is problematic. Philoponus reports it might be argued that, strictly speaking, the first premise is false: “Someone might object to this <by arguing> that there is not a proper contrary to a *harmonia*, but rather an indefinite privation” (στέρησις ἀόριστος).¹⁵ Disharmony is the lack of *harmonia*. But there

¹⁴ The difference between a property like ‘is the brother of a poet’ and a property like ‘is known by me to be the author of the *Tusculan Disputations*’ is this: the latter involves the attribution of a representational or intentional state to some subject but the former doesn’t. Those properties having to do with what one knows or believes, hopes or fears, doubts or doesn’t doubt, etc. *cannot* be applied using Leibniz’ Law to distinguish between two things. Consider this intensional (opaque) sentence which attributes an intentional state to me: “I believe Henry Aaron is the all-time home run leader.” This sentence is true, but if I were to swap the name ‘Hammerin’ Hank’ for ‘Henry Aaron’ the sentence would come out false if I didn’t know that ‘Henry Aaron’ and ‘Hammerin’ Hank’ have the same extension. So it’s not the fact that a property is *relational*, but the fact that it’s *intentional*, which results in a failure of Leibniz’ Law.

¹⁵ Philoponus, *In Aristotelis De Anima Libros Commentaria* 144.25-28.

is not a single, definite property to which a *harmonia* is the proper contrary. The poles of a magnet have opposite charges; one positive and the other negative. The proper contrary of being positively charged is being negatively charged. But the indefinite privation of being positively charged is being either negatively charged or having a neutral charge. An indefinite privation of *F*, is being not-*F* where being not-*F* can be satisfied by a range of states or conditions. The indefinite privation of being red is being not-red. This condition can be satisfied by being orange, yellow, green etc.

Neither Philoponus nor any of the other commentators make much of the specifics of this objection and neither shall I. What is interesting is the account given of what sort of opposite the soul has. Philoponus objects that though there might not be a proper contrary to the soul there might be the next best thing: “To the soul, being a kind of form (ὡς εἶδει τινί), there is an indefinite privation.” Simplicius reports the same: “In the *Eudemus* (the dialogue also called *On the Soul*) the soul appears to be an εἶδος τι, and in this work he commends those who claim that the soul is receptive of forms.”¹⁶ To clarify just what Aristotle means when he says that the soul is an εἶδος τι we need to take a closer look at the evidence.

Forms of the indefinite pronoun ‘τις’ can be used in two ways, either substantively or adjectivally. In its substantival use, τις can mean some one particular item. In its adjectival use, τις can be used to strengthen the word it is modifying or it can be used apologetically to draw attention to the fact that the word it is modifying is only, in a manner of speaking, appropriate. We can ren-

¹⁶ Simplicius, *In Libros Aristotelis De Anima Commentaria* 221.20-33.

der ‘εἶδος’ straightforwardly as ‘form.’ So there are three options for reading ‘εἶδος τι.’ First, taking τίς substantively, we might take ‘εἶδος τι’ to mean ‘some form in particular.’ Second, taking τίς adjectivally and as strengthening the noun, we could read ‘εἶδος τι’ to mean ‘this very form.’ Third, taking τίς adjectivally and as apologetic, we could read ‘εἶδος τι’ to mean ‘a sort of form (but not really).’

Simplicius provides evidence that we ought to take this third alternative. After claiming that in the *Eudemus* Aristotle seems to regard the soul as an εἶδος τι and praises those who claim that the soul receives forms, Simplicius goes on to say that really it is not the whole soul which receives the forms but strictly speaking only the noetic part (ἡ νοητικὴ). So he concludes: “For it is to νοῦς, which is greater than the soul, that the true forms (τὰ ἀληθῆ εἶδη) are correlated.”¹⁷ The contrast he intends to draw, it seems, is between the true and proper Platonic Forms and what we call a form, i.e., the soul. Therefore, we ought to read ‘εἶδος τι’ as a kind of guarded assertion. The soul may be similar to the Forms but, strictly speaking, it is not one.

The difficulty with reading ‘εἶδος τι’ this way is that it requires Simplicius to use ‘εἶδος’ and its cognates to pick out three different sorts of forms in the course of a single sentence: the soul is a sort of form (εἶδος τι), it is receptive of forms (εἰδῶν), and the soul has knowledge of the true Forms (τὰ ἀληθῆ εἶδη). But given the position the *Eudemus* occupies as a transition between the Academy and Aristotle’s own mature philosophical work it is, perhaps, not surprising to find these three views present. I shall not discuss the complex and controver-

¹⁷ Simplicius, *In Libros Aristotelis De Anima Commentaria* 221.20-33.

sial Platonic theory of Forms here. Still, there are vestiges of what looks to be a theory of ‘capital-F’ Forms in the *Eudemus*, though there is certainly not enough evidence to decide the issue conclusively. But what evidence there is seems to suggest that in the *Eudemus* Aristotle took the soul to be an εἶδος τι—a sort of Platonic Form (but not really a Form).

Third, Philoponus does not include Aristotle’s justification for the tenuous second premise that the soul doesn’t have a contrary. Fortunately there are two places one can find this justification. Expanding on the argument, Olympiodorus writes: “To *harmonia* the contrary is disharmony, but to the soul there is no contrary, for it is a substance (οὐσία). The conclusion is clear.”¹⁸ But with this jarring explanation, hasn’t Olympiodorus just pushed the problem back? Why should we suppose that the soul is a substance? It appears to be a dogmatic assumption of the *Eudemus* that the soul is a substance.

We find not much more than this in the *Categories* where Aristotle specifically addresses this concern. In *Categories* 3b10-4a22 Aristotle lists four characteristic features of substances: (1) they signify “a certain this (τόδε τι);” (2) they have no contrary; (3) they do not admit of more or less; and (4) numerically one and the same substance can receive contraries.

The second characteristic feature of substances is that they have no contraries. Aristotle argues for this feature by appealing to our intuitions. He asks: “What could be contrary to a primary substance? Nothing is contrary, for instance, to an individual person; nor is anything contrary to person or animal” (*Categories* 5.3b25-27). He admits that this is a necessary, but not sufficient,

¹⁸ Olympiodorus, *Commentarius in Phaedonem* 173.20.

feature of substance, for there is nothing contrary to being two feet long, though this is not a substance. The same strategy can be applied to the argument in the *Eudemus*. The soul has no contrary, for what could be contrary to an individual soul? This gives us good reason not to eliminate soul as a candidate for being a substance, but this is not enough to positively prove it is. We'll return to questions about the soul as substance in §5.2 and §6.2 below.

5.1.2 If the Soul had a Contrary

Again Philoponus is our best source for the second argument Aristotle enlists to counter the *harmonia* theory in the *Eudemus*. The argument is this:

There is a contrary to the *harmonia* of the body, <namely> disharmony of the body, and disharmony of the ensouled body is sickness, weakness, and ugliness. Sickness is the disharmony of the elements, weakness is <the disharmony> of the homoeomerous parts, and ugliness is <the disharmony> of the organs. Therefore, if disharmony is sickness, weakness, and ugliness, *harmonia* would be health, strength, and beauty. But the soul is none of these, I mean it is neither health nor strength nor beauty, for even Ther-sites (who was the ugliest person) had a soul. Therefore, the soul is not a *harmonia*.¹⁹

Themistius and Olympiodorus also attest that this argument is found in the *Eudemus*. “If the disharmony of the body is sickness, ugliness or weakness,” Themistius writes, “the *harmonia* of the body would be beauty, health, and strength, but not the soul.”²⁰ Compressing the argument even further, Olympi-

¹⁹ Philoponus, *In Aristotelis De Anima Libros Commentaria* 144.30-145.7.

²⁰ Themistius, *In Libros Aristotelis De Anima Paraphrasis* 24.13.

odorus records that “if disharmony of the elements of an animal is sickness, the *harmonia* would be health, not a soul.”²¹

The structure of the argument is clear. It is a *reductio ad absurdum* of the view that the soul is the *harmonia* of the body and it works as the second part of a two-pronged attack against the theory. Either the soul has a contrary or it doesn't. If the soul doesn't have a contrary, then Aristotle can invoke the first argument—*harmoniai* have contraries, so the soul can't be one. Operating under the assumption that the soul is a *harmonia*, the soul would have a contrary. But these contraries are the disharmonies of the body—sickness, weakness and ugliness. These are the proper opposites of the bodily excellences health, strength and beauty, not the soul. (Were ugliness the contrary of the soul, people with such a trait would be soulless. This is an absurd result. Thersites, who was renowned for his ugliness,²² nonetheless had a soul.) So whether or not one

²¹ Olympiodorus, *Commentarius in Phaedonem* 173.20.

²² According to Homer, Thersites was physically ugly but also morally ugly as well. A passage from the beginning *Illiad* is particularly appropriate:

Now the rest had sat down, and were orderly in their places,
but one man, Thersites of the endless speech, still scolded,
who knew within his head many words, but disorderly;
vain, and without decency, to quarrel with the princes
with any word he thought might be amusing to the Argives.
This was the ugliest man who came beneath Ilion. He was
bandy-legged and went lame on one foot, with shoulders
stooped and drawn together over his chest, and above this
his skull went up to a point with the wool grown sparsely upon it.
Beyond all others Achilles hated him, and Odysseus.
These two he was forever abusing... (*Illiad* 2.211-221, Lattimore tr.)

assumes that the soul has a contrary, Aristotle can show that the soul could not be the *harmonia* of the body.

The doctrine of the three bodily excellences harkens back to Plato and anticipates Aristotle's own hierarchical model of composition we've already discussed in §4.4. Plato often draws parallels between the excellences of the soul and those of the body. In the *Philebus*, for example, Plato claims that with the establishment of a *harmonia* in the body comes health and "with health there come beauty and strength and again in our soul there is a host of other excellences" (26b).²³ Aristotle takes and assimilates this doctrine. The passage Philoponus preserves is remarkably similar to a passage in the *Topics* where Aristotle explains the bodily excellences as follows:²⁴ There are three paradigm bodily excellences—health, strength and beauty. Health is a state of the body which is had when there is a proper arrangement of elements which compose the homoeomerous parts of the body—the hot, cold, wet and dry. Strength is a state of the body which is had when there is a proper arrangement of the homoeomerous parts of the body—flesh, bone, sinew and the like. Beauty is a state of the body had when there is the right sort of symmetrical arrangement of the anhomoeomerous parts—arms and legs, for example. We'll see in §6.3 the importance of calling these *harmonia* states of the body.

But for now, let this much suffice. Even as far back as Aristotle's days in the Academy, the *harmonia* theory of the soul was a concern. Though these arguments seem thoroughly grounded in a Platonic metaphysics, they are clearly

²³ See also *Republic* 9.591a-d; *Laws* 1.631b-d.

²⁴ *Topics* 3.1.116b17-22. The same sort of account is given in *Physics* 7.3.246b3-10.

formulated as Aristotelian syllogisms. According to what is left of the *Eudemus*, Aristotle argues that the soul is not a *harmonia*. It is not a state of the body like health, strength or beauty. Rather it is a substance, something akin to a Platonic Form, though not one precisely. Let us now return to *On the Soul* to see how this fits together.

5.2 The Soul is a Substance

Aristotle's arguments against the *harmonia* theory begin with this claim: "a *harmonia* is a certain ratio of the things mixed or a composite, and it is not possible that the soul is either of these" (*On the Soul* 1.4.407b32-34). There would be little reason to see this as an independent argument against the theory were it not for two things. First, this sentence is followed by the phrase 'ἐτι δέ.' Second, all of the commentators agree that this is not merely an introduction to the arguments that follow, but an allusion to a complete argument. So what could the argument be? Without the fragments of the *Eudemus* and the accounts of the commentators, we could only speculate about the answer. But with the help of the *Eudemus* and the commentators, the argument comes into focus: the soul cannot be a *harmonia* because it is a substance and no *harmonia* is a substance.

Let us first look at the evidence presented in the commentaries. According to Themistius, the soul cannot be a ratio or a composite because it is a substance. He states this as a matter of fact and offers no further support for why one might think the soul is a substance or why neither a ratio nor a composite

might count as substances.²⁵ Aquinas, who used Themistius's commentary as his primary guide to the first book of *On the Soul*, elaborates only a bit further. He says that the soul is a substance but ratios and composites are accidents.²⁶ We are left to surmise that no accident can be a substance in order to preserve the validity of the implied argument.

Simplicius offers another account. He claims that the soul cannot be a ratio or composite because those things are "some sort of relation between things mixed" and the soul is not a relation.²⁷ What he goes on to say is more revealing. The soul is not a relation, and so cannot be a *harmonia*, because "every life is a substance, given that the animal is too, and given that it is receptive of opposites."²⁸ The soul causes the animal to be alive, because the soul is itself alive. But besides pointing to an interpretation of Plato's Final Argument, Simplicius adds that substances are receptive of opposites.

Themistius and Simplicius don't provide much support for the view that the soul is a substance. Still, what they say is consistent with the ontology Aristotle outlines in the *Categories*. Themistius claims that, unlike ratios or composites, the soul is not an accident. Simplicius claims that the soul is something capable of receiving opposites. But more than merely being consistent, what these commentators say puts us in mind of the *Categories*' account. Allow me to summarize some of the key points Aristotle makes there about the nature of substance.

²⁵ Themistius, *In Libros Aristotelis De Anima Paraphrasis* 24.30.

²⁶ Aquinas, *In Aristotelis Librum De Anima Commentarium* 1.9.135.

²⁷ Simplicius, *In Libros Aristotelis De Anima Commentaria* 53.15-18.

²⁸ Simplicius, *In Libros Aristotelis De Anima Commentaria* 53.20-21.

I will be forced to gloss over numerous subtleties and controversial issues, but let what follows serve as a sketch of some of the main claims.

In the *Categories*, Aristotle claims that there are ten sorts of ‘things that are’ which are grouped in ten categories. The ten categories listed in 4.1b25-26 are substance, quantity, quality, relative, place, time, positing, having, acting on and being affected. Substance is the category under which the ontologically basic entities are grouped; the others are non-substances or properties which are (non-linguistically) predicable of substance. The category of substance is further divided into primary and secondary substances. Primary substances are the ontologically basic entities and pick out particular individuals. Secondary substances are more ontologically fundamental than non-substances, though not as basic as primary substances. Secondary substances pick out sorts of things, universals. Socrates is a primary substance, human being is a secondary substance. Without primary substances, i.e., particular individuals, neither secondary substances nor non-substances could exist.

According to Aristotle’s account in the *Categories*, there are four positive criteria that must be met by a primary substance.²⁹ The first criterion I’ve alluded to already: every substance is ‘a this’ (τὸδὲ τῆ, 1.5.3b10-18). To be ‘a this’ is to be an individual, something numerically one. It is a necessary feature

²⁹ There are important differences between the criteria given in the *Categories* account of primary substance and that given later in the *Metaphysics*. It is sometimes argued that these two accounts of substance are incompatible. This is not my concern at present. The account of substance in *Metaphysics Z* will come up in §6.2. For accounts regarding the similarities and difference between the *Categories* view of substance and that in the *Metaphysics* see Wedin 2000; Loux 1991, 1-12 *passim* and 13-48; Lewis 1991; Gill 1989, 3-7; Lear 1988, 273-293 and Fine 1983.

of primary substance that it be a particular, though it is not sufficient. There are particular non-substances. We've encountered the second criterion in §5.1 and it is this: nothing is contrary to a primary substance (3b25-33). Since primary substances are particular individuals, they have no contraries. What could be the opposite of Socrates? The third criterion for substance is that substance "does not admit of more or less" (3b34-35). Primary substances do not admit of degrees, one man is no more a man than any other.³⁰ Fourth, the most distinctive feature of a (primary) substance is that "numerically one and the same thing is able to receive contraries" (5.4a10-11). It is this which forms the foundation for Aristotle's account of alteration.³¹ When Socrates changes from being pale to being dark, it is not the case that one thing—pale Socrates—goes out of existence and is immediately replaced by another thing—dark Socrates. Rather, numerically one and the same individual, Socrates, underlies the change of contrary properties. The feature is necessary and sufficient for being a primary substance.

So now let us return to the argument in *On the Soul*. The commentators all implicitly agree that Aristotle is committed to the following argument: accord-

³⁰ I've restricted my discussion to primary substance here and elsewhere. Aristotle does admit that primary substance are substance to a greater degree than secondary substance. So (unqualified) substance does admit of degrees. By restricting the discussion to primary substance, we are able to avoid this wrinkle.

³¹ I say 'alteration' (*ἀλλοίωσις*) to distinguish the kind of qualitative change at issue here from the other sorts of change or motion (*μεταβολή, κίνησις*) Aristotle discusses including generation, destruction, increase, diminution and change of place. The differences between these are not always clear. For an account of the differences see, for example, *Categories* 14 and *Physics* 5.1-2.

ing to the *harmonia* theory, the soul is either a ratio of the things mixed or a composite. The soul is a substance. No ratio of things mixed can be a substance, nor can any composite. Since these are the only two possible options, we can conclude that the soul is not a *harmonia*. But in order for the argument to work, it must be the case that a ratio of things mixed and composites must fail to have one or more of the characteristic features of substances. But none of the commentators provide such support.

What the commentators do say is revealing nonetheless. It will be useful to recall evidence from the *Eudemus*. Philoponus reported the first argument against the *harmonia* theory in that dialogue saying: “There is a contrary to a *harmonia*, disharmony, but to the soul there is no contrary. Therefore, the soul is not a *harmonia*.”³² Olympiodorus explains why the soul has no contrary: “To *harmonia* the contrary is disharmony, but to the soul there is no contrary, for it is a substance (οὐσία). The conclusion is clear.”³³ Both commentators alight on the same property: no substance has a contrary. The soul is a substance and so it has no contrary. So the reason why the soul cannot be a *harmonia*, at least as it is recored in the *Eudemus*, is because there is a contrary to *harmonia*, disharmony.

But if we try to make a similar move for the *On the Soul* passage, we face difficulties. In the passage we’ve been discussing, the two options available are that a *harmonia* is either a ratio of the things mixed or a composite. We concluded chapter four with the claim that these options ought to be understood as

³² Philoponus, *In Aristotelis De Anima Libros Commentaria* 144.24-25.

³³ Olympiodorus, *Commentarius in Phaedonem* 173.20.

follows: a *harmonia* is either the ratio according to which the four elements are mixed in the homoeomerous parts of the body or it is a composite of spatially extended parts. As a composite of spatially extended parts a *harmonia* is either one of the anhomoeomerous parts of the body or the body of an organism capable of carrying out a certain set of vital functions. But if these are the two options available, there seems to be no good reason to suppose that such a ratio or composite has an opposite.

Simplicius tried a different property. His claim was that ratios and composites were “some sort of relation between things mixed”³⁴ and the soul wasn’t a relation. The soul wasn’t a relation because it was a form of life and “every form of life is a substance, since every living thing is such and since it is receptive of opposites.”³⁵ His argument has it that the soul is a substance because it bears the characteristic feature of substances—the ability to receive contraries. But to yield the conclusion that the soul is not a *harmonia*, it must be the case that no ratio or composite is able to receive contraries. But it looks like a ratio can receive contraries and it seems certain that a composite can.

Consider the ratio 2:1. This ratio, it seems, can receive contrary properties. It can be the subject of the property attributed by the predicate ‘is correct.’ Suppose we’re making water in the lab and we’re trying to combine hydrogen and oxygen atoms in a 2:1 ratio. This ratio is the correct ratio of the elements. But it might also be the subject of the property attributed by the predicate ‘is incorrect.’ If we’re attempting to make salt, the ratio 2:1 is the incorrect pro-

³⁴ Simplicius, *In Libros Aristotelis De Anima Commentaria* 53.15-18.

³⁵ Simplicius, *In Libros Aristotelis De Anima Commentaria* 53.20 -21.

portion of sodium and chlorine atoms. So one might say that numerically one and the same ratio has changed from being correct to being incorrect—it is capable of receiving contraries.

Aristotle is equipped to handle this counterexample. He explains that a substance is “able to receive contraries by itself changing” (*Categories* 5.4a30-31). The example of the preceding paragraph falls short in this regard. The ratio itself undergoes no change whatsoever. Rather what happens is that the things the ratio were about change. In the first case the ratio purported to be about hydrogen and oxygen, but in the second case the ratio was purported to be about sodium and chlorine. The non-relational properties remain the same, the ratio doesn’t itself change. It seems that Simplicius is right, in part. The soul cannot be a *harmonia* insofar as the soul cannot be a ratio. A ratio cannot receive contraries by changing in its non-relational properties. But this only gets us halfway there.

A composite can receive contraries by itself changing. Whether understood as picking out the anhomoeomerous parts of the body or the body of an organism capable of carrying out a certain set of vital functions, a composite can receive contraries. Socrates’ living body can go from being pale to being dark by undergoing a change in itself, not in its relation to anything else. Likewise Socrates’ arm could go from being straight to being bent, a change it undergoes in itself. Since we have a case where a composite is capable of receiving contraries by changing in itself, we have a counterexample to Simplicius’s argument. Thus the argument doesn’t go through.

The failure of the argument is all the more remarkable, I think, because the commentators all agree on what they find. Though Aristotle only actually says that a *harmonia* is either a ratio or a composite and the soul can be neither, the commentators all claim that this is because the soul is a substance. The reason for this widespread agreement is two-fold. First, Aristotle's remarks are followed by the phrase 'ἔτι δέ,' or 'further,' seemingly suggesting that one ought to find an argument in *On the Soul* 1.4.407b32-34. Second, the argument seems to be implied by what Aristotle does say in the *Eudemus*. There he argued that the soul cannot be a *harmonia* because the soul has no contrary, while a *harmonia* does. But this feature attributed to the soul is one of the characteristic features of substances (at least as it is the *Categories* account). Olympiodorus simply made explicit what seemed to be implied—the soul cannot be a *harmonia* because it is a substance. The trouble with the argument arises when one looks closely at how Aristotle uses the terms 'ratio' and 'composite.' For it does seem that a composite, understood as a structure of material parts, could meet the four criteria of a substance. So despite the aid of the commentators, it seems best to take Aristotle's claim—"a *harmonia* is a certain ratio of the things mixed or a composite, and it is not possible that the soul is either of these" (*On the Soul* 1.4.407b32-34)—simply as an introduction to what follows and not as an independent argument. In the passages that follow (particularly 408a5-a18) Aristotle explains why the soul fails to be a *harmonia* on either account, but it doesn't appear that this opening sentence is meant as a self-standing argument. I return to questions about the soul as a substance in §6.2.

5.3 The Soul Effects Change

Aristotle moves on to his next point with an ‘ἔτι δέ.’ “Further,” he claims, “a *harmonia* is not a mover, but practically everybody assigns this attribute to the soul more than any other” (*On the Soul* 1.4.407b34-408a1). Two attributes—the ability to effect change and the ability to perceive—were the features which Aristotle’s predecessors thought marked the animate off from the inanimate.³⁶ Although some of Aristotle’s predecessors claim that the soul is “characteristically and primarily that which effects change,” not all things that effect change are ensouled. Thales found souls everywhere. Because of their ability to move iron, he thought that magnets had souls.³⁷ Using the ability to effect change to differentiate the animate from the inanimate, one can cast one’s net too wide. Still, it is a useful rule of thumb for determining many of the central cases and it is the *sine qua non* for something being ensouled.

Armed with this principle, the argument here is straightforward. The soul has the ability to effect change. No *harmonia* has the ability to effect change. Because the soul has a property that *harmoniai* lack, the soul cannot be a *harmonia*. The argument is valid, but is it sound?

In order to see why the argument is sound, Aristotle needs an account of precisely what he means for something to ‘effect change.’ Thales’ magnet or a bolder rolling down a hill or an inspirational poem all have the ability to effect change in one way or another, but don’t presumably have souls. There must be

³⁶ See *On the Soul* 1.2.403b25-29.

³⁷ *On the Soul* 1.2.405a19.

something in particular about the manner in which the soul effects change which distinguishes it from a *harmonia*. By the same token, Aristotle needs to do more to support the claim that *harmoniai* don't effect change. We've seen that a *harmonia* can be a structure composed of material parts; a boat is one example of such a structure. I think we'd want to say that a boat has the ability to effect the change of position of its passengers or cargo.

The ability of the soul to effect change is, on Aristotle's view, quite different from the way in which we normally think about motion and change. Let's take motion for example. Suppose a boulder rolls down a hill and hits a tree, causing its leaves to rustle. The ability of the boulder to effect the motion of the leaves happens because the boulder (which is in motion itself) knocks into the tree. Imagine if the soul effected change by pushing things around in this way. On this model, the soul would be no different than Dædalus's statue of Aphrodite. The quicksilver Dædalus poured into the wooden statue of Aphrodite imparted its motion into the limbs of the statue by, quite literally, bumping into the wood which enclosed it (1.3.406b15-22). Democritus thought the soul caused the motion of the body in this way. The soul, being composed of spherical atoms which are constantly in motion, set the body as a whole in motion. Aristotle wants to argue that the soul does not effect change because of the motion of the soul's material parts, but in some other way.

The soul cannot effect change in the way Democritus imagined. Suppose the soul *were* composed of spherical atoms in constant motion. If these atoms impart their motion to the body in a purely mechanical manner suggested in the preceding paragraph, once the motion got going there would be no way to stop

it. Animals would be in constant motion. But Aristotle thinks that the soul is also responsible for the animal coming to rest. This would be impossible to explain were motion to be accounted for by invoking Democritus's model. Aristotle proposes an alternative. The soul effects change in animals "through a certain choice or thought" (1.3.406b24-25). To this Aristotle adds an additional stipulation: though the soul effects change, it does so without being changed itself. The soul doesn't undergo change in virtue of itself, rather is the particular human being who brings about change with her soul.³⁸ Although the soul doesn't undergo change in itself "sometimes [change] reaches to, and sometimes starts from, the soul" (1.4.408b15-16). We'll discuss these difficult passages in more detail in §6.2. For now, let us just say that the soul is an *unchanged* changer.

Let us turn to the second premise of the argument, the claim that no *harmonia* has the ability to effect change. Before we see what Aristotle himself has to say on the matter, let's look at his commentators. Themistius followed by Aquinas takes an interesting tack, one that harkens back to an argument made by Plato in the *Phaedo*. A *harmonia*, they claim, does not produce movement but follows from movement that originated elsewhere. Take a lyre for example. The *harmonia*, or tuning, of a lyre is caused by certain movements of the musician. By turning the pegs and tensioning the strings, the musician produces the tuned lyre. That is, there is an external agent to harmonize the parts of the lyre. Themistius and Aquinas argue that the same would have to

³⁸ *On the Soul* 1.4.408b14-15.

hold in the case of the soul.³⁹ Were the soul a *harmonia*, there would have to be something else that harmonizes it. This requires introducing another soul which does the harmonizing; but then we're off on a regress.

The principle on which they run this argument might seem to be flawed, however. “[A] *harmonia* does not produce movement,” Aquinas claims, “rather, it follows from and is the result of moving.”⁴⁰ At first glance it looks as if this implies the following (clearly fallacious) principle: if x is the result of the movement of y (where x and y are different), then x cannot be a cause of motion. But one cannot claim that because one thing is the result of the motion of another, it can't produce motion itself. Consider a row of toppling dominoes. The first domino falling might be the result of the motion of my finger; but the motion of the second domino is produced by the first and the motion of the third is produced by the second etc. One event might be both the result and cause of motion.

But let us consider what else one might mean when he claims that a *harmonia* “follows from” change, but does not produce it. The Greek ‘ἔπομαι’ and the Latin ‘*sequor*’ indicates consequence; when one thing occurs another thing follows. This certainly might be causal consequence, but we needn't suppose that this is what is at issue here.⁴¹ The musician exerts direct causal influence over the parts of the lyre. By turning the pegs, the musician puts the instrument in a certain physical configuration. The consequence of putting the

³⁹ Themistius, *In Libros Aristotelis De Anima Paraphrasis* 24.31-32; Aquinas, *In Aristotelis Librum De Anima Commentarium* 1.9.136.

⁴⁰ Aquinas, *In Aristotelis Librum De Anima Commentarium* 1.9.136.

⁴¹ Following Caston 1997, 323-324.

instrument in this state is that the lyre comes to have (or to be) a certain *harmonia*. Changes in the *harmonia* follow from changes in the instrument. The instrument doesn't cause the change in the *harmonia*; it merely follows as a matter of natural necessity. One translator chose to render the passage from Themistius to reflect this distinction: "The soul causes the body to move, whereas the attunement does not cause movement in what has been attuned, but *supervenies* on what has been attuned."⁴² Whenever there are changes in the parts of the lyre, there are changes in the *harmonia*, necessarily.

I think the translator's choice of terminology is apt. Not only does it make Aristotle's second premise more subtle than it might have first appeared, but it shows how Themistius and Aquinas were right on track. The principle on which they based their argument need not be the fallacious one I attributed to them: if one thing is the result of the motion of another, it can't produce motion itself. Instead their argument turns on a more interesting and controversial claim. *Harmoniai* are causally inert because they follow from (i.e., supervene on) some material parts. To justify Aristotle's claim that no *harmonia* can effect change, Themistius and Aquinas seem to be saying that no *harmonia* can effect change in virtue of its being a *harmonia*. All the causal interaction takes place at the level of the material parts. *Harmoniai* themselves are causally impotent; mere epiphenomena which result from the interaction of some material parts.

Put this way, this argument begins to sound much like the Opposition Argument in Plato's *Phaedo* (94b3-95a2) we dealt with in §3.3. There Plato argued

⁴² Robert B. Todd's 1996 translation of Themistius, *In Libros Aristotelis De Anima Paraphrasis* 24.32-33. My emphasis.

that a *harmonia* follows from the parts from which it is composed and never directs those elements. The metaphysical principle on which he bases the argument was that the properties of a composite object are completely determined by the properties and relations among the parts. As such, *harmoniai* don't have any causal powers which are not had in virtue of its parts or the relations between its parts. For Plato as for Aristotle, a *harmonia* is itself causally impotent. The real causal work is done at the level of its material parts. But both Plato and Aristotle argue against the causal inefficacy of the soul. According to Plato, the soul can oppose the desires of the body; something that could never be done were the soul a *harmonia*. According to Aristotle, the soul is an unchanged changer and not a mere epiphenomeon.

5.4 Harmonia and Health

Aristotle expands his attack in the next sentence with an uncharacteristic display of wit: “it is more harmonious to speak of a *harmonia* in the case of health (and generally of the bodily excellences) than in the case of the soul” (*On the Soul* 1.4.408a1-3). The parallels between this and the second argument in the *Eudemus* are unmistakable.⁴³ Philoponus agrees. In commentary on *On the Soul* he claims that Aristotle uses four arguments to dismantle the *harmonia* theory:

⁴³ They are, for the most part, unmistakable. Curiously, Themistius and Aquinas pass over this passage in silence. Though Themistius records the arguments from the *Eudemus* only a paragraph before, he doesn't draw out the connection when commenting on this line.

the third of which is the second one he said in the *Eudemus* ... “It is more appropriate to speak about health as a *harmonia* and generally about the excellence of bodies than <to claim it is> a soul.” This is the third argument (but it is the second of those in the *Eudemus*). He proved that health is a *harmonia* in that work from its <having as its> opposite, sickness. We’ve stated above the thread of the syllogism.

The third argument in *On the Soul*, Philoponus notes, is the second argument in the *Eudemus*. It ran as follows. Suppose the soul were a *harmonia* of the body. A *harmonia* has a contrary, disharmony. Disharmony among the elements is sickness. Disharmony among the homoeomerous parts is weakness. Disharmony among the anhomoeomerous parts is ugliness. But the contrary of *these* are the bodily excellences—health, strength and beauty. Health, strength and beauty, therefore, are the *harmoniai* of the body; not the soul. So we can conclude that the soul is a not a *harmonia* of the body.⁴⁴

Simplicius offers a rival interpretation of what is going on in this argument.⁴⁵ Instead of arguing that health, strength and beauty are themselves *harmoniai* he claims that these bodily excellences “arise where there is *harmonia* and proportion.”⁴⁶ Take health for example. Simplicius’s view has it that health follows from the elements having the right sort of structure. Once there is the right proportion of earth, air, fire and water, health results. Health is not the *harmonia* or proportion of these elements; rather it counts as one of the “super-

⁴⁴ Similar, but more compressed, reports are found in Themistius, *In Libros Aristotelis De Anima Paraphrasis* 24.13 and Olympiodorus, *Commentarius in Phaedonem* 173.20.

⁴⁵ Simplicius, *In Libros Aristotelis De Anima Commentaria* 53.25-35.

⁴⁶ Simplicius, *In Libros Aristotelis De Anima Commentaria* 53.25-26.

vening perfections (αἱ ἐπιγινόμεναι τελειότητες).”⁴⁷ In other words, health is a natural consequence of the organization at the material level, but it is not the organization itself. Health can be said to supervene on the material organization of the elements because when changes occur at the elemental level, there are necessarily corresponding changes to one’s health. Health (and the other bodily excellences) may be said to ‘follow from,’ ‘supervene on,’ or ‘derive from’ the structure of the body’s material parts. But the bodily excellences are not to be identified with that structure.

Simplicius’s shift from saying that health *is* a *harmonia* of the elements to saying that it *supervenes* on the *harmonia* of the elements, interesting as it is, turns out to be problematic. The goal of this argument is to show that the soul is not a *harmonia*. Simplicius’s shift, then, causes the argument to miss its target. The argument must begin with the assumption to be reduced to absurdity: the soul is the *harmonia* of the parts of the body. The contrary of the *harmonia* of the parts of the body is their disharmony. The disharmony of the parts of the body might occur at the level of the elements, homoeomerous parts or anhomoeomerous parts. Sickness supervenes on the lack of *harmonia* at the elemental level; weakness supervenes on the lack of *harmonia* among the homoiomerics and ugliness supervenes on the lack of *harmonia* among the anhomoeomerous parts of the body. Here we run afoul of Simplicius’s shift. Health, strength and beauty are the “supervening perfections” which are the natural consequence of the *harmonia* of the elements, homoeomerous parts and anhomoeomerous parts respectively. The original argument got its foothold with the

⁴⁷ Simplicius, *In Libros Aristotelis De Anima Commentaria* 53.31.

claim that the soul is neither health, strength, nor beauty. But even if this is the case, there is not enough to show that soul couldn't still be a *harmonia*; for health, strength and beauty are excellences which merely *supervene* on the material parts of the body. For this reason, we should leave Simplicius's strategy to the side.

There is little doubt that in this line we are meant to find an argument against the *harmonia* theory. The question now becomes: Which specification of the theory is its target? In chapter four we saw that Aristotle presented two possibilities: either the soul is a ratio of the things mixed together or a composite. As we've seen, calling something a 'ratio of the things mixed together' is a claim that should be understood in light of Aristotle's chemistry. The ratio of the things mixed together is that ratio according to which the elements—earth, air, fire and water—are combined so as to result in the homoeomerous parts of the body. This interpretation doesn't allow the present argument to get off the ground. The first premise would read: suppose the soul were a ratio according to which the homoiomerics are composed. But ratios aren't the sorts of things that have contraries. So substituting the first specification of what it is for something to be a *harmonia* fails at the second step.

If we take the argument above as an attack on the view that the soul is a composite, it fares only slightly better. In §4.4 we've seen Aristotle's hierarchical model of composition. Composition that takes place between the elements results in the homoeomerous parts of the body. Composition occurring between the homoeomerous parts results in the anhomoiomerics and composition between the homoeomerous and anhomoeomerous parts results in the functionally orga-

nized body. The argument above assumes that composition can take place at each level of the hierarchy, but again it is difficult to see how there could be a contrary to the composites at any level. Take the first level of composition that results in the homoiomerics of the body like bone, flesh or sinew. What would the contrary of flesh be?

In sum, this line does allude to an independent argument against the *harmonia* theory; specifically, the second argument presented in the *Eudemus*. But a shift in Aristotle's thinking seems to have occurred between the time of that dialogue and the writing of *On the Soul*. The same argument no longer works against the two 'live' options he presents in his more mature treatise. Why not? The answer, in part, is that in the *Eudemus* Aristotle didn't take sufficient care to determine whether in fact *harmoniai* have contraries. Philoponus was the first to notice this failure. Recall he claimed that "someone might object to <the *harmonia* theory arguing> that there is not a proper contrary to a *harmonia*, but rather an indefinite privation."⁴⁸ Despite there being the terms for *harmonia* and the lack of *harmonia*, strictly speaking these don't comprise a pair of contraries. A *harmonia* is something more akin to a substance than Aristotle is willing to admit.

5.5 The Actions and Affections of the Soul

Augmenting the previous argument that it is more 'in tune' with the facts to say that health is a *harmonia* than it is to say the soul is, he writes: "This would be

⁴⁸ Philoponus, *In Aristotelis De Anima Libros Commentaria* 144.25-28.

most clear if someone tried to assign the affections and actions (τὰ πάθη καὶ τὰ ἔργα) of the soul to a particular *harmonia*; for it is difficult to harmonize” (*On the Soul* 1.4.408a3-5). Certainly Aristotle cannot just mean that it is *difficult* to bring the actions and affections of the soul into line with particular *harmoniai*; rather he must mean that one *cannot* bring the two into line. The actions and affections of the soul cannot be accounted for by appealing to some *harmonia* or other.

The first step to understanding this argument is to determine what the “affections and actions” are which Aristotle presumes cannot be assigned to a *harmonia*. We find another occurrence of this conjunction in *On the Soul* 1.5. Arguing that Democritus’s materialist conception of the soul—the soul is composed of smooth, round atoms—is faced with many absurdities, Aristotle claims it is most acute in his account of motion. Because he takes the soul to be a material, composite object, Democritus is forced to view the motion of the body as a purely mechanical process, as we’ve seen above. The soul moves the body by *itself* moving. The trouble for Democritus gets even worse when considering more complex properties commonly attributed to the soul. Beginning with the materialist conception of the soul, it is impossible to explain “the affections and actions (τὰ πάθη καὶ τὰ ἔργα) of the soul, for example, reasoning, perception, pleasure, pain and others like these” (409b15-17). Here Aristotle seems to be using the phrase ‘the affections and functions of the soul’ as shorthand for a general list of the soul’s functions. That he specifies a few here—reasoning and perception etc.—is inconsequential.

We find a different list earlier on in the book. In *On the Soul* 1.1, Aristotle explains some *prima facie* worries that must be faced if one is to claim that the soul is separable from the body.⁴⁹ If one is going to argue that the soul is separable from the body, it must be the case that there is some “action or affection of the soul peculiar to it” (403a10-11). The strategy he suggests for someone arguing for such separability is a good one, it seems. First isolate a particular action or affection which the soul does not share with the body. If such an action or affection can be found, then it can be argued that the soul and body are non-identical—the soul has a property the body lacks. With the non-identity of the soul and body established one has secured, at the very least, the separability of the soul and body *in account*. The problem for someone who might adopt such a strategy is that in most cases the soul seems to act or be affected together with the body. Aristotle goes even further, saying that “all the affections of the soul—anger, gentleness, fear, pity, confidence; also joy, loving and hating—would seem to require a body” (403a16-19). To this list we can add also perception (403a6). All of these actions and affections of the soul, with the possible exception of the understanding (403a7), have both a psychological and physiological component. With anger, there is a corresponding boiling of the blood. With

⁴⁹ Aristotle speaks of two sorts of separability. The first sort is what he calls ‘separability without qualification’ or ‘separability in place.’ If one thing is separable from another *without qualification* or *in place* those two things are capable of existing in the absence of the other. That is, one thing doesn’t depend on the other for its existence. See *Physics* 5.3.226b21-23; *On the Soul* 2.2.413b14-20; *Metaphysics* Δ.6.1016b2, I.1.1052b17, K.12.1068b26, N.5.1092a19. The second sort of separability is ‘separability in account.’ If one thing is separable *in account* from another, it is possible to give a complete definition of one without mention of the other. See *On the Soul* 3.9.432a20, 3.10.433b25; *Metaphysics* Z.5.1030b25, K.7.1064a24.

fear, there is a corresponding bodily condition. Questions of separability notwithstanding, it is clear what sorts of properties Aristotle means to pick out with the phrase ‘the actions and affections of the soul.’ None of the properties or functions typically attributed to the soul can be explained by appealing to some *harmonia*.

Does Aristotle have an argument in support of this claim, or does he merely assume that it is obvious? He only explicitly says that it is “difficult to harmonize” (*On the Soul* 1.4.408a5) the actions and affections of the soul and the *harmoniai* with which they purportedly correspond or that “it is not easy to venture a guess” (1.5.409b17-18) which *harmonia* corresponds with which action or affection of the soul. Themistius takes it to be obvious. He asks: “To what sort of *harmonia* does sense-perception belong, and what sort is there for loving or hating?”⁵⁰ Though this is not very illuminating, it does point out this much at least. The actions and affections of the soul (whether or not they have both a psychological and physiological component) cannot be explained by any sort of *harmonia*. Whatever argument there is to be found here is meant to work as a universal rejection of the *harmonia* theory.

Simplicius is a bit more forthcoming. He claims that in those cases “where the activities (ἐνέργειαι) are different, the things themselves are also different.”⁵¹ From this general principle we can deduce the more specific claim that if the activities of the soul are different from the activities of a *harmonia*, the two cannot be the same. Let us put to the side our doubts about whether these princi-

⁵⁰ Themistius *In Libros Aristotelis De Anima Paraphrasis*, 24.37-25.1.

⁵¹ Simplicius *In Libros Aristotelis De Anima Commentaria*, 54.3-5.

ples hold true.⁵² Simplicius's claim yields the following argument. For some x and for some y , if the activities of x are different from the activities of y , then x and y are different. The activities of the soul are the soul's actions and affections. If the actions and affections of the soul are different than the activities of a *harmonia*, the soul cannot be a *harmonia*. The actions and affections of the soul *are* different from those of a *harmonia*. So, the soul and a *harmonia* are different. For this argument to work, we need something which supports the crucial claim that the actions and affections of the soul are different than those of a *harmonia*.

Simplicius suggests the following, rather subtle, maneuver. All the actions and affections of the soul, he claims, "exhibit vitality and have their character from the living thing; and this is not through their bodily constitution, even if they belong to a composite."⁵³ The actions and affections of the soul are different sorts of things than the actions and affections of *harmoniai*. They are different because the actions and affections of the soul derive their character from the soul; but the actions and affections of *harmoniai* derive their character from the parts of the body. "The *harmoniai* of the parts is a corporeal condition of the qualities of bodies," he explains, "even if of living bodies, and not life."⁵⁴ Now we've seen in §4.4 that a living body is one structured in such a

⁵² It seems plausible that one and the same thing could have two different activities. A screwdriver can be used to turn screws into wood and to pry open paint cans. Because it has these two different functions, we are not tempted to say that there are two different tools. Perhaps we can avoid such worries by focusing on the *distinctive* or *characteristic* activities of something.

⁵³ Simplicius *In Libros Aristotelis De Anima Commentaria*, 54.9-10.

⁵⁴ Simplicius *In Libros Aristotelis De Anima Commentaria*, 54.11-13.

way that it is capable of carrying out a certain set of vital functions. For human beings these vital functions include understanding in addition to nutrition, reproduction, perception and locomotion, among others. A *harmonia* is a corporeal condition of the parts of bodies, even bodies which are capable of supporting complex functions. The *harmonia* is either a material composite itself (i.e., a structure the body is) or its the ratio according to which the parts are organized (i.e., the structure the body has). In either case, a *harmonia* is a “corporeal condition” of the body. Although these vital functions belong to a body, they do not derive their character from the body. Rather they “have their character from the living thing.”⁵⁵ His argument, then, is this. The actions and affections of the soul get their character from the living thing. The actions and affections of the *harmonia* get their character from the parts of the body. The parts of the body, no matter how complex their organization, are different from the living thing and as a result the actions and affections of the soul will have a different character than those of a *harmonia*. As a result, the actions and affections of the soul aren’t reducible to the actions and affections of a *harmonia*.

With this, we have the conclusion Aristotle is after. The actions and affections of the soul cannot be attributed to a *harmonia*. Since the actions and affections of the soul aren’t reducible to those of a *harmonia*—they derive their character from different sources after all—the soul cannot be a *harmonia*. The move suggested by Simplicius is an important one and is one to which we’ll re-

⁵⁵ Simplicius *In Libros Aristotelis De Anima Commentaria*, 54.10. The word he uses is ‘χαρακτηρίζεσθαι.’

turn below. It is possible for the living body to be, or to have, a *harmonia* while being distinct from the soul. “Life is a substance,” Simplicius explains, “different from bodies.”⁵⁶

5.6 The Soul is Not a Composite or a Ratio

Much less detective work needs to be done regarding Aristotle’s last argument against the *harmonia* theory. The argument extends from *On the Soul* 1.4.408a5-18 with its main considerations coming at 408a9-18. Much of what Aristotle says here makes use of distinctions he sets out earlier, but here he treats the issues in greater detail than he does in the rest of the chapter.

The argument begins with ‘ἔτι δέ,’ clearly marking it off from the preceding as a new thought. The structure of the argument is a simple dilemma. A *harmonia* is either a composite or a ratio. If it’s a composite, the soul cannot be a *harmonia*. If it’s a ratio, the soul cannot be a *harmonia*. Therefore, the soul cannot be a *harmonia*. The argument, then, begins by explaining the disjunction we face in the first premise.

As we’ve seen in chapter four, Aristotle suggests that the word ‘*harmonia*’ has two applications. The most proper application of the term is to “magnitudes which have motion and position” (τῶν μεγεθῶν...ἔχουσι κίνησιν καὶ θέσιν) such that they are “fitted together such that they admit nothing of the same kind” (408a6-7; 7-8). According to this application of the term, a *harmonia* is an extended, material composite. More specifically, it is a composite of spatially

⁵⁶ Simplicius *In Libros Aristotelis De Anima Commentaria*, 54.11: “ἑτέρα δὲ παρὰ σώματα οὐσία ἢ ζωή.”

extended parts as either one of the anhomoeomerous parts of the body (e.g., bone, flesh or blood) or the body of an organism capable of carrying out a certain vital functions. ‘*Harmonia*’ is used in a derivative or secondary sense to pick out the ratio of the things mixed (408a8-9). Thought of in this way, a *harmonia* is the ratio according to which the four elements are mixed in the homoeomerous parts of the body. That is, it’s an abstract mathematical entity. Aristotle takes these as exhausting the possibilities; the soul, he claims, can be neither.

Let us begin with his argument against the first horn. Here he confidently claims that the “application according to which the soul is a composite of the parts of the body is exceedingly easy to refute” (408a10-11). As we’ve seen above, this specification of the *harmonia* theory expresses a materialist thesis: the soul is composed of material parts put together in a particular arrangement. This materialist thesis can be specified in three ways, according to the hierarchical model of composition described in §4.4:

- (1) A *harmonia* is one of the homoeomerous parts of the body such as flesh or blood. These material composites result from mixing earth, air, fire and water.
- (2) A *harmonia* is one of the anhomoeomerous parts of the body such as toes or eyes. These material composites are composed of the homoeomerous parts.
- (3) A *harmonia* is the living creature itself. This material composite has both homoeomerous and anhomoeomerous parts.

Despite Aristotle’s confidence, it is not clear which specification of the theory (if, in fact, he did have a particular specification in mind) the argument is directed against. All he actually does to refute it is to note that there are many different

composites which compose the body and then to ask: Which one of these might the mind be, or perception or appetite? How is it composed?

If we lean on his claim that there are many composites of the body and they are composed in a variety of different ways (408a11-12), we might suppose that the argument is directed against the first two rungs on the hierarchy of composition. His qualms have to do with numbers: there are many composites of the body and they are composed in different ways. There is only one soul. If the soul were a composite—a homoeomerous or anhomoeomerous part of the body—which one would it be? It is absurd to suppose that the soul is any particular composite of the body. So he can conclude that the soul is not a composite and so not a *harmonia* on this specification.

Now consider how the argument would run if it were directed against the view that the soul is a composite of the third sort, namely, the living body itself. If the soul were such a composite, the parts of the soul would be the parts of the living body. The parts of the living body, as we've seen, are its homoeomerous and anhomoeomerous parts. But Aristotle describes the parts of the soul very differently. Faculties like the intellect, perception and appetite are the sorts of parts he ascribes to the soul (2.2.413b11-16). That would mean that if the parts of the soul were the parts of the body, then the parts of the soul must either be *identical to* the parts of the body or *composed of* them. Aristotle argues that the parts of the soul could not be identical to or composed of the parts of the living body however. His argument consists of rhetorical questions meant to show the absurdity of assuming otherwise. Which composite, Aristotle asks, might the mind or perception or appetite be? No particular homoeomerous or

anhomoeomerous part could properly answer this question. Perception is not identical to flesh or the eyes or the ears. Nor are (all) the parts of the soul composed of the parts of the body. At 408a12 Aristotle asks: How would the mind be composed? The mind, he will later argue explicitly, cannot be composed of material parts (3.4.429a10-429b9).⁵⁷ Since the parts of the soul cannot be identical to or all composed of the parts of the body, the soul cannot be the living body. And since the living body is a top-level composite and such a composite is a *harmonia*, the living body is a *harmonia*. Putting this all together, Aristotle can conclude that the soul cannot be a *harmonia*.

There is one problem, however. The argument in all three cases turns on the idea that the faculties of the soul must be *identical to* or *composed of* certain material composites in the body. It is not clear why we ought to accept this assumption. It seems that the various faculties and functions of the soul might not be any particular composite one could point to (as Aristotle's questions challenge the *harmonia* theorist to do). Rather such functions might *ontologically depend* on the material composites out of which the body is composed, though they're not identical to or composed of them. There are a wide variety of such dependence relations which might obtain between the faculties and functions of the soul and the material composite—the living body or its anhomoeomerous

⁵⁷ The argument for why the intellect lacks a bodily organ is as interesting as it is controversial. *Very* briefly the argument runs (roughly) as follows: There isn't anything the intellect cannot understand. If the intellect had a bodily organ or were "mixed" with material elements, then there would be things the intellect couldn't understand. So, the intellect doesn't have a bodily organ and is "unmixed" with the body. For a sympathetic reconstruction of this argument see Aquinas' *In Aristotelis Librum De Anima Commentarium*, 3.7 §§679-685

parts—upon which they depend. Contemporary metaphysicians of mind have catalogued a number of ways the mind might depend on, without being identified with, a composite material object. Nonreductive materialists, for instance, deny that the mental and physical are identical but insist that any mental change requires an underlying material change.⁵⁸ Were Aristotle to avoid considering similar non-identity or non-compositional dependence relations, his support for the premise that the faculties of the soul must be material composites would be tenuous at best.

Charging Aristotle with failing to consider these alternatives is not anachronistic. There is reason to think that Aristotle was well aware of non-identity or non-compositional dependence relations. First, this is precisely how the *harmonia* theory was first introduced in the *Phaedo*. You will recall that the theory was first introduced as a counterexample to Socrates' Affinity Argument. The *harmonia* of a lyre is invisible, incorporeal, beautiful and divine—all properties it shares with the forms. But this affinity with the forms was not enough to guarantee indestructibility. The *harmonia* is ontologically dependent on the lyre, wood and strings, though it is not identical to or composed of those parts.

And we have good evidence, moreover, that Aristotle was intimately acquainted with this dialogue. Firstly, Aristotle explicitly mentions the dialogue in two places: once in *Metaphysics* A.991b3-4 and again in *On Generation and*

⁵⁸ This view has the advantage of avoiding certain problems associated with identifying the mental and the physical, particularly the possibility of the variable realizability of the same mental state in different material stuff. See Pereboom 2002 and Kim 1993. Nonreductive materialism also bears some similarity to the emergentist view of the late 19th and early 20th century most notably held by C.D. Broad 1925.

Corruption 2.9.335b10. Second, we know from the fragments of the *Eudemus* that survive that it seems to be a dialogue modeled on the *Phaedo* which Aristotle produced while still a member of the Academy.⁵⁹ Not only was the *Eudemus* modeled on the *Phaedo*; it deals specifically with the *harmonia* theory. From this I think we can safely conclude that Aristotle was aware of the *harmonia* theory as it was presented in the *Phaedo*.

Second, Aristotle himself describes a non-identity and non-compositional dependence relation with the ‘in’ relation he describes in the *Categories*. In *Categories* 2, Aristotle explains that the ‘in’ relation is one which obtains between non-substances and substances; it is a cross-category relation. Non-substances are said to be *in* substances. When he says that something is ‘in a subject’ he means that it “belongs in something, not as a part, and cannot exist separately from what it is in” (*Categories* 2.1a24-25). So if x is in y the following criteria must be met:

- (1) x is a non-substance and y is a substance;
- (2) x is in y ;⁶⁰
- (3) x is not a part of y ; and
- (4) x is ontologically dependent on y .

An individual instance of grammatical knowledge, he explains, is *in* a subject, Socrates’ soul; or an individual instance of white is in a body. That particular bit of knowledge or that instance of the color cannot exist apart from the sub-

⁵⁹ See above §5.1.

⁶⁰ Here Aristotle must have a different sense from the ‘in’ he attempting to define, but if he does it is not entirely clear what he has in mind. It might be that he simply means that x is predicated of y .

ject it is in, so the former are ontologically dependent on the latter.⁶¹ But it is not the case that a particular bit of knowledge *constitutes* Socrates' soul or that an instance of white *constitutes* a body. So it seems we can say that Aristotle had a concept of non-compositional ontological dependence.

With this, one of the supports of the argument collapses. It is not the case that all the faculties of the soul must be constituted by a composite. The fact that thought, perception and appetite aren't constituted by or identical to composites needn't trouble the *harmonia* theorist. By Aristotle's own lights there is an alternative: these faculties ontologically depend on material composites, but are not constituted by them.

Let us turn to the second horn of the dilemma—the soul is a ratio of the parts mixed together. The argument here is straightforward. If the soul were a ratio of the parts mixed together, it would be the ratio of the elements according to which the homoeomerous parts of the body are composed. We've seen why this is the case in §4.2 above. The body is composed of a variety of homoeomerous parts. Flesh, bone, blood and sinew are some of the examples he mentions. Were the soul a ratio of the elements of these parts, there would be as many souls as there are homoeomerous parts. Moreover, according to the hierarchical model of composition the anhomoeomerous parts are composed of the ho-

⁶¹ I've taken the expression 'cannot exist separately from what it is in' just to mean 'is ontologically dependent on.' But this is not put as carefully as it might have been. For example, Owen 1965, 99 ff. claims that to say that *x* is in *y* doesn't is not to say that a particular *x* is ontologically dependent on that particular *y*. Still, Owen allows for their to be a sort of ontological dependence of non-substances on substances which is not a constitutional relation.

moeomerous ones. This leads to the conclusion that not only does the body have more than one soul, but also the anhomoeomerous parts of the body have more than one soul. Since it's absurd to attribute more than one soul to one individual (this is an unargued assumption on Aristotle's part), he concludes that the soul cannot be a ratio.

Aquinas multiplies the absurdities by generalizing the conclusion. Souls are not only the ratios according to which the parts of a living body are composed, but they are also the ratios according to which the parts of any material body are composed. Aquinas reads Aristotle as saying that “with regard to every body, if indeed they all do come from elements mixed together, then the ratio of the mixture will be a *harmonia* and the soul.”⁶² The world is full of souls. All material bodies of any sort, he reasons, are composed from the four elements. So all such bodies will be composed in some proportion. All bodies then will have a *harmonia* and so a soul—even inanimate ones. But this is doubly absurd. So the soul cannot be a *harmonia*.

There is an obvious objection to this line, however.⁶³ Saying that every soul is a *harmonia* is not equivalent to saying that every *harmonia* is a soul. Aristotle does occasionally use the term ‘*harmonia*’ to pick out inanimate things or the parts of inanimate things. The term can equally well be applied “to the production of a house, a statue, or anything else” (*Physics* 1.5.188b17). The set of things that are souls are a subset of things that are *harmoniai*. But has Aris-

⁶² Aquinas, *In Aristotelis Librum De Anima Commentarium* 1.9.140.

⁶³ This objection was first raised by Charleton 1985, 133 and a variant is raised by Langton 2000, 19.

totle made the mistake of inferring that all *harmoniai* are souls from the proposition that all souls are *harmoniai*?

There is good reason to think that he doesn't make this mistake. The discussion of this horn of the argument against the *harmonia* theory is restricted to the parts of an ensouled, or possibly ensouled, body—not the parts of any spatially extended body. We can rule out the *harmonia* which might exist in things like houses or states from consideration. This is possible only because the version of the theory now under scrutiny is not one according to which a *harmonia* is any ratio of elements, but the ratio of the parts of the *body* mixed together. To repeat, the ratio of the parts of the body mixed together is that ratio according to which the homoeomerous parts are composed. According to the *harmonia* theorist Aristotle has in his sights, the soul just is this ratio of elements. Since the body is composed of more than one homoeomerous part, the body will have more than one ratio of elements and so will have more than one soul. Aristotle didn't make the further mistake of inferring that every *harmonia* is a soul from the claim that every soul is a *harmonia*.

With this, the dilemma is complete. A *harmonia* is either a composite or a ratio of the things mixed. In either case Aristotle claims that such a thing cannot be identical to the soul. Were he right about this, he would have made a strong case that the soul cannot be a *harmonia*. There are two problems with this argument, however. First, the argument against the first horn of the dilemma isn't sound. Contrary to one of its premises, it is possible for there to be faculties of the soul which ontologically depend on, but are not constituted by, the material composites of a living body. Second, there is a question whether the

disjunction which frames the dilemma is exhaustive. We first encountered this worry in §4.1 above. Although one might make a case that ‘*harmonia*’ is used either to pick out an abstract or a material structure, what Aristotle says about ratios and composites precludes us from making this Platonic move on his behalf. Furthermore, if Aristotle were to take ‘*harmonia*’ to pick out an abstract or material structure as Plato conceived of them, Aristotle would be guilty of a *tu quoque*. If Aristotle’s arguments against the *harmonia* theory are successful against the *Platonic* specifications of the view and not the narrower versions he actually considers, then those arguments would also defeat the view that the soul is the form of a natural body having life potentially.

5.7 Conclusion

In sum, Aristotle presents four arguments against the *harmonia* theory in *On the Soul* 1.4. Despite the consensus among the commentators that there is a fifth—an argument based on the assumption that the soul is a substance—it is not clear whether Aristotle himself enlists such an argument. Of the arguments which Aristotle does seem to endorse, most need quite a bit of restoration. Once the restorative work is done, the arguments are still rather brusque. Aristotle considers two, and only two, interpretations of what it means to say something is a *harmonia*: it is either a composite or a ratio of the parts of the body mixed together. Though it is not clear that this choice exhausts the possibilities, he constructs his arguments as if they were. Were he not to consider the narrower specifications of the *harmonia* theory, his own view would be subject to those very same arguments. In the first and third arguments, he seems to rely on un-

derstanding the soul as a substance, but he never makes this explicit. The arguments dealing with the functions of the soul, the second and fourth, he assumes it is obvious why a *harmonia* is inadequate when pressed into service to account for the soul's actions and affections. Finally, in the last argument Aristotle doesn't make a case for why the functions of the soul couldn't ontologically depend on, rather than be constituted by, a *harmonia*. Simply put, Aristotle dismisses the *harmonia* with a cavalierness it is not clear he is entitled to enjoy. Next let us turn to the alternative view about the soul which forces Aristotle to regard the *harmonia* theory as he does.

Chapter 6

Aristotle's Alternative

My examination of Aristotle's rejection of the *harmonia* theory has focused on those failures having to do with the compositional structure of the soul and those having to do with the functions and capacities of the soul. Structure and function are not unrelated. The *harmonia* theory fails to account for certain functions of the soul because *harmoniai* have a particular compositional structure. In the course of arguing against the theory, Aristotle makes various commitments about what the soul is, what it does and how it is affected. The following is a list of those commitments and a brief summary of the argument which gave rise to each:

- (1) *The soul is a substance.* Although not put forward as an explicit attack on the *harmonia* theory (as some of the commentators have suggested it is), Aristotle is committed to the view that the soul is a substance. This commitment allows the following argument to be attributed to him: a *harmonia* is either a ratio of the things mixed or a composite. Neither is a substance, so the soul cannot be a *harmonia*.
- (2) *The soul is able to effect change.* The argument here was straightforward. No *harmonia* has the ability to effect change, but this (along

with the capacity for perception and immateriality) is the characteristic mark of the soul. Since the soul has a property every *harmonia* lacks, the soul cannot be a *harmonia*.

- (3) *The soul is not a state of the body.* According to the third argument, a *harmonia*, like health, is better classified as one of the “bodily excellences” (τῶν σωματικῶν ἀρετῶν, *On the Soul* 1.4.408a1-2). Aristotle distinguishes those excellences that are states of the body (ἐχεις... τοῦ σώματος) from those that are states of the soul (*Physics* 7.3.246a10-11). States like health, strength and beauty are bodily excellences. Health is a state of the body and a *harmonia* is like health in this regard. The soul won’t be a *harmonia* because the soul is not a state of the body.
- (4) *The actions and affections of the soul are different than those of a harmonia.* Reasoning, perception, pleasure, pain, anger, gentleness, fear, pity, confidence, joy, loving and hating are actions and affections of the soul Aristotle mentions (*On the Soul* 1.5.409b15-17; 1.1.403a16-19).¹ These actions and affections attributed to the soul are different than those attributable to a *harmonia*. They are different, Simplicius claimed, because the actions and affections of *harmoniai* derive their character from all the parts of the body. This is not the case for the soul. The soul cannot be a *harmonia* because the two have different actions and affections and those attributable to the soul cannot be reduced to or identified with those attributable to a *harmonia*.
- (5) *The soul is not a material composite.* The first horn of the last argument is an argument against the materiality of the soul. Neither the mind, nor perception nor appetite is a composite of material parts. These faculties of the soul are not constituted by composites, so the soul cannot be a composite.
- (6) *Living things have one and only one soul.* The second horn of the last argument takes on the view that the soul is a *harmonia* understood as a ratio of the parts mixed together. There are many ratios according to

¹ More precisely these are affections of the human soul. Certainly the souls of plants won’t have any of these affections and the souls of animals will have some but not all of these affections. What is important for the argument is where the actions and affections derive their character.

which the homoeomerous parts of the body are composed, but only one soul. The soul, therefore, cannot be a ratio of the parts mixed.

From the commitments Aristotle makes in the course of arguing against the *harmonia* theory, his own alternative view emerges about what the soul is and how it is composed. In this chapter I will argue that because of each of these commitments, Aristotle understands the soul to be the abstract structure of a living body—something non-material. Not all of the arguments are equally convincing, but jointly they comprise a strong case that the soul is something non-material.² But according to one materialist view that has been attributed to Aristotle, the soul *is* the living body—a composite of material parts.³ Aristotle's rejection of the *harmonia* theory gives us a compelling reason to reconsider that view. Further, despite the fact that it is not composed of material parts, the soul has causal powers of its own; causal powers it has not in virtue of the parts of the body or the relations between them, but in spite of those parts and relations. Despite its having the sorts of parts it has, it is still possible to account for its actions and affections.

Aristotle's ancient and contemporary commentators have seen the *harmonia* theory of the soul as remarkably similar to the position he actually endorses.⁴ They are right to note the similarity, but they often leave it at that—not ex-

² The arguments of 6.1.2 and 6.1.3, for example, might not be as convincing as those of 6.2-5.

³ *Contra* Whiting 1992, 81 and Irwin 1988, 285. See also Sorabji 1975 [1974]; Ackrill 1973, Wiggins 1971, 38.

⁴ Themistius *In Libros Aristotelis De Anima Paraphrasis* 25.23-24: "Those saying that the soul is a *harmonia* are none too close, nor yet too far from the truth." See also Barnes 1982, 491-492; Ross 1961, 195 and Hicks 1907, 263.

plaining the source of the resemblance or what Aristotle did to guard against his view collapsing into the *harmonia* theory.

The key is to see that there are different versions of the *harmonia* theory. On the Platonic account, a *harmonia* is either the abstract principle of organization a whole of parts has or it is the material whole of parts. Aristotle considers a narrower, technical notion of a *harmonia*: it's either the ratio of the four elements in the mixed parts of the body, or a composite of material parts, namely, the living body. Although Aristotle rejects the versions of the *harmonia* theory he describes, it doesn't follow that he rejects every version of a *harmonia* theory. In fact, his own view is a version of the kind of *harmonia* theory Plato considers. Aristotle can fail to be one kind of *harmonia* theorist without failing to be a *harmonia* theorist. Consequently, if Aristotle hadn't argued against a narrower conception of the *harmonia* theory, his arguments against the view would undercut his own conception of the soul. Commentators who have been puzzled about why Aristotle rejects 'the' *harmonia* theory have not seen the important distinctions among different versions of it.

I argue that despite Aristotle's explicit rejection of certain versions of the *harmonia* theory, he remains committed to others. Despite Aristotle's successful arguments against the version of the theory according to which a *harmonia* is a material structure, he remains committed to the view in the other Platonic sense—the soul is an abstract structure. So those who accuse Aristotle of actually being committed to the *harmonia* theory are right,⁵ but the reason why

⁵ See especially Barnes 1982, 491-492. He maintains that the best sense he can make of Aristotle's claim that the soul is the "*entelecheia* of a potentially living body" is to view it as a version of the *harmonia* theory.

they are right is that Aristotle is committed to a *Platonic* specification of the view. It is this fact which allows Aristotle to successfully argue against the *harmonia* theory (the narrow specifications he considers) while remaining committed to the view in the broader sense. Let us turn now see how Aristotle's alternative to the narrower specification of the *harmonia* theory emerges.

6.1 The Soul is a Substance

Let me begin this section by backtracking. You will recall that in §5.2 I argued that Aristotle's claim—"a *harmonia* is a certain ratio of the things mixed or a composite, and it is not possible that the soul is either of these" (*On the Soul* 1.4.407b32-34)—shouldn't be understood as a self-contained argument against the *harmonia* theory. Though there isn't enough evidence to establish this as a self-contained argument relying on the view that the soul is a substance, there is little doubt that Aristotle did hold such a view. By figuring out what it means to say that the soul is a substance, we'll be in a better position to see what Aristotle takes the soul to be, if it's not a *harmonia*.

In this section I argue that Aristotle understands the soul to be a substance insofar as it's the form of a certain kind of body. But as we've seen in §5.6, Aristotle rejects the specification of the *harmonia* theory according to which it's understood as the body of an organism capable of carrying out a certain set of vital functions. Now there are some who have argued that Aristotle *identifies* the soul with the living body.⁶ If Aristotle held this view, then his rejection of

⁶ See Whiting 1992; Irwin 1988 and Whiting 1984. See also Sorabji 1975 [1974]; Ackrill 1973, Wiggins 1971, 38.

the *harmonia* theory would amount to a rejection of his own view about the soul. In order to insulate Aristotle from that charge, I will have to go to some lengths to show he doesn't identify the soul and the living body.

6.1.1 Substance as Form⁷

Before looking at Aristotle's arguments for the view that the soul is a substance insofar as it is the form of the body, allow me a few brief remarks about the nature of substance. My goal here is just to gesture in the direction of some of the relevant issues having to do with Aristotle's conception of substance in service of finding the shortest route to his argument in *On the Soul* 2.1 for claiming the soul is a substance qua form of a natural body.

Aristotle uses the word 'substance' (οὐσία) in two different ways.⁸ He summarizes these two uses at the end of the entry on substance in his philosophical lexicon.⁹ There he explains that "substance is spoken of in two ways...

⁷ I make no claims that what follows in this section either is or attempts to be a comprehensive account of Aristotle's views about substance (in fact, it's far from it). There is controversy at just about every turn in the discussion of Aristotle on substance and the central books of the *Metaphysics* (particularly Books Z and H) where the discussion of substance is at its most detailed and abstract is arguably the most vexing stretch in the entire Aristotelian corpus. Although hardly a substitute for a comprehensive attestation of the literature here, for some relatively recent monographs which help to sort out some of the main issues see Wedin 2000; Spellman 1995; Scaltsas 1994; Lewis 1991; Loux 1991; Gill 1989; Witt 1989; Furth 1988 and Hartman 1977.

⁸ See the differences between the first category listed in *Categories* 4.1b25-2a5 and *Topics* 1.9.103b20-27. See also Wedin 2000, 124-156 passim; Bostock 1994, 43-44; Gill 1989, 13 n.2; Irwin 1988, §109-115; Fine 2003 [1983], 398; Kirwan 1971, 148-149 and Cousin 1933, among others.

⁹ *Metaphysics* Δ.8.1017b23-26.

- (1) the ultimate subject (ὑποκείμενον ἔσχατον) which is not said of anything else, and
- (2) that which is this something and separable; the shape and form of each thing.”

According to the first application, substances are the fundamental entities in Aristotle’s ontology. Everything that exists is either a substance itself or depends on a substance for its own existence. Substances, according to the view expressed in the *Categories* for example, are ontological bedrock. Paradigmatic examples of these primary substances are ‘spatiotemporal particulars’¹⁰ like this man or this horse (1b28; 2a14-15).

According to the second application of the term, ‘substance’ is used to pick out what something is essentially—the substance *of* something. In *Metaphysics* Z.6 for example, Aristotle claims that “the what-it-is-to-be (τὸ τί ἐν εἶναι) for a thing is said to be the substance of the thing” (1031a18).¹¹ The expression ‘the what-it-is-to-be’ for a thing was coined by Aristotle to pick out a thing’s essence and is commonly translated as such.

In the *Metaphysics* and *On the Soul*, Aristotle further analyzes sensible particular substances (e.g., this man or this horse) into compounds of form and matter. Since individual sensible particulars are substances, as are the parts of

¹⁰ Irwin 1988 §26, 51.

¹¹ See also *Topics* 1.5.101b38; *Metaphysics* Z.4.1029b14; 1030a30-31.

those substances,¹² one might have anticipated a threefold division of substance.

This is just what we find in *On the Soul*:

We say that one sort of being is substance and of this there is
<substance> as matter, which is not in itself this something,
another as shape and form, by which it is called ‘this something,’
and third that from these. (2.1.412a6-9)

I’d be reticent to conclude that Aristotle thinks matter, form and the compound are all substances were this same list not repeated four times in the *Metaphysics*.¹³ Each iteration affirms that matter and the compound are both substances.¹⁴ Aristotle characterizes substance qua form a bit differently in each of these passages, though they all amount to the same. In *On the Soul* 2.1 and *Metaphysics* Z.3 Aristotle offers “shape and form” (μορφὴν καὶ εἶδος, 412a8) or

¹² At least according to the first definition he gives for ‘substance’ in his philosophical lexicon (Δ.8.1017b10-14). There he suggests that:

We call substance the simple bodies, for example earth and fire and water and all these sorts of things, and generally bodies and those animals, deities and parts of them constituted from bodies—all these are said to be substances because they are not said of a subject, but other things are said of them.

There is dispute about whether Aristotle retains these candidates as substances. See, for example, Gill 1989, 14 and 112. Gill claims that Aristotle winds up denying that the simple bodies are substances because they are not unities, but more like heaps and also denies that the parts of animals are substances because they cannot exist separately from the animals of which they are parts. What matters for my purposes that Aristotle repeats the three-fold division of substance in *On the Soul* 2.1.

¹³ *Metaphysics* Z.1.1029a1-3; H.1.1042a26-31; H.2.1043a26-28; and Λ.3.1070a9-13.

¹⁴ Matter, the sort of substance most often dismissed by commentators, is also independently confirmed as a substance in, for example, *Metaphysics* Z.3.1029a30-33; Z.10.1035a1-2; Z.13.1038b4-6; H.1.1042a26-1042b3; and Θ.6.1049a34-36.

“the form” (ἡ μορφή, 1029a2) as a kind of substance. It seems reasonable to suppose that these notions are meant to pick out the same sort of thing as is picked out by “the account and the form” (ὁ λόγος καὶ ἡ μορφή, 1042a28-29) in H.1 or “form and actuality” (μορφή καὶ ἐνέργεια, 1043a28) in H.2 or “the nature” (ἡ φύσις, 1070a11) in Λ.3.

Now for the argument in *On the Soul* 2.1. Aristotle begins by reminding us of the threefold division of substance into form, matter and the composite (2.1.412a6-9). He then argues that the soul has to be the substance insofar as it’s the form of a living, natural body (412a11-21). The argument takes two steps. With the first step, Aristotle shows that every living, natural body is a substance insofar as it’s a composite. He makes his case in this way—bodies, and natural bodies most of all, have the best claim to the title of ‘substance.’ Among natural bodies there are some that have life and some that don’t. Natural bodies having life are distinguished from those that don’t by their capacity for self-nutrition, growth and decay. That is, living natural bodies possess a nutritive soul (or in the case of more complex organisms, a nutritive capacity of the soul). A natural body having life, therefore, is a compound of soul and body. Since a living natural body is a substance (this is an unargued assumption of the argument¹⁵) it must be a substance as compound.

¹⁵ Although it is unargued, it does not appear to be controversial for Aristotle. This is the same point where he begins his investigation into substance. See, for example, *Metaphysics* Z.2.1028b8. Further, the paradigmatic examples of primary substance Aristotle gives in the *Categories* and elsewhere are particular living things like Socrates or Callias.

Taking this intermediate conclusion, Aristotle then argues that the soul is a substance insofar as it's the form of a living natural body (412a19-21). The argument he solicits in support of this conclusion is unclear. The soul cannot be a body (*a fortiori* cannot be a living natural body) because he claims "the body is not said of a subject; rather it exists as subject and matter" (412a18-19). It might look as if he is arguing that the soul is not a body because the latter and not the former is a subject, but that cannot be what he means. The threefold division is an analysis of substance as subject.¹⁶ Form, matter and compound are all subjects and so he cannot use the subject criterion to distinguish the soul from the body.¹⁷

There is another route to the same conclusion. The soul is not a body, he claims, because the body is a substance "as subject *and matter*" (412a18-19). Aristotle is not distinguishing the soul and body on the basis of one being a subject. The difference arises rather because the body is the subject and matter, the soul is a subject in a different way. The argument proceeds by disjunction elimination. The soul is a substance either as matter, compound or form. The living body is a substance qua compound (this was the conclusion of the first step of the argument). This sort of substance can be analyzed into two parts,

¹⁶ In *Metaphysics* Z.3.1028b34-1029a3 he writes: "[T]he essence, the universal and the genus seem to be the substance of a given thing, and the fourth of these cases is the subject. Now, the subject is that of which other things are said, but which is not itself said of any other thing; hence we must first determine what it is, since the primary subject seems to be substance most of all. What is spoken of in this way is in one way the matter, in another way the form and in a third way that from these."

¹⁷ For an excellent account of Aristotle's conception of the soul as subject see Shields 1998a.

the body and the soul. The body is the substance as matter. That leaves form. The soul must be substance qua form of the living natural body.

6.1.2 Form, Matter and Unity

But the view that the soul is a substance insofar as it's the form of a living natural body faces a prima facie problem: there are passages where it looks like Aristotle claims the soul and body are identical. Since the soul is a substance as form, the relationship between the soul and the body will be a special case of the relationship between form and matter. After proposing a definition according to which the soul is the “first actuality of a natural instrumental body” (*On the Soul* 2.1.412b5-6), Aristotle explains that because the soul is the first actuality of a natural, organized body:

it's not necessary to ask if the soul and the body are one, just like its not necessary to ask if the wax and the shape (τὸ σχῆμα) are, nor generally about the matter of each thing and that of which it's the matter. For although 'one' and 'being' are spoken of in many ways, the most proper is the actuality. (412b6-9)

From this we can conclude that in whatever way form and matter are one, the soul and the body will also be one. This view is supported and explained in an important, though confusing, passage in *Metaphysics* H.6. There we find the following:

As we've said, *the proximate matter* (ἡ ἐσχάτη ὕλη) *and the form* (ἡ μορφή) *are the same and one*—the former potentially, the latter actually, so that the search for the cause of the unity is like the search for their being one. For each thing is one, and the potentiality and the actuality are in a way (πῶς) one, so that there is no other cause of their unity except if there is something like a

motion from potentiality to actuality. But anything that doesn't have matter is, without qualification ($\acute{\alpha}\pi\lambda\tilde{\omega}\zeta$), one. (1045b17-23)

Let's pause to clarify the terminology. Aristotle distinguishes different types of matter, in part, by differences in their persistence conditions. The persistence conditions for some types of matter are determined according to their relative level of organization. Consider a bronze statue, Goliath. The statue lasts (as a statue of Goliath) only as long as it is shaped like this particular biblical figure. The bronze from which it was cast could survive melting and subsequent recasting into a different shape but it could not survive the redistribution of the elements composing the bronze to their natural places. The elements themselves could survive such redistribution. In this case the bronze is the 'proximate'¹⁸ matter of the statue and the elements are the proximate matter of the bronze, but the elements are the 'remote' matter of the statue.

As it is for artifacts, so it is for organisms. Some material parts survive the death of the organism.¹⁹ These sorts of parts are non-structure laden.²⁰ That is, their identity as the sorts of parts they are is not determined by the whole of which they are parts. Aristotle writes: "The clay statue is destroyed into clay,

¹⁸ The talk of proximity or remoteness has to do with the metaphorical distance the matter is from the target form. This 'distance' is to be accounted for by the difference in degrees of organization—something with a higher degree of complexity in its organization is further from something with a lower degree of complexity.

¹⁹ *On the Soul* 2.1.412b25-26; *Metaphysics* Z.10.1035a18-19.

²⁰ Following Harte 2002, 165. There she describes structure-laden parts as those "that get their identity only in the context of the structure of which they are part" and these parts "will only exist for as long as the structure itself exists." Conversely, non-structure laden parts could outlast the structure of which they are parts.

the bronze sphere into bronze and Callias into flesh and bones” (*Metaphysics* Z.10.1035a31-33). The flesh and bone into which Callias is destroyed is his remote (or ‘nonproximate’ or ‘compositional’²¹) matter.

Some material parts of an organism, however, cease to exist when they’re no longer parts of a functioning whole.²² These sorts of parts are structure-laden; their persistence conditions are bound up with their being functioning parts of a living organism. The proximate (or ‘closest’ or ‘functional’²³) matter of a living creature persists only so long as it can fulfill its function. A finger or an eye is what it is only while it is part of a functioning whole. For Aristotle, a severed ‘finger’ or the ‘eye’ of a corpse is a finger or an eye in name only. Functioning fingers, eyes and other organic parts are the proximate matter of the living organism.

Aristotle broadens this claim: “We must apply to the whole living body that which applies to the part” (*On the Soul* 2.1.412b22-23). From this it seems reasonable to take *the whole organic body* as the proximate body of the organism. Just like a stone or painted ‘eye’ lacks the capacities characteristic of a real, functioning eye and so is an eye in name only; so also does a dead body lack the capacities characteristic of a functioning organic body. Hence he claims that the organic body is *essentially* ensouled. “It is not the body that has lost a soul that has the potentiality to live, but the body that has it” (412b25-6). The body that has a soul has the right sort of capacities for living and does not sur-

²¹ The terms here are interchangeable. See Whiting 1992, 79 n.17.

²² *On the Soul* 2.1.412b13-15; 412b20-22; *Parts of Animals* 1.1.640b35-641a6; 1.5.645a35; *Metaphysics* Z.10.1035b18-27; Z.11.1036b30-32.

²³ See n.15.

vive the death of the organism. That sort of body serves as the proximate matter of the living organism. The body that lacks a soul, lacks the capacities for living and *can* survive the death of the organism. But the ‘body’ that lacks the soul is just a heap of elements—the remote matter which persists after the death of the organism.

Returning to the argument, we’ve seen that the soul and body are ‘one’ in the same way as the wax and its shape are one. We’ve also seen that the proximate matter—which we should now understand as the functionally organized body—are ‘the same and one.’ But does this mean that the soul and the body are *identical*?

Aristotle does occasionally use the expression ‘the same and one’ to mean identity, as we do in English. The clearest and most uncontroversial case of identity is that relation which holds between a thing and itself. Aristotle sometimes uses the phrase to pick out that relation. When investigating the one over many problem in *Metaphysics* Z.14, for example, he asks whether “the animal in horse is *one and the same* as the animal in man as you are one and the same as yourself” (1039a33-34). Since you are certainly identical with yourself, Aristotle does allow that ‘one and the same’ can be used to express identity.²⁴

Now we have what we need to make the case that form and matter (and so the soul and body) are identical. One might argue as follows: Aristotle claims

²⁴ See also *Metaphysics* Z.17.1041a18-19: “each thing is not distinguished from itself, since this is what it is to be one.” Compare the use at *Metaphysics* I.3.1054a32-1054b2, where it is less exact though compatible. He writes: “‘The same’ means one in number; on both in definition and in number (as you are with yourself and one in definition (as equal straight lines are the same).”

that the unity of the soul and body is just like that of form and matter. Form and proximate matter are the same and one. The expression ‘the same and one’ can be used to pick out the identity relation. If he means to do so in the present case, then the soul will be identical to the body just as the form is identical to the proximate matter. But is there reason to think that antecedent is satisfied?

Some commentators have answered affirmatively.²⁵ T.H. Irwin, for example, suggests: “the proximate matter, the materiate form, and the formal compound are identical, these are three different ways of describing the same subject.”²⁶ A page later he expands on this idea, suggesting that the hylomorphic doctrine of the *Metaphysics*:

should also explain, however, why the soul is not the proximate body (412a17), even if body and soul are identical. Aristotle should mean that the soul and the body are different ‘in being,’ so that what it is to be a body is not the same as what it is to be a soul.

The idea here is that the soul is the proximate body; but being a proximate body is not the same property as being a soul. Aristotle will typically use the expression ‘one in number, different in being’ to describe this sort of case.²⁷ A clear example of this is found in the *Physics*. The road from Thebes to Athens, Aristotle explains, is the same as the road from Athens to Thebes

²⁵ See especially Lewis 1994; Whiting 1992; Irwin 1988, §152 and Whiting 1984.

²⁶ See especially Irwin 1988, §152, 285.

²⁷ See Irwin 1988, §152 n.20. There he catalogues a number of examples where Aristotle describes some x and some y as being one in number but different in being.

(3.3.202a18-20; 202b11-16). There is only one road, but the property of being the road from Thebes to Athens is different than the property of being the road from Athens to Thebes. The ‘roads’ can bear different properties. The road from Thebes to Athens runs southeastward and downhill; the road from Athens to Thebes runs northwestward and uphill. On Irwin’s view, the soul and proximate body are one in number, but different in being much in the same way that the road from Thebes to Athens and from Athens to Thebes are. These ‘roads’ (if it is right to use the plural here) are not merely accidentally the same²⁸ and may perhaps be identical.²⁹

Although this solution gets us around a number of problems (the most pronounced of which is that Aristotle assigns different, and often incompatible, properties to the body and soul³⁰), one consequence of the view is more troublesome. Suppose that for some x and some y , x and y are one in number, but different in being in the way described in the previous paragraph. This entails that x and y share all their parts in common. As Michael Rae has pointed out: “accidental sameness...entails complete community of parts.”³¹ If the relation

²⁸ Accidental sameness is that relation which obtains between, for example, Socrates and seated-Socrates for as long as the two persist. See Matthews 1982 on such ‘kooky’ objects.

²⁹ I say *perhaps* because it’s possible that the relation between them is neither one of accidental sameness nor strict identity, but co-location. Irwin 1988, §152 n.20 precludes this possibility: “I do not think Aristotle means to deny identity (the relation satisfying Leibniz’s Law) here, but the issue is disputed.”

³⁰ For example, the body is posterior to the soul like matter is posterior to the form (*Metaphysics* Z.3.1029a30-32; Z.10.1035b18-21); the body is a subject, the soul belongs to a subject (*On the Soul* 2.1.412a19-28).

³¹ Rae 1999, 109.

between the soul and body is stronger than accidental sameness and perhaps as strong as identity, this suggests that the soul and the proximate body share all their material parts in common. For reasons we shall see, Aristotle denies the complete community of parts between proximate body and soul.

Before I make that case, however, we need to determine whether Aristotle can consistently maintain that the soul and the proximate matter are “the same and one” without also maintaining that they are one in number, but different in being. To do this we’ll need to consult the philosophical lexicon of *Metaphysics* Δ and other relevant passages in the *Metaphysics* to find alternative definitions of the terms ‘one’ (ἓν), ‘the same’ (ταὐτά) and for reasons which will become apparent, ‘whole’ (ὅλον).

One...

Both in *Metaphysics* Δ.6 and in I.1-2 Aristotle explains the different ways the term ‘one (ἓν)’ can be used. “Things are called ‘one,’” he begins in Δ.6, “either coincidentally (κατὰ συμβεβηκόσ) or in their own right (καθ’ αὐτό)” (1015b16-17). We can short-circuit the investigation into coincidental unity, however.³² The proximate matter of a living organism is essentially ensouled. Aristotle writes: “The body that is potentially alive is not one which has lost the soul, but one which has it” (*On the Soul* 2.1.412b25-26). A body without a soul is only homonymously a body or it is a body of a different sort. The soul and the proximate body, therefore, are one essentially or in their own right.

³² For the five different senses of coincidental unity see *Metaphysics* Δ.6.1015b16-34.

Aristotle outlines a number of ways some things are said to be one in their own right (*Metaphysics* Δ.6.1015b36-1017a3; I.1-2.1052a15-1054a19). The discussions in both Δ.6 and I.1 begin with the claim that some things are one in their own right just in case those things are continuous (συνεχῆ). Some planks of wood, for example, might be continuous because they have been glued together. But the parts of the body are one, not because they have been fastened together according to some craft, but by being naturally so joined. We can derive the following definition: For some x and some y , x and y are *one in their own right* just in case x and y are continuous (συνεχῆ, Δ.6.1015b36-1016a1). Having some things which are merely in contact, however, is not enough for those things to be continuous and so one (1016a7). Although there is a sense in which “we claim that anything is one which is a quantity and continuous, we don’t unless it is some kind of whole” (1016b11-13). Aristotle’s example is instructive here. He writes:

if we should see the parts of a shoe put together in any old way we wouldn’t claim they are one, unless on account of their continuity, but only if they were put together such that they were a shoe and had some one form. (1016b13-16)

So what makes some bits of leather one is not the mere contact of those bits, but the fact that they have been fitted together according to the skill of the cobbler in such a way that they have a single form—that is, they are parts of a shoe. It is the form which makes the difference between a heap of leather and those parts being parts of a whole.

Things can be continuous by having one form either by nature or by craft (1016a4). The parts of the body are continuous by having one form by nature, but the parts of a shoe are made continuous by the craft of the cobbler. Aristot-

the further claims that those things that are continuous by nature are one to a greater degree than those which have been bonded together according to some craft. It is especially the case that something is continuous if it is so “by nature and not by contact or bonds” (I.1.1052a19-20). What makes something continuous by nature, Aristotle explains, is that it is a whole which has “in itself the cause of its own continuity” (I.1.1052a22-25).

...and the Same

The three key texts for determining Aristotle’s views about the various uses of ‘the same’ (τὰ αὐτὰ) are *Metaphysics* Δ.9, I.3 and *Topics* 1.7. “It is clear,” he writes in Δ.9, “that sameness is a kind of oneness” (1018a7). Sameness can obtain either in cases where “the being of more than one thing” is called the same or where “a thing is treated as more than one (for example, when someone says that a thing is the same as itself)” (1018a8-9). Sameness can obtain between more than one thing or between a thing and itself (by treating it as two things). So when Aristotle says that some x and some y are the same, in many cases it will be a substantive question whether he has identity in mind. And since sameness is a kind of oneness, some thing(s) can be called ‘the same’ in as many ways as some thing(s) are called ‘one.’ This is true both for things that are coincidentally one³³ and things that are one in their own right. So it seems that calling x and y ‘the same’ doesn’t get us anything we didn’t already know by knowing

³³ See, for example, *Metaphysics* Δ.9.1017b27-1018a4 for the ways some things are the same coincidentally. They are presented in a way that corresponds to his account of things that are one coincidentally.

that x and y are one. Thus the expression ‘the same and one’ is redundant. Take one of the conjuncts; no new information is being conveyed by the addition of the other.

Wholes

Just as Aristotle connected the notions of sameness and oneness in *Metaphysics* $\Delta.9$,³⁴ so also does he make the connection between oneness and some things composing a whole. “Wholeness,” he claims, can be understood in certain circumstances as “a kind of oneness” ($\Delta.26.1023b36$). We can clarify what this connection is by looking at what he has to say about the unity of parts in a whole.

Some things are called ‘a whole’ in two ways. First, something is called a whole if “no part is missing from something which is called a whole naturally” (1023b26-27). This use of the term suggests that a whole is something complete. It is not enough for something to count as a whole merely by containing parts.

Second, something is called a whole if it “contains its contents such that they are one thing” (1023b27-28). This can happen in two circumstances: “Either as each thing being one thing ($\acute{\omega}\varsigma \acute{\epsilon}\kappa\alpha\sigma\tau\omicron\nu \acute{\epsilon}\nu$) or as composing one thing ($\acute{\epsilon}\kappa \tau\omicron\upsilon\tau\omega\nu \tau\acute{o} \acute{\epsilon}\nu$)” (1023b28-29). Aristotle has two sorts of part/whole relation in mind here. First is that which obtains in cases of *discontinuous wholes* and the second is that which obtains between *continuous wholes*. A discontinuous whole is something like a kind whose members are all severally instances of that kind. The kind ‘animal’ is a whole whose parts—human being, horse, etc.—are

³⁴ At 1018a7 he says: “It is clear that sameness is a kind of oneness.”

each themselves instances of the kind. It's certainly not the case that the universal *species* human being or horse is an animal. It must then be the case that it is the particular human beings and horses that are the parts of the kind.

The part/whole relation which obtains between continuous wholes is different. Here the parts are not each an instance of the whole; but are collectively some whole. As we've seen above, the individual bits of leather which jointly compose a shoe can be called a whole. This sort of part/whole relation differs from the previous simply because the parts of a shoe are not shoes. Aristotle describes this sort of whole as follows: "The continuous and the limited is a whole whenever there is something one composed of many, most of all if they are present potentially,³⁵ but if not, if they are present actually" (1023b32-34). A whole of parts is one insofar as it has a single form (see, for instance, Δ.6.1016b16). So a whole is something one, a unity, and not merely a heap because it has a single form. The form, therefore, is that which is responsible for the unity of a composite whole.

³⁵ Aristotle continues by claiming that something is a whole of parts most of all when the parts are present potentially, though something might still count as a whole even if its parts are present actually. Aristotle speaks of parts that remain only potentially in the whole in his discussion of mixtures. In *On Generation and Corruption* 1.10.327b24-26, one of the criteria which must be met in order for something to be a mixture was that its parts remain potentially, but not actually in the compound. In a mixture, the elements from which it is composed wind up losing their distinctive natures, though they remain in the mixture potentially. When one thing is present potentially in another, what is distinctive about the whole is *its* form and not the forms of the parts.

6.1.3 Parts of the Form v. Parts of the Composite

The soul is a substance qua form of a natural body. As a form, the soul is that which unifies the material parts of a living thing. Having shown this, I want to argue that Aristotle denies the complete community of parts between any material body (whether proximate or nonproximate) and the soul and consequently denies that the soul could be composed of material parts. In *Metaphysics* Z.11, Aristotle specifically discusses whether or not material parts are parts of the form or parts of the composite.

The difficult and controversial chapter begins with the question: “What sorts of parts are parts of the form and what sorts are parts of the compounded whole (τοῦ συνειληγμένου), not of the form?” As this question suggests, Aristotle is looking to determine what sorts of parts count as parts of the form but do not also count as parts of the composite. That is, he’s looking for parts that are unique to the soul which aren’t also shared by the composite. Aristotle responds to this challenge in two notoriously troublesome passages. The first passage (Z.11.1036a31b7) seems to contain an argument which concludes that forms are *variably realizable* and consequently cannot include matter. In the second passage (1036b24-32), the so-called Socrates the Younger passage, Aristotle seems to renege his commitment to the variable realizability of forms and consequently concluding that the form must include matter.

In the first passage, Aristotle argues that forms are variably realizable. He begins with the simple observation that there can be circles made of bronze, stone and wood. The matter from which the circle is composed ought not be

part of the form of the circle because it is “separated from them” (τὸ χωρίζεσθαι ἀὐτῶν, 1036a34). Aristotle uses the adjective ‘χωριστόν’ and its cognates to mean the actual separation of one thing from another—call this ‘separated.’ He also uses the term and its cognates to mean the possible separation of one thing from another—call this ‘separable.’ With this in mind, he distinguishes separability without qualification (χωριστόν ἀπλῶς, H.1.1042a30-31) from separability in account (τῷ λόγῳ χωριστόν, H.1.1042a29). *X* is *separable without qualification* from *y*, just in case *x* can exist in the absence of *y*. The circle is separable without qualification from bronze, stone and wood (though it is not clear whether the circle is separable from all matter whatever³⁶). *X* is *separable in account* from *y*, just in case one can give a complete account of *x* without mentioning *y*. The circle is also separable in account from the bronze, stone and wood since no mention of the latter needs to be made in a complete account of the former.

The circle, then, is realizable in different sorts of matter; it need not be composed of a particular sort of matter in order to exist. This would be true “even if all the circles that were seen were bronze” (Z.11.1036b1-2). Even if it were the case that no circle was separated from bronze, this wouldn’t impugn the fact that the bronze ought not be considered part of the form of the circle. Aristotle admits that we would have a difficult time trying to “remove the bronze in thought” (1036b2-3), that is, to think of the circle as if it were actually separated from the bronze.

³⁶ In particular, Aristotle considers whether mathematical circles needn’t be composed of ordinary matter but rather could be hylomorphic compounds of the form and *intelligible* matter.

This hypothetical case of a world where all circles were made of bronze is meant to parallel the actual world where the form of a human being is “always found in flesh and bone and parts of that sort” (1036b3-4). Aristotle sets up the comparison in such a way that we are invited to draw conclusions about the relation between the form of a human being and the flesh and bone on the basis of those drawn about the relation between the form of a circle and bronze (in a world where all circles are composed of bronze). Though it might be difficult to ‘abstract’ the form of a human being from flesh and bone (i.e., to think of a human being composed of something other than flesh and bone) because it is the only matter the form is ever actually realized in, this form could still be variably realizable. It could be, though it never actually is, realized in matter of a different sort. Following the argument through, we are led to conclude that flesh and bone and parts of that sort are not parts of the form of a human being.

But what does Aristotle mean by flesh and bone and *parts of that sort*? Sometimes Aristotle treats flesh and bone as the sorts of parts that survive the death of an organism—the remote matter of a living thing. This is just what he had in mind in Z.10 when he wrote: “...a clay statue is destroyed into clay, a bronze sphere into bronze, Callias into flesh and bone, and even a circle into its segments” (1035a31-34). The remote matter of an organism ought not be included as parts of the form. The remote matter of an organism survives the loss of the soul and so can’t be what the soul essentially is.

Sometimes, however, Aristotle treats flesh and bone as the sorts of parts which don’t survive the death of an organism—the proximate matter of a living thing. In *Generation of Animals* 2.1 Aristotle claims that “there is no such

thing as face or flesh without the soul in it; it is only homonymously that they will be called ‘face’ or ‘flesh’ if the life has gone out of them, just as if they had been made of stone or wood” (734b25-31). Again we find the same claim in the *Meteorology*, though he’s a bit more tentative: “...a dead man is a man only in name. And so the hand of a dead man, too, will be a hand in name only in the same way...but in the case of flesh and bone the fact is not so clear to see” (4.12.389b32-390a3). Although it’s more difficult to see in the second passage, the result is the same in both—flesh and bone are understood as proximate matter which doesn’t survive the loss of the soul.

When Aristotle denies that flesh and bone and parts of that sort are parts of the form, does he have in mind those parts understood as proximate or remote matter? Contrary to what some have argued³⁷ I’ll now try to make the case that Aristotle denies that the proximate matter could be part of the form.

Recall that the question that Aristotle opens Z.11 with is this: which parts are parts of the *form* (τοῦ εἶδους) and which parts are parts of the *compounded whole* (τοῦ συνειλημμένου). Now before moving on, we need to determine what Aristotle means by ‘compounded whole’ here. Corresponding to the distinction between proximate and remote matter, T.H. Irwin distinguishes between two types of compound that can be found in Aristotle.³⁸ Irwin describes a *formal* compound as the compound of form and proximate matter and a *material* com-

³⁷ Some have argued that Aristotle means to eliminate the remote, but not the proximate matter, from the form here. See Gill 1989, 126-138 and Irwin 1988, §§129-133. Cf. Bostock 1994, 164-165.

³⁸ Irwin 1988 §132, 243.

pound as the compound of form and remote matter.³⁹ Irwin uses this distinction to show that Aristotle's seemingly inconsistent claims about compounds can be resolved once we're clear about the kind of compound he's got in mind.

Irwin finds one such inconsistency in the following passage from *Metaphysics* H.3. Aristotle explains that sometimes it's not clear when we use a name like 'animal,' 'house' or 'human being' whether we mean to refer to the form or the compound:

We must realize that it is not always clear whether a name signifies the compound substance or the actuality and the form ($\mu\omicron\rho\text{-}\phi\acute{\eta}$)...Is an animal a soul in a body or a soul—since the soul is the substance and actuality of a certain body? Now, animal might belong to both form and compound; if it does, it will be spoken of not in one account, but with reference to one thing.

[T]his question...makes no difference to the search for perceptible substance; for the essence belongs to the form and the actuality. For soul and being soul are the same, but human and being human are not the same, unless the soul is also to be called the human. In that case in one way they are the same and in another way they're not. (1043a29-b4)

³⁹ Although I agree that there is an important distinction between proximate and remote matter, I wonder whether this could result in two different kinds of compound. The important feature of proximate matter is that it is essentially informed. Proximate matter is itself a compound of form and remote matter. The resulting composite is matter that is functionally organized in a certain way. A formal compound is described as a compound of the form and the proximate matter. Since the proximate matter is already a compound of form and remote matter, a formal compound would be composed of a form and a form/matter compound. Thus the very same form is going to compose two compounds—one of which has itself as a part. The form in a formal compound will have to do double duty.

If it turns out that ‘animal’ could refer both to the compound and to the form, there might be a confusion about what the essence of the animal is. But Aristotle explains that the ambiguity here won’t make a difference since in either case—animal as form or animal as compound—there is just one essence. The essence of the compound will be the same as the essence of the form. Irwin suggests that this claim is only defensible if we understand it as a claim about the formal compound. The essence of the formal compound will be the same as the form and hence we needn’t bother about whether ‘animal’ or ‘human’ picks out the form or the formal compound.

If it turns out that the form and the formal compound have the same essence, Irwin argues that this means that they must be identical.⁴⁰ And further, since Aristotle also claims that the form is the essence of the proximate matter (*On the Soul* 2.1.412b11), it will turn out that the form, the formal compound and the proximate matter are identical.

It’s crucial for this view that the essence which is the form and the essence of the compound are identical. If the form and the essence of the compound are identical, they’re going to have to share all and only the same properties. But it turns out that they don’t. At the end of *Metaphysics* Z.11, for example, Aristotle explains that “things that are matter or compounded with matter are not the same as their essence; nor are things that are one accidentally like Socrates and musical...” (1037b4-6). Things that are compounded with matter won’t be the same as their essence, but things that aren’t compounded with matter will be the same as their essence. If the formal compound and the proximate matter

⁴⁰ 1988 §132, 243.

are compounds of matter, it seems that they couldn't be the same as their essence. But, as Aristotle explains "the soul and being soul" are the same—the soul is the same as its essence. And so we might argue that since the soul is the same as its essence, but material compounds (of whatever sort) aren't the same as their essence, it will turn out that the soul cannot be a material compound.

So what about the Socrates the Younger passage (Z.11.1036b24-32) which has also been used to support the view that the form must include matter of some kind? Here is the passage:

The comparison that Socrates the Younger used to make in the case of an animal wasn't well put for it leads away from the truth and makes one suppose that there could be a human being without the parts, as there can be a circle without the bronze. But these are not similar, for an animal is perceptible⁴¹ and cannot be defined without reference to motion and therefore to parts in a certain condition. For the hand is not part of a human being in just any condition, but only the part capable of fulfilling its function, and therefore the one that is ensouled; when it is not ensouled it is not a part.

Here it looks as if Aristotle is denying that the material parts of a human being ought to be extirpated from the form. A human being cannot be defined without "parts in a certain condition." As he goes on to say, these parts are those functionally defined such as hands or eyes. So here Aristotle claims that a

⁴¹ There has been a textual emendation suggested by Frede and Patzig 1988, 98 and independently by Irwin 1988 §133, 245 n.39 which would replace 'perceptible' (*αἰσθητόν*) with 'that which is capable of perceiving' (*αἰσθητικόν*). This emendation would fail to make explicit the intended comparison between the animal, which is only a perceptible thing and a circle which might or might not be a perceptible thing. The emended text, however, implies this much: the only things which are capable of perceiving are those things which have bodies with the proper sort of organs. Those things with the proper organs, like an animal, are necessarily perceptible.

human being cannot be defined without reference to the functional parts and so cannot be defined without reference to the proximate matter. But even if we grant that the proximate matter must be mentioned in the account of the *human being* or the *animal* does that imply that the proximate matter must be mentioned in the account of the *soul*? In other words, it's important to determine whether this passage means to argue that the proximate matter must be included in the *form* of a human being and not in the composite.

The proximate matter will be part of the form of a human being if the human being is identical to the form, but will only be part of the composite if the two are not identical. There are two good reasons to think that they're not. First there is Aristotle's threefold division of substance into form, matter and the compound of form and matter. In *Metaphysics* Z.11 he claims that "the soul is the primary substance, the body is matter, and the human being or the animal is the compound of the two..." (1037a5-6). The fact that Aristotle draws a distinction between these various sorts of substances might seem to be enough to conclude that the soul and the human being are different.

But twice Aristotle seems to allow that a particular human being might *be* his soul (Z.11.1037a5-10; H.3.1043b2-4). But he never advances this possibility as his own positive view. In the first passage he seems simply to be considering a possible position: "Socrates and Coriscus are twofold if Socrates is also his soul (since some understand him as a soul and some as a combined whole)..." This is far from a ringing endorsement of the view that Socrates is his soul. The situation is much the same in the second passage as well. Aristotle is considering the implications of a possible view for a position he positively endorses: "A

man is not the same as being for a man (unless the soul is also to be called ‘a man’ and in that case they are the same in one way and not in another).” So although Aristotle considers the possibility that one might identify the soul with the composite human being, he doesn’t advance this as his own positive view.

So how can we determine whether the soul and the human being are different? We need to find a property that the soul has that the human being lacks or vice versa. We’ve seen that a compound of form and matter isn’t the same as its essence and hence the human being isn’t the same as its essence; but the soul is the same as its essence. If we’re right about this, then the soul and the composite human being cannot be identical.

But now we can ask what sorts of parts are parts of the living creature? We’ve seen that functionally defined parts like hands or eyes are parts of a living organism only as long as they are parts of a functioning whole—i.e., only as long as they are parts of the compounded whole. The ‘hand’ of a corpse is like the ‘eye’ of a statue; it is a hand in name only. Hands and eyes and other functionally defined parts, then, are the parts of a living creature.⁴² The same goes for flesh and bone, considered functionally. So if flesh and bone were a part of the compounded whole, the living organism, it would have to be flesh and bone functionally considered. But flesh and bone functionally considered are proximate matter for the living organism. Flesh and bone, when they’re not

⁴² Given Aristotle’s views about the transitivity of parthood, it is much more difficult to make the case that the remote matter is his target for elimination from inclusion in the form. At best, the remote matter is only potentially a part of the functional parts. See §4.4.1, where I discuss Aristotle’s views about the transitivity of the ‘part of’ relation.

parts of a functioning whole, are flesh and bone in name only (or flesh and bone not considered functionally). So when Aristotle denies that flesh and bone and parts of that sort are parts of the form, he's denying that the proximate matter is part of the form. But whether or not the argument presented here is ultimately convincing, a stronger case can be made in the following sections which shows that Aristotle's soul couldn't be composed of material parts.

6.2 The Soul is an Unmoved Mover

Let us now turn to the second argument Aristotle invokes against the *harmonia* theory. The soul is able to initiate motion. This is one of the features—along with the capacity for perception and incorporeality (*On the Soul* 1.2.405b11-12)—that Aristotle's predecessors thought were marks of the soul.⁴³ No *harmonia* is able to initiate motion, he argues, so the soul cannot be a *harmonia*. To see why this argument works, we need to take a closer look at how the soul is able to initiate motion. We've already discussed this a bit in §5.3. There we concluded that the soul is able to effect change “through a certain choice or thought” (1.3.406b24-25). This was meant to contrast with Democritus' model of how the soul effects change. On that model the soul is composed of spherical atoms in constant motion. The soul moves the body by

⁴³ Cf. *On the Soul* 1.2.403b25-28. Here Aristotle only mentions the first two marks: “Two things most of all distinguish things with a soul from things without a soul—motion and perception; and these are the two characteristics of the soul that have been passed down by our predecessors.” The difference between the list given here and that at 1.2.405b11-12 is that the former give the characteristic marks of *something with a soul* but the second list gives the marks of the soul itself.

bumping into it, just like the quicksilver which animated Dædalus's statue of Aphrodite. Aristotle claims that the soul initiates motion, though it isn't moved in its own right ($\kappa\alpha\theta' \alpha\upsilon\tau\acute{o}$).

Aristotle distinguishes two ways in which something might be said to be in motion. Something can be in motion "because of something else" ($\kappa\alpha\theta' \acute{\epsilon}\tau\epsilon\rho\omicron\nu$) or "in its own right" ($\kappa\alpha\theta' \alpha\upsilon\tau\acute{o}$). Something in motion because of something else is in motion because it is *in* something that is in motion. A stationary sailor on a moving ship is in motion in this sense (1.3.406a5-8). The motion of the ship must be mentioned in a complete account of why the sailor is in motion. But if something is in motion in its own right, giving the reason why it is in motion needn't involve an appeal to the motion of anything else. It is possible for something to be in motion because of something else though it is not capable of motion in its own right. This is just what is happening with the soul. Aristotle makes this point by claiming that the soul "can be moved coincidentally" ($\kappa\alpha\tau\grave{\alpha} \sigma\upsilon\mu\beta\epsilon\beta\epsilon\kappa\acute{o}\varsigma$, 1.4.408a30-34) by being in something which is moving. "In no other sense," he adds, "can the soul be moved in place" (408a33-34).

There are four types of motion which something might be in either in its own right or coincidentally: locomotion (literally 'a carrying,' $\varphi\omicron\rho\alpha\tilde{\nu}$), alteration ($\acute{\alpha}\lambda\lambda\omicron\iota\acute{\omega}\sigma\epsilon\omega\varsigma$), decay ($\varphi\theta\iota\sigma\epsilon\omega\varsigma$) and growth ($\alpha\upsilon\zeta\eta\sigma\epsilon\omega\varsigma$). Aristotle explains that each of these motions involves a change of place (1.3.406b15-16). It is clear why this is the case for three of the types of motion, but alteration seems different. Locomotion is the most straightforward—it involves a change from one place to another. Decay involves something taking up less space, growth involves something taking up more. But it seems like one might undergo an alteration of

quality without undergoing any change in respect of *place*. But even alteration involves a change of place (*Physics* 8.7.260a33-260b8). Something can't undergo a change of quality, say from being cold to being hot, without a change of place: "and so it's clear that the mover doesn't stay the same distance, but at one time is nearer and another time further from the thing being altered; without locomotion (ἄνευ φορηᾶς) this would not be possible" (260b4-5). If we allow that alteration involves change of place in this sense, then his conclusion is secure that "the soul must have a place if it undergoes motion by nature" (*On the Soul* 1.3.40b620-22). Anything that undergoes motion in its own right in any of these four senses, is subject to locomotion.

Aristotle first explained the differences between something's being in motion in its own right and something's being in motion on account of something else in *Physics* 6.10. Though this chapter makes no explicit mention of the soul, we can apply the lessons learned there to the soul. The key point has to do with parts and wholes. "Something which has no parts (ἀμερές) cannot be in motion in its own right" and if it is in motion in any way at all, it is only coincidentally (240b8-13). The soul, as we've seen, does have a certain kind of parts—it has parts qua capacities. So could the soul be in motion in its own right because it has these sorts of parts?

He explains the sorts of parts which are at issue: "By 'that which has no parts' I mean that which is quantitatively indivisible (τὸ κατὰ ποσὸν ἀδιάρρητον)" (*Physics* 6.10.240b13-14). Aristotle discusses quantities in *Categories* 6 and *Metaphysics* Δ.13 and gives the following definition in the philosophical lexicon: "By 'quantity' we mean what is divisible into its constituents (ἐνυπάρχ-

οντα) each of which is one (ἓν) and this something (τόδε τι) by nature” (1020a7-8). Something that is ‘one’ and ‘this something’ is some individual, numerically one, particular thing. The idea is that a quantity is divisible into denumerable particular constituents.

Perhaps we can get a better idea of what a quantity is by looking at the examples he provides. The following are quantities: lines, surfaces, bodies, time, place, numbers, and spoken language. Consider the first three. Bodies are entities extended in three dimensions. A body is composed of surfaces which are composed of lines which are composed of points. Points are not further divisible (*Physics* 6.10.241a8) and *a fortiori* are not divisible into denumerable particular constituents. A point, therefore, is quantitatively indivisible.

Points and souls are alike in this regard—they are not composed of parts which would allow them to be in motion in their own right. “Neither a point nor any other indivisible thing,” Aristotle asserts, “is able to move” (*Physics* 6.10.241a8). Things like points and souls are not able to move because it is not possible for part of them to be in the state or place they’re changing from while part is in the state or place they’re changing to. Aristotle then gives three arguments meant to show that something without spatial parts cannot be in motion or undergo change in its own right. The first of these arguments (240b19-31) is the most important for our purposes.⁴⁴ An instance of Aristotle’s argument here might be the following: Suppose a ship is being launched from dry-dock. That ship is in motion in its own right and moves from dry-dock to the water in a

⁴⁴ This argument, as we shall see, bears a striking similarity to an argument Plato uses in the *Parmenides* to show that ‘the one’ cannot move. See *Parmenides* 137c3-138a2.

certain amount of time. In order for this to happen there must be a time when part of the ship is in the water while part of the ship remains in dry-dock. Something quantitatively indivisible could not be partly in each place; for, if it could, it would be divisible (240b26-27). Nor is it the case that the whole ship could be in dry-dock and then in the water without moving through this intermediate position (i.e., part in and part out of the water). Parallel arguments can be used to show that nothing can undergo a change of any kind without, at some intermediate stage, being partly in the condition it's changing from and partly in the condition it's changing to. Since something that has no spatial parts could not be partly in a condition it's changing from and partly in a condition it's changing to, such a thing could not move in itself or change. Aristotle concludes: "It is not possible for something without parts to move, or more generally, to change ($\mu\epsilon\tau\alpha\beta\acute{\alpha}\lambda\lambda\epsilon\iota\nu$) in any way" (240b30-31).

Applying this strategy to the case of the alleged motion of the soul yields the following: the soul is quantitatively indivisible, i.e., it lacks spatial parts (and consequently it lacks material parts as well). Only those things that have such parts can be in motion in their own right. So the soul cannot be in motion in its own right. Moreover, the soul cannot change ($\mu\epsilon\tau\alpha\beta\acute{\alpha}\lambda\lambda\epsilon\iota\nu$) in its own right for the same reason it cannot be in motion. Because the soul lacks material parts, it cannot initiate motion in the way Democritus thought—by mechanically transferring the motion of something already in motion to something at rest (*On the Soul* 1.3.406b15-27).

But if a materialist account of motion doesn't suffice, how does the soul initiate motion? Aristotle's answer is that it does so through "a certain decision or

thought” (διὰ προαιρέσεώς τινος καὶ νοήσεως, 406b25). Given the argument we’ve seen from the *Physics*, decision and thought cannot be a motion or change. To see how this is supposed to work, we need to enlist Aristotle’s distinction between the actualization of a capacity and a motion or change. In *Metaphysics* I.6 he suggests the following test to distinguish actualization from motion (1048a23-28): if one can say, at any time, that one is φ -ing and that one has φ -ed, then one is actualizing a capacity. If the test is failed, the candidate is a motion. The examples he uses to illustrate cases of actualization are those capacities typically attributed to the soul. “The same thing at the same time has seen and is seeing, or is thinking and has thought” he claims (1048a23-25). Contrast this with motions such as learning or being cured. One cannot say, at the same time, that one is learning and that one has learned or that one is being cured and that one has been cured. Thinking, unlike learning, is complete at every moment. The transition from not thinking to thinking doesn’t require some intermediate state where one is thinking in one part of the intellect and not in another. Thus the soul can initiate motion by actualizing its capacity for thought. Such an actualization doesn’t require that it be composed of spatial parts, as would be the case if the soul were in motion in its own right.

Were the soul quantitatively divisible in the way a magnitude is, the process of thought would be inexplicable. Aristotle addresses this issue in his critique of the account of the soul Plato gives in the *Timaeus*⁴⁵ (*On the Soul*

⁴⁵ Aristotle seems to have in mind *Timaeus* 34b-37d where Plato describes how the Demiurge fashions the world-soul. Aristotle’s (seemingly uncharitable) account runs as follows: The Demiurge compounded the soul out of elements and divided it up in accordance with certain harmonic numbers. The result of this was a line. Taking the line, the Demiurge then

1.3.406b26-407b11). Taking the *Timaeus* account quite literally, he says that Plato tries to give a physiological account of how the soul moves the body (406a26-27): the soul is ‘entangled’ (συμπεπλέχθαι) with the body. The soul moves the body by moving itself, and it moves itself by moving in a circle. Aristotle argues that this account of the soul’s motion is inadequate. “First of all,” he claims, “*it is wrong to say that the soul is a magnitude*” (μέγεθος, 407a2-3). We’ve seen (§4.3) that a magnitude is something spatially extended. Something spatially extended is quantitatively divisible and so the sort of thing that could be capable of motion in its own right.

Aristotle argues that the soul is not a magnitude as follows. First he narrows down the kind of soul he has in mind. The perceptive and appetitive souls don’t have circular movements (407a5-6); presumably they move in a straight line, if such a thing is appropriate to say, from the soul to its object. The intellect (νοῦς), if any part of the soul can be, might be said to move in a circle. The activity of the intellect is thinking and the parts of the activity are particular thoughts. These thoughts are “one and continuous” (εἶς καὶ συνεχῆς, 407a6-7) in a manner different than the unity and continuity of the parts of a circle. The thoughts which comprise the intellect are more like an ordered series (ἐφεξῆς, 407a8), like the ordered series of numbers. Thought, the argument continues, is either without parts (ἀμερῆς, 407a9) or is continuous differently than the way in which magnitudes are.

bent it into a circle and divided that circle further into two. One of those circles he left intact, the other he divided into seven circles. The movement of the world-soul is a circular, local motion.

In *Categories* 6 Aristotle distinguishes discrete (*διωρισμένον*) quantities such as number and spoken language from continuous (*συνεχές*) quantities (4b20-5a35). A circle is a continuous quantity. Continuous quantities have parts which join together at a common boundary, namely a point (5a1-2). The parts of continuous quantities are also composed of parts that have positions relative to one another (5a15-16). The parts of a line, plane, or solid all have relative positions—we could say where one part is in relation to another. Thoughts and numbers and the parts of time don't have positions in this way; nor do their parts share a common boundary. Continuous quantities differ from discrete ones insofar as the former are composed of parts which have a position and share a common boundary. Magnitudes are continuous in this way.

Thought, Aristotle concluded, is either partless or continuous differently than a magnitude. The parts of the soul, then, are parts which do not have a position relative to one another.⁴⁶ Since the parts of the soul don't have a position relative to one another, it makes little sense to speak of them being 'joined at a common boundary' as the parts of a continuous quantity are. Whether thought is partless or continuous differently than a magnitude, it doesn't have the sorts of parts necessary for local motion—parts which have a position. Since all the motions attributable to the soul require local motion in one way or another, the soul can neither be altered nor decay nor grow in its own right but only coincidentally. The soul is an unmoved mover.

⁴⁶ Nor does it seem right to say that they have a position *simpliciter*, but that is an issue whose additional complexity needn't concern us here.

6.3 The Soul is Not a State of the Body

Aristotle revives an old argument with a pun: “It is more harmonious to speak of a *harmonia* in the case of health and of the bodily excellences in general than in the case of the soul” (*On the Soul* 1.4.408a1-3). As we’ve seen in §5.4, Aristotle is alluding to an argument first put forward in the *Eudemus*. A *harmonia* is like health—both are states of the parts of the body. The soul is not a state of the parts of the body, so the soul cannot be a *harmonia*. So what does it mean to say something is a state of the body like health?

In both the *Topics* and the *Physics*,⁴⁷ Aristotle gives a similar account of the ‘bodily excellences.’ There are, he claims, three paradigm bodily excellences: health, strength and beauty. Health is a state of the body had when there is a proper structure of the elements which compose the homoeomerous parts of the body—the hot, cold, wet and dry. Strength is a state of the body had when there is a proper structure of the homoeomerous parts of the body—flesh, bone, sinew and the like. Beauty is a state of the body had when there is the right sort of symmetrical structure of the anhomoeomerous parts—arms and legs, for example. Each rung on the hierarchy of composition⁴⁸ has its particular excellence, though the general principle is the same: a bodily excellence is had when you’ve got a well structured whole of material parts. Aristotle’s point seems to be that it’s better to call health, strength and beauty *harmoniai* than it is to

⁴⁷ *Topics* 3.1.116b17-22 and *Physics* 7.3.246b3-10.

⁴⁸ See §4.4.

call the soul a *harmonia* because the bodily excellences are states of the body but the soul isn't.

We find a more formal account of what he means by 'state' (ἕξις) in the philosophical lexicon of the *Metaphysics* (Δ.20.1022b4-14). He defines 'state' by appeal to his definition of 'disposition'⁴⁹ (διάθεσις, Δ.19.1022b1-4). A disposition is the "structure of something having parts (τοῦ ἔχοντος μέρη τάξις) in respect of place or capacity or form" (1022b1-2). A state is "a disposition in virtue of which a thing is well or ill disposed" (Δ.19.1022b10-12). So a state is the particular structure of a thing that meets some normative standard. More than this, we find in the *Categories* that a state is "more stable" and "lasts longer" than a mere disposition (8b26-9a13). A state, therefore, is a relatively long-lasting structure of something composed of parts. The bodily excellences seem to be relatively long-lasting structures of the material parts of the body and in virtue of which a person is "well disposed."

Aristotle claims that it is better to say that a *harmonia* is a relatively long-lasting structure of the material parts of the body, than to say the soul is. In one way, this isn't surprising. On this view we are to think of a *harmonia* as an *attribute* of something having parts—i.e., the structure it has that is in accor-

⁴⁹ It does not appear that Aristotle is using the term 'διάθεσις' as a contemporary metaphysician would use 'disposition.' To say that something has a dispositional property is to say something about how that thing would be have if certain conditions of manifestation were to obtain. Fragility is an example of a dispositional property. Something that has this property has the propensity to break when struck (in certain circumstances). Aristotle, however, uses 'διάθεσις' to pick out the arrangement of a things with parts without making any claims about who that composite would or will be have in certain conditions.

dance with some normative standard. But for Aristotle nothing is both an attribute and a substance. Charlotte Witt puts the point well. “There is a categorical divide in Aristotle’s ontology,” she writes, “if something is a substance then it is not an attribute and vice versa.”⁵⁰ We’ve seen previously that Aristotle is committed to the view that the soul is a substance. Since nothing in Aristotle’s ontology can be both a substance and an attribute, we have a quick argument against the *harmonia* theory. The soul cannot be a *harmonia* where a *harmonia* is understood as the structure of something having parts—such a structure is an attribute, but the soul is a substance.

But in another way, Aristotle’s denial that the soul is a *harmonia* understood as the structure of the material parts of the body is quite surprising indeed. In *Metaphysics* Z.17 we encounter an argument which suggests that the form is precisely the abstract structure a whole of parts has (1041b12-27). Aristotle distinguishes between a whole of parts and a heap. The parts of a whole are put together so as to form a unity, the parts of a heap are not. One entry in the philosophical lexicon under ‘whole,’ which we did not consider in §6.1, is apposite: “For a quantity having a beginning, middle and end, those for which position ($\theta\acute{\epsilon}\sigma\iota\varsigma$) doesn’t make a difference are called ‘a totality’ ($\pi\tilde{\alpha}\nu$), but those for which it does, ‘a whole’ ($\delta\lambda\omicron\nu$)” (*Metaphysics* Δ.26.1024a1-3). We’ve seen above that a disposition is the structure of something having parts with regard to place, capacity or form. Aristotle provides the etymological connection. “There must be some position ($\theta\acute{\epsilon}\sigma\iota\varsigma$), as the name ‘disposition’ ($\delta\iota\acute{\alpha}\theta\epsilon\sigma\iota\varsigma$) indeed makes clear” (Δ.19.1022b2-3). So according to what we have here, a whole is some-

⁵⁰ Witt 1992, 179.

thing composed of parts which have a certain position or arrangement with respect to some principle of organization.⁵¹

Now for the argument proper. In it, Aristotle seems to show that the principle of organization for a whole of parts is its form. The form is that principle according to which some parts are organized, though it is not composed of those parts. In other words, Aristotle takes the form in this case to be a *harmonia* understood as an abstract structure of the Platonic sort. To show this, Aristotle asks us to consider the syllable ‘BA.’ The syllable, the composite whole, is not the same as the mereological sum of the letters ‘B’ and ‘A.’ The syllable is not identical to the mereological sum of the letters because it is possible to destroy the syllable without destroying the letters. He puts it this way:

The syllable is not the letters—‘BA’ is not the same as ‘B and A’—nor is flesh fire and earth (for these, flesh and the syllable, no longer exist when dissolved, but the letters exist as does the fire and the earth); therefore the syllable is something, not just the letters, the vowel and consonant, but also *something else* (ἕτερόν τι) and flesh is not just fire and earth or the hot and cold, but also *something else* (ἕτερόν τι). (Metaphysics Z.17.1041b12-19)

Aristotle identifies this ‘something else’ as the primary cause of being (ἄκτιον πρώτον τοῦ εἶναι, 1041b28), its nature (φύσις, 1041b30), and a principle (ἀρχή, 1041b31). Although he doesn’t explicitly identify this as form, it is clear that he has form in mind (see *Physics* 2.1 and §6.1.3). The form, here construed as the structure of the letters, is not itself a letter or composed of letters. If it were, Aristotle argues we’d be off on a regress—What is the cause of the ‘B’ and ‘A’

⁵¹ These connections are also brought up in Harte 2002, 132-133 where she connects them to a Platonic conception of parts and wholes in the *Parmenides* and *Theaetetus*.

and this something else being parts of a whole and not a heap?⁵² The reason why ‘B’ and ‘A’ are parts of a syllable is their structure, the principle according to which the letters have been given a certain position. If ‘BA’ were a living organism, the structure would be its soul.

Now let us return to the argument with which this section began. The argument turns on the claim that the soul is not a state, and so not a relatively long-lasting structure of the parts of the body. The argument from *Metaphysics* Z.17 implies that the form (and so the soul) just is a structure of this sort. So Aristotle seems committed to claiming that the soul both is and is not a structure of parts. The options for how one might dissolve this tension are limited.

One way to dissolve the tension would be to show that the something else added to the ‘B’ and ‘A’, such that they are parts of a syllable and not just heap, is not an abstract structure. This move shows some initial promise. Aris-

⁵² This ‘something else’ is the nature, principle and cause of the syllable being what it is; it is not an element or something composed of elements. This would seem to lend support to my argument in §6.1 that matter ought not be included as part of the form. The structure of the letters cannot be the same as the letters or their mereological sum because the letters or sum survives whether the syllable does or not. So the structure of the letters cannot be identical to the syllable’s ‘remote matter,’ namely, the letters ‘B’ and ‘A.’ The ‘proximate matter’ of the syllable would be the letters arranged ‘syllable-wise.’ If the proximate matter and the form were identical, then Aristotle’s argument here would be this: something different must be added to ‘B’ and ‘A’ such that they are parts of the syllable ‘BA’ and not just a heap of letters. If the form were identical to the proximate matter, the suggestion would be that the letters arranged syllable-wise need to be added. But, he insists, the further thing to be added is neither an element nor composed of elements. Certainly the letters arranged syllable-wise are composed of elements. So we have an argument against the identification of form and proximate matter.

totle picks up the discussion of the syllable and its letters again in *Metaphysics* H.3 (at 1043b4). There he suggests that the ‘something else’ in virtue of which something is a whole rather than a heap is either a composite (σύνθεσις, 1043b6; b7) or a mixture (μίξις, 1043b7). These are not to be understood as the results of composition or mixture, the composite object or the thing that has been mixed. As he puts it: “neither a composite nor a mixture is composed of the things of which it is a composite or a mixture” (1043b7-8). Curious as it sounds, a composite or mixture understood in this way is something purely formal, lacking material parts. So the ‘something else’ added to the letters is something purely formal and Aristotle describes it in terms similar to those in the Z.17 argument. The ‘something else’ in virtue of which something is a whole is “not an element nor composed of elements but it is the substance, and this is excluded when stating only the matter” (H.3.1043b12-13). But this just puts us back at square one. That which is missing from a syllable or a threshold when one mentions only the letters or the wood is the structure or position of those parts. Though Aristotle sometimes calls this ‘something else’ a composite or mixture, what he has in mind is no different than the abstract structure of those parts.

A second way to dissolve the tension would be to show that there are two different senses of ‘structure’ in play. The soul might be a structure in one sense, but not in another. Bringing into service the two ways to think about structure we’ve been discussing, a structure can either be the abstract arrangement a whole of parts has or it could be a whole of material parts. Applying this distinction to the present case yields the following: we know that the soul

seems to be a structure akin to that in virtue of which ‘B’ and ‘A’ compose a syllable and not a heap. This is clearly something like an abstract principle of organization; not something composed of material parts. But we also know that the soul is not an arrangement like health, strength or beauty. These bodily excellences are states of the parts of the body. If we can legitimately apply the distinction of the preceding paragraph to the present case, health will be a material structure—an entity composed of material parts which have been organized according to some principle. So just as flowers are parts of an arrangement, so earth, air, fire and water would be parts of health. Though this makes sense of the way the soul is and isn’t an arrangement, it doesn’t do justice to Aristotle’s views about the bodily excellences. Health is a state of a material body, not a material body itself.

We need to look somewhere else for a solution. This much we know: Aristotle plainly denies that the soul is a state of the body like health, strength or beauty. But he seems to admit that the soul is a kind of abstract structure a whole of parts has. So what’s the difference between states like health, strength or beauty and a structure like the soul? The answer is that the soul has causal powers which are genuinely distinct from the causal powers of the parts the body or the relations between those parts. To put it another way: the soul can oppose or direct the material parts of the body, but health, strength, beauty or any other *harmonia* cannot.

This should put us in mind of Plato’s Opposition Argument against the *harmonia* theory and the metaphysical principles underwriting that argument.⁵³

⁵³ See §3.3.

The operative principle there, as here, is that “a *harmonia* does not direct (ὀκώγη̄εῖσθαι) those things from which it is composed, but follows from them (ἔπεσθαι)” (*Phaedo* 93a6-7; see also 94c2-7). Plato drew on familiar examples. Sometimes it happens that the body is thirsty, though the desire for drink is opposed by the soul. If the soul were a *harmonia* it could never oppose the body in this way, so the soul cannot be a *harmonia*. Aristotle seems to operate with an even more radical principle—the soul opposes the natural motions of the elements from which a living body is composed.

In a very curious passage in *On the Soul* 2.4 Aristotle criticizes Empedocles’ account of the growth and unity of plants:

Empedocles did not speak well when he added this, that growth takes place in plants, when they root themselves downward because earth naturally moves in this direction, and when they grow upwards because fire moves that way. For he does not have a good understanding of up and down...

In addition to this, what is it that holds together (τὸ συνέχον) the fire and the earth, given that they tend in opposite directions? For they will be torn apart, unless there is something to prevent them; but if there is, then this is the soul and the cause of growth and nourishment. (415b28-416a2; 416a6-9)

The soul of a plant is the cause of the continuity of its elemental parts. It has this cause not by the imposition of a form by the workmanship of some craft, but by nature. Determining how the soul holds the elements together is the central concern of what follows.

6.3.1 The Natural Motion of the Elements

First to set the stage. Aristotle uses the term ‘element’ (στοιχεῖον) to pick out the fundamental components of a thing. The elements of a syllable are the letters that compose it (see e.g., *Metaphysics* Z.17.1041b12-25). Syllogisms are the elements of more complex demonstrations (*Metaphysics* Δ.3.1014a37-1014b3). The elements of material objects are those simple bodies into which other bodies are physically divided but which cannot themselves be further physically divided (see e.g., *On the Heavens* 3.3.302a15-18)—earth, air, fire and water. Our concern presently is with elements of this last sort.⁵⁴

Each of the elements has a natural place of rest and a natural motion towards that place.⁵⁵ Aristotle divides the sublunary cosmos into three regions, the center, the periphery and that intermediate between these two.⁵⁶ The natural motion of earth is towards its natural place of rest—the center of the cosmos. Fire’s natural motion is towards the periphery of the cosmos. Water and air are naturally at rest in the intermediate region between the center and the periphery. Water, being relatively heavy⁵⁷ compared to air, comes to rest naturally

⁵⁴ Therefore when I use the word ‘element’ I’ll mean the primary constituents of bodies—earth, air, fire or water—unless specified otherwise.

⁵⁵ Aristotle connects the natural motion of the elements with their natural places in *On the Heavens* 3.2.300a30-31: “And so since there is clearly a body naturally at rest at the center, it is clear that the motion to that place is also natural.” See also *On the Heavens* 1.8.276a27-30. It is a matter of controversy how the elements, being inanimate, could have natural motion. See Cohen 1996, 37-45; Gill 1989, 238-239; Lang 1984, 69-106; Waterlow 1982, 167-168.

⁵⁶ See e.g., *On the Heavens* 1.8.277b14-18.

⁵⁷ In *On the Heavens* 4.4-5 Aristotle argues that there are four elements by

around the earth. Air, being relatively light compared to water, comes to rest naturally between the water and the periphery. In the absence of any external constraint, Aristotle's cosmos would consist of a series of nested spheres. At the center would be a sphere of earth, surrounded by a sphere of water which is surrounded by a sphere of air which is surrounded by a sphere of fire.

The natural motions of the elements are sometimes constrained, however. Motion of an element away from its natural place of rest is constrained (*On the Heavens* 1.8.276a25-26); the rest of an element somewhere other than its natural place is likewise constrained (276a26).⁵⁸ An element cannot naturally be in motion away from its natural place nor can an element naturally be at rest outside its natural place. When an element is in motion or at rest away from or outside its natural place, that motion or rest must be constrained. This gives us the following 'law' of elemental motion (L.E.M.):

Aristotle's L.E.M.: An element at rest in its natural place will remain at rest there, unless constrained; an element outside its natural place will move towards that place, unless constrained.

A clod of dirt thrown upwards is in an unnatural motion for the earth composing it. An air bubble trapped under water is unnaturally at rest. The proper activity of the elements is to move towards, or be at rest in, their natural places in the cosmos—anything other than that is unnatural.

considering natural motion. There he argues that there are absolutely heavy bodies (i.e., earth) and absolutely light bodies (i.e., air) as well as bodies that are relatively heavy and light.

⁵⁸ See also *On the Heavens* 1.2.269a7-19; 3.2.300a20-300b9; *Physics* 4.1.208b9-14. For an illuminating discussion of Aristotle's views about hinderances see Lang 1984, 88-99.

6.3.2 Teleology and the Analogy with Craft

Now consider the living body of an organism. In §4.4 we've seen the hierarchical model of composition Aristotle adopts. Living organisms are composed of homoeomerous and anhomoeomerous parts. The homoeomerous parts of a living things—parts like flesh, bone and blood—are mixtures. A mixture is a chemical combination of all four elements (see §4.4; *On Generation and Corruption* 2.8.334b32-34) such that one mixture is distinguishable from another only by the proportion of elements in it. So living organisms are composed of all four elements.

But these elements are out of their proper places in the body of such an organism (or any other composite material object). Given Aristotle's law of elemental motion, these elements tend to move towards their natural places. The result of the natural motion of the elements is the unnatural decay of the organism:

The incapacities of animals—age, decay and the like—are all unnatural, due, it seems, to the fact that the whole structure (σύνταξις) of an animal is composed of elements whose proper places are different; none of its parts are in their proper places. (*On the Heavens* 2.6.288b15-18)

Aristotle gives a tidy slogan to capture this view: “Natural things are destroyed by the same things out of which they are composed” (*On the Heavens* 1.12.283b21-22). The elements would move to their natural places without something hindering that motion. As we've seen above, Aristotle claims the soul is responsible for putting the natural motions of the elements in check. There could be no unified body nor could the body retain its integrity over time were it

not for the soul. So how does the soul hinder the natural motions of the elements in a living body?

Aristotle answers this question by connecting the soul's role as that which is responsible for the unity of a living body with its role as the cause of nutrition and growth (*On the Soul* 2.4.416a6-9). He imagines an opponent who tries to explain the growth and nutrition of a living thing simply by appealing to elemental motion. Fire, among all the elements, seems to be nourished and to grow. For that reason some have supposed that fire is, without further qualification, the cause of nourishment and growth in living things. But this cannot be the case. Aristotle denies that fire could be the cause *simpliciter* of nourishment and growth. Left to its own devices (and in the presence of something to burn) fire would grow without limit:

The growth of fire is unlimited (ἄπειρον) while there is fuel, but there is a limit and proportion (πέρας καὶ λόγος) for everything united by nature both of its size and its growth; these belong to the soul, but not to fire, to the form rather than the matter. (*On the Soul* 2.4.416a15-18)

So the soul, as the form, limits the natural growth of the fire in a living body. In order that the unity of an organism be sustained over time, the natural behavior of its elements must be limited in service of that end. Living things don't just grow without measure as fire would if left unchecked. They grow to a size appropriate for a thing of that kind. The account of growth which appeals only to the natural behavior of fire fails to be a complete account of the phenomenon because a full account must appeal to the *final cause* of the living organism. The natural behavior of fire is put in service of the growth and nourishment of an organism. (This is hard to explain without personifying the soul.) The soul

as a final cause determines the limits for the natural behaviors of the elements in a living body. Thus to see *how* the soul limits the natural behaviors of the elements in a living body, we need to see how the end ($\tau\acute{\epsilon}\lambda\omicron\varsigma$) of a thing causally contributes to its composition.

To explain how the final cause operates in the natural processes which results in a living organism, Aristotle frequently invokes an analogy between nature and craft.⁵⁹ The final cause operates in the same way in nature as it does in craft (*Parts of Animals* 1.1.639a19-22). What something is for—that thing’s final cause—determines the range of materials from which it can be made, its shape and the range of procedures required to fashion those materials into something which fulfills that function. Consider an axe. What an axe is for, i.e., chopping wood, determines what sorts of materials it can be made from. In order to fulfill its function, an axe must⁶⁰ be made of something hard and capable of holding a sharp edge. Steel or iron fits the bill. The final cause also determines the sort of shape it must have—a wedge, thin at one end, wide at the other, connected to a handle with certain specifications. Though the blacksmith actually *makes* the axe by heating and hammering the metal, how the axe is made is determined in large part by what the axe is for.

One might expect Aristotle to say that the soul limits the natural behavior of the elements by establishing what sort of characteristics are hypothetically necessary for them if they are to be parts of a living organism. But he says much more than this. The soul actually uses the elements like a craftsman

⁵⁹ See, for example, *Physics* 2.8 especially 199a8-30; *On Generation and Corruption* 336b27-28; *Parts of Animals* 1.1.639b12-21 and 640a12-640b5.

⁶⁰ See also *On the Soul* 2.4.415b15-20.

uses her tools. For example, to those who mistakenly claim that the soul is fire he warns: “To say that the soul is fire is like saying that the saw or auger is the carpenter or the art of carpentry” (*Parts of Animals* 2.7.652b14-15). Spinning out the analogy further, Aristotle likens the soul to the craftsman and the fire to his tools. He unambiguously makes this connection in *Generation of Animals* 2.4:⁶¹

As the products of art are made by means of the tools of the artist (or to put it more truly, by means of their movement) and this is the activity of the art, and the art is the form of what is made in something else, so is it with the power of the nutritive soul...This soul causes growth from the nutriment, using heat and cold as its tools. (740b25-30)

So not only does the soul qua final cause determine what sorts of material are hypothetically necessary for an organism; the soul seems to act as the agent of change using the material parts of the body as an artisan uses her tools.

R.A.H. King came to a similar conclusion. The only difference he finds between natural and artificial production is that in the latter the origin of the changes are external to the product; in natural production the origin of the change is “present in the thing that comes about.”⁶² Thus it turns out that the soul as form is responsible for the unity of the material parts of an organism not

⁶¹ The sort of necessity Aristotle has in mind here is what he calls ‘hypothetical necessity.’ See *Parts of Animals* 1.1.639b12-640b4; 642a2-13; 642a32-642b4; *Physics* 2.9 and *On Generation and Corruption* 2.11. Put roughly, something is a hypothetical necessity just in case that thing is necessary for attaining some goal. Hypothetical necessity and final causation are thus tightly connected. See especially Cooper 1987 [1982/1985]; see also Broadie 1998; Sauve-Meyer 1992 and Charles 1988.

⁶² King 2001, 28.

simply by determining what those parts must be like, but by actually using those parts as tools to transform nourishment into material parts of the body.

The tool and that which uses the tool must be distinct, however. This dictum is found in *On Youth and Old Age* 4.469b1-4. There Aristotle claims “that which employs <a tool> and <the tool> it employs must be distinct, in capacity and if possible, in place, just as the flute and that which plays it—i.e, the hand.” If the soul uses the body or parts of the body as a tool, as the passages in the preceding paragraph seem to indicate, then the soul must be distinct from those parts in capacity at least.

So Aristotle claims that the soul prevents bodies of living organisms from being torn apart by being the thing holding the elements together (τὸ συνέχον, *On the Soul* 1.5.416a6-9). Here we have as clear a case as one might hope for showing the soul is ‘directing’ and not ‘following from’ the parts from which the body is composed. The soul opposes the natural motions of the elements, literally keeping them from moving to their natural places in the cosmos. Health, strength and beauty follow from the parts of the body being structured in a certain way.

Aristotle is right to say that the soul is not a state of the parts of the body like the bodily excellences. He’s right to say this *not* because the soul isn’t the structure of the body—we’ve seen that he’s committed himself to such a view in *Metaphysics* Z.17. He is right to say that the soul isn’t a structure like health, strength or beauty. Such states lack the causal powers to oppose the elements of the body which are essential to the soul in its role as that which is responsible for the unity of a living body.

6.4 How the Soul Acts and is Acted On

The soul cannot be in motion in its own right. Aristotle anticipates a possible objection to this view:

Someone might well be puzzled about how the soul moves, noticing the following sorts of things: we say that the soul is pained and pleased, is confident and afraid, and that it gets angry and perceives and thinks. These all seem to be motions. From this one might think that the soul is moved, but this isn't necessary. (*On the Soul* 1.4.408b1-5)

A proper account of the soul must explain why one can say that the soul is angry without thereby implying that the soul is moved or changed in its own right. Recall he criticized the *harmonia* theory by arguing that one couldn't legitimately attribute the "affections and actions" (τὰ πάθη καὶ ἔργα) of the soul to a *harmonia* (408a3-5). If he is unable to explain the attribution of these sorts of predicates to the soul in such a way that they don't attribute motion to the soul, then the view Aristotle endorses will be no better off than the *harmonia* theory he rejects.

To deflect this criticism, he might have denied that attributing these sorts of predicates to a subject involves attributing intrinsic motion to it. Aristotle might have argued that although it *appears* the soul is moved when it is pained, pleased, confident, afraid and the rest, *in fact* it does not undergo motion in its own right. Straightaway he rejects this possibility. "Let it be the case," he insists, "that being pained or pleased or thinking are motions and that each of these is a being moved" (408b5-7). If something is the subject of a predicate like 'is angry,' that subject moves and is moved. Aristotle doesn't try to shunt

the criticism by denying that something which is a subject of anger isn't moved. Since something that is a subject of anger *is* moved and the soul seems to be a subject of anger, then the soul seems to be moved.

Aristotle seems to block this argument by denying that the soul is a subject of anger. What Jonathan Barnes called the 'celebrated Rylean passage'⁶³ contains the crux of Aristotle's reply:

To say that the soul is angry would be like saying that it weaves or builds houses; for perhaps it is better not to say that the *soul* pities or learns or thinks but that the *human being* does so with (in/by means of) the soul. (408b11-15)

The proper subject of predicates like 'is angry' or 'weaves' is not the soul, but the whole human being—a composite of soul and body. This passage suggests that the human being is the proper subject of these predicates insofar as one is ensouled. Hence Aristotle claims that the human being pities with the soul ($\tau\tilde{\eta}\psi\upsilon\chi\tilde{\eta}$, 408b15); that is, the human being is able to be a subject which pities on account of the fact that it is an ensouled, living thing. The soul is not the thing which undergoes pity, but the living being. His strategy for defeating this objection seems to be to accept that if something is the subject of a state like anger, then that thing would be in motion in its own right; but to deny that the soul is the subject of such predicates.⁶⁴

This strategy seems to work in many cases, but perception poses a problem. Suppose, as it seems reasonable to, that the soul is the subject of perception.⁶⁵

⁶³ Barnes 1975 [1972], 33-34.

⁶⁴ This strategy is that adopted by Witt 1992 and Shields 1988a.

⁶⁵ It seems reasonable because along with motion and incorporeality, perception is one of the characteristic marks of the soul. *On the Soul*

Attributing perception to the soul involves attributing motion to the soul in its own right: “Perception occurs in being moved and affected, just as we said, since it is a certain alteration” (*On the Soul* 2.5.416b33-35). If the soul is the subject of perception, then it is moved and affected. This certainly looks like an attribution to the soul of motion in its own right. Aristotle qualifies this, explaining that such motion is not in the soul although “sometimes motion reaches as far as the soul and sometimes begins from it” (1.4.408b16). He then gives two examples. The motion involved in perception reaches the soul (presumably from the object via the senses); the motion involved in recollection runs in the other direction proceeding from the soul.

One can take this in two ways. Aristotle is either claiming that the motion is never properly attributed to the soul, although proceeding from and extending back to it; or he’s claiming that the soul is in motion, although only coincidentally so. These are not incompatible and both might be true: the human being is the proper subject of these motions and so is in motion in its own right. But it is in virtue of the fact that the human being is ensouled that it can be such a subject. The soul is only moved coincidentally, by being in something that is moved in itself.

Though this move may avoid attributing unacceptable forms of motion to the soul, we may have run into another pitfall. The soul is a substance. As a substance the soul is a basic subject (ὑποκείμενον).⁶⁶ Aristotle initially presents the idea this way: a subject is something “of which other things are predicated

1.2.403b25-28; 405b11-12.

⁶⁶ See, for example, *Metaphysics* Z.3.1029a1-2; Z.13.1038b14-16.

while it itself is predicated of nothing further” (*Metaphysics* Z.3.1028b36-37). If the soul is not the subject of predicates like ‘thinks’ or ‘desires,’ it is hard to see how it could be a subject at all. We are faced with what, as Christopher Shields pointed out, seems to be an inconsistent triad:⁶⁷

- (1) If something is a substance, then it is a subject;
- (2) The soul is a substance;
- (3) The soul is not a subject.

Aside from attributing inconsistency to Aristotle, we can do one of three things. We could say ‘substance’ is being used equivocally in propositions (1) and (2); we could say that ‘subject’ is being used equivocally in propositions (1) and (3); or we could deny that Aristotle is committed to all three propositions. Shields goes in for the second, arguing that there are two senses in which something can be a subject. A subject can either be that which underlies form, namely matter, or it can be what underlies properties ($\pi\acute{\alpha}\theta\eta$), namely the form/matter compound or form itself.⁶⁸ The soul is not a subject in the first sense—it is not matter and doesn’t underlie form; it is a form. The soul is a subject in the second sense—it is a form and underlies properties.

The trouble with Shields’ move is that the Rylean passage seems precisely to deny that the soul is the subject of mental states. It is not the soul that is a subject, but the ensouled creature—the distinction between two ways of being a subject doesn’t disentangle Aristotle here. What must be argued here is that the soul is the subject of mental states like anger in a way that doesn’t attribute

⁶⁷ Shields 1988a, 140.

⁶⁸ Shields 1988a, 142-143.

motion to the soul in its own right. The best way I can see to do this is to take states like anger and to analyze them in terms of a psychological component (of which the soul *is* the proper subject) and a physiological component (which attributes $\kappa\alpha\theta'$ $\alpha\upsilon\tau\acute{o}$ motion to its subject). The living creature is the proper subject of both the psychological component (in virtue of its being ensouled) and the physiological component (in virtue of being a living body) and so is the proper subject of the whole complex predicate. Such a move is warranted and endorsed by Aristotle, as his account of anger will show.

In *On the Soul* 1.1 Aristotle describes how affections like anger, fear, and pity are attributable to the soul. Just about every psychological act or affection is accompanied by a corresponding physiological act or affection. Anger is not just the desire for revenge, but it also and necessarily involves the boiling of blood around the heart (403a31-b1). The student of nature and the dialectician both give incomplete accounts of anger (403a29-403b19). The student of nature gives only the physiological component, defining anger as the boiling of the blood around the heart. The dialectician gives only the psychological component, defining anger as the desire to inflict pain in return for pain. The full and complete account of anger involves an account of both of its components.

Only one of those components involves attributing $\kappa\alpha\theta'$ $\alpha\upsilon\tau\acute{o}$ motion to its subject. The boiling of the blood around the heart necessarily involves a change of place of its subject's parts, so the physiological component of anger requires attributing local motion to its subject. This is just what Aristotle wanted to avoid in the case of the soul. The soul doesn't have spatial parts and so can't move locally, except coincidentally by being in a body that is so moved. The

psychological component of anger, a desire to return pain for pain, needn't involve local motion. We've seen why this is the case in the preceding section—the soul is not composed of spatial parts and so can't be moved spatially in its own right. We've also seen how this could happen—by actualizing a capacity. The soul is the proper subject of the psychological component of complex states like anger, but it is not a subject in such a way that it is moved in its own right.

6.5 The Soul is Not a Composite, the Body Is

Aristotle's last argument against the *harmonia* theory is a dilemma. The first horn of the dilemma targets the view that the soul is a *harmonia* understood as a composite (σύνθεσις) of the parts of the body. He's rather dismissive of it, claiming that the view is “exceedingly easy to refute” (*On the Soul* 1.4.408a10-11). As we've seen in §4.3, this specification of the *harmonia* theory expresses a materialist thesis: the soul is composed of material parts put together in a particular structure. This materialist thesis can be specified in three different ways, according to the hierarchical model of composition (§4.4). The first level of composition results from mixing earth, air, fire and water. The resulting mixture might be flesh, blood, or any of the homoeomerous parts of the body. The anhomoeomerous parts like hands or eyes are composed of the lower level parts. The living creature itself is a composite of the homoeomerous and anhomoeomerous parts. Despite Aristotle's confidence, it is not entirely clear which specification (if, in fact, he did have a particular specification in mind) of the theory the argument is directed against. All he actually does to refute it is

to note that there are many different composites of the body and then ask: Which one is the mind or perception or appetite?

If we lean on the fact that there are *many* composites of the body and they are composed in a variety of different ways (408a11-12), we might suppose the argument is directed against the first two levels of composite. His qualms have to do with numbers: there are a many composites of the body and they are composed in different ways. There is only one soul.⁶⁹ If the soul were a composite—a homoeomerous or anhomoeomerous part of the body—which one could it be? It is absurd to suppose that the soul is any particular composite of the body. So the soul is not a composite and so not a *harmonia* on this specification.

Now consider how the argument would run if it were directed against the view that the soul is a composite qua living body.⁷⁰ The argument becomes much more interesting. If the soul were such a composite, the parts of the soul would be the parts of the living body. Faculties like the intellect, perception and appetite are the parts of the soul. The parts of a living body are its homoeomerous and anhomoeomerous parts. If the parts of the soul were the parts of the body, then the parts of the soul are either *identical to* the parts of the body or *composed of* them. The parts of the soul are not identical to the parts of the living body. Which composite, Aristotle asks, might the mind or percep-

⁶⁹ This would have to be an unstated, though not unreasonable, assumption of Aristotle's here. He argues against the view that the soul is a ratio using just this principle. See §5.6.

⁷⁰ Recall that a living body is a top-level composite according to Aristotle's hierarchical model.

tion or appetite be? Nor are (all) the parts of the soul composed of the parts of the body. Aristotle asks at 408a12: How would the mind be composed? The soul, therefore, cannot be the living body. Since the living body is a top-level composite and such a composite is a *harmonia*; the living body is a *harmonia*. Putting this all together, the soul cannot be a *harmonia*.

If Aristotle means his stated argument here to have this flexibility, it overturns an important version of materialism about the soul. Recall that Aristotle distinguishes between two types of matter in a living organism: the proximate matter is that functionally organized stuff that doesn't survive the loss of the soul; the remote matter is that which does survive (§6.1). There we also suggested that the whole living body might reasonably be classified as the proximate matter of an organism. According to the hierarchical model of composition, the living body of an organism is a composite (see e.g., *Parts of Animals* 2.1.646b26-27). If Aristotle argues successfully here that the soul is not a *harmonia* qua composite, then he is committed to the view that the soul is not the living body of an organism and also that the soul is not the proximate matter of a living thing. If Aristotle argues unsuccessfully, then he's committed to the *harmonia* theory of the soul and a specification of it he claims is "exceedingly easy to refute."

6.5.1 Dependence and Digestion

Although Aristotle denies that the soul and its parts are identical to or composed of the parts of the body, there is no question that he thinks there is some dependence relation between the soul and those parts.

There are many places where he claims that the demise of the living body and the soul are simultaneous. “Why is it,” he asks at the end of his criticisms of the *harmonia* theory of the soul, “that the soul is destroyed at the same time as the being of flesh and the other parts of the animal?” (408a25-26). That two things are destroyed simultaneously tells us little about their dependence. It might be the case that one ontologically depends on the the other, but the simultaneity could have other explanations. They both might ontologically depend on a third thing. When that is destroyed so are the other two. It could also just be coincidence; the two things happen to be destroyed at the same time. The fact that *x* and *y* are destroyed simultaneously, implies neither that *x* ontologically depends on *y* nor vice versa.

The way Aristotle describes things, however, the dependence seems to go in both directions. He says things which seem to imply that the body is ontologically dependent on the soul. In *On the Soul* he argues that the body does not hold the soul together “rather it seems that the soul holds the body together; when the soul departs (ἐξελθούσῃς) the body dissolves and decays” (1.5.411b7-9).⁷¹ Here it seems more like the demise or continued existence of the body depends on that of the soul. That the living body is ontologically dependent on the soul is no surprise. We’ve seen previously that the living body is es-

⁷¹ There are two things to be careful of here. First, the ‘body’ which dissolves when the soul departs is by Aristotle’s own lights a body in name only. Strictly speaking it is the remote matter. Second, Aristotle is not here committing himself to any view about the soul’s continued existence apart from the body. Sometimes he uses ‘departs’ euphemistically, as we sometimes do in English, to mean perishes or ceases to exist. See *On the Soul* 2.1.412b20.

essentially ensouled (§6.1). A ‘body’ that lacks a soul is one only homonymously. So here, strictly speaking, the body doesn’t dissolve and decay when the soul departs; rather the corpse does. The body is essentially ensouled.

Elsewhere Aristotle says things which apparently imply that the soul is ontologically dependent on the body. In his treatise *On the Length and Shortness of Life* we find that the soul is destroyed on account of the destruction of the body: since the soul is in the body by nature, it is destroyed whenever the body is destroyed (3.465a27-31). This suggests the soul’s ontological dependence on the body. Clearer evidence is found elsewhere. The length of life is determined by the persistence of heat in the body. For this reason, people who live in warmer climates live longer than those living in cooler weather (1.465a9-10). There should be no causal correlation between length of life (i.e., persistence of the soul) and the persistence of the material elements of the body, were the one not ontologically dependent on the other. Here it looks like the soul is ontologically dependent, not on the proximate matter, but on the remote matter of the organism. Aristotle’s question at the end of his criticism of the *harmonia* theory is apposite: “What is it that is destroyed when the soul quits (*ἀπολιπούσης*) the body?” (1.4.408a28).

The answer, surprisingly enough, is fire. The life of a living organism—the persistence of the soul and more specifically, the nutritive soul—depends on the persistence of heat in that organism. Aristotle puts the point clearly in *On Youth and Old Age (On Respiration)*: “life and the possession of the soul involve a certain heat. For not even digestion, that through which nutrition comes to animals, occurs apart from the soul and heat, for in all cases fire does

the work” (14(8).474a25-28). This ‘certain heat’ on which nutrition depends sometimes gets called ‘vital heat’ or ‘natural heat.’⁷² Despite the names, Aristotle identifies this heat with familiar, elemental fire.⁷³ When the fire of a living thing is extinguished or consumed, the animal dies.⁷⁴ The loss of the soul and the extinction of the fire are concurrent.

The link between the persistence of the soul and the persistence of fire in a living organism is the nutritive faculty of the soul. Under the sun, one never finds a living thing which doesn’t have a nutritive faculty. It is a necessary and sufficient condition for plant life, and it is a necessary condition for animal and human life, that there be an operative nutritive faculty. The nutritive faculty cannot function without fire: “The other faculties of the soul cannot exist without the nutritive (the reason for this has been discussed in my work *On the Soul*⁷⁵) nor can it exist without the natural fire in which nature has kindled it.” (14(8).474b10-13). All the other faculties of the soul ontologically depend on the nutritive, and the nutritive faculty depends on their being some fire. Why is this the case?

The answer is found in Aristotle’s criticism of Empedocles’ explanation of nutrition in plants, which we’ve looked at previously (§6.1). The soul (specifically the nutritive soul) and fire are the ‘co-causes’ (συναίτια) of nutrition (*On the Soul* 2.4.13-15). Neither fire nor the soul alone is responsible for nourishing

⁷² Caston 1997, 336; Freudenthal 1995, 19 and *passim*.

⁷³ See, for example, *On Youth and Old Age* (*On Respiration*) 14(8).474b12-14.

⁷⁴ See, for example, *On Youth and Old Age* (*On Respiration*) 14(8).474b10-24; 23(17).478b31-33.

⁷⁵ This seems to be a reference to *On the Soul* 3.12.

a living thing. But fire, when its natural behaviors are limited in service of the good of the whole living organism, is an essential tool for the exercise of the nutritive faculty. The nutritive soul “causes growth from the nutriment, using heat and cold as its tools” (*Generation of Animals* 2.4.740b29-30). So the nutritive soul is able to exercise its capacity for nourishing the living animal only when its tools are available, that is, when there is some fire.

Fire is an essential tool of the nutritive soul because it is used to convert food first into blood and then into one or another of the homoeomerous parts of the body. Aristotle calls this process ‘digestion’ specifically or ‘concoction’ generally ($\pi\acute{\epsilon}\psi\iota\varsigma$).⁷⁶ One of the natural behaviors of fire, aside from moving toward the periphery, is to bring together things of the same kind and to eliminate what is not of the same kind (*On Generation and Corruption* 2.2.329b25-28). The result of the action of fire is something homoeomerous. As Gad Freudenthal points out: “concoction results in combination, *mixis*.”⁷⁷ The nutritive soul, using fire as its tools, concocts food into blood and then into the other parts of the body. “The end of this process,” Aristotle explains, “is the thing’s nature, by which we mean its form ($\epsilon\tilde{\iota}\delta\omicron\varsigma$) and substance ($\omicron\upsilon\sigma\acute{\iota}\alpha$)” (*Meteorology* 4.2.379b25-27). Digestion is the process by which matter (i.e., food) is transformed into parts of the body through the action of the nutritive soul imposing form on those parts by the process of heating made possible by the body’s natural fire. When the fire is extinguished, the soul can’t perform its function. And so when the natural fire of an organism goes out, that organism dies. In a living

⁷⁶ *Meteorology* 4.3.381b7-9; *Parts of Animals* 2.3.650a1-9.

⁷⁷ Freudenthal 1995, 22.

creature the ‘departure’ of the soul and the extinction of this natural fire are simultaneous—the soul no longer has the capacity for nutrition when it no longer has the fire it uses as its instrument (*On Youth and Old Age (On Respiration)* 23(17).478b32). The simultaneity is here counted as ontological dependence.

So although the soul is not a composite of the parts of the body, the soul is ontologically dependent on them and specifically, the soul depends on the fire present in the body. Since all the other faculties of the soul are ultimately dependent on the nutritive faculty and since the nutritive faculty is ultimately dependent on the presence of fire, it turns out that the soul is ontologically dependent on fire. So the soul is ontologically dependent on the *remote* matter of an organism. The *proximate* matter of the organism, however, depends on the soul.

6.5.2 Living Things Have Exactly One Soul

Aristotle has as much confidence in his ability to defeat the second horn of the dilemma as he did with the first. “It is similarly absurd,” he claims, “for the soul to be a ratio of the mixture” (*On the Soul* 1.4.408a13-14). His argument against the view is this: the body is composed of many different homoeomerous parts. Each of those parts is composed of a different ratio of elements. Blood has a different proportion of the four elements than bone—it has proportionally more water than that which is in bone. If the soul were a ratio of the mixture and the body were composed of many different mixtures, there would be as many different souls as homoeomerous parts. Aristotle thinks this is an absurd result, apparently assuming that living things have one, and only one, soul. Al-

though he doesn't argue for this claim, the argument requires it. The soul cannot be a *harmonia* qua ratio because living things have only one soul (but many ratios).

Of course, the argument above would still go through if a living thing had *a few* souls but were composed of *many* homoeomerous parts which contained elements mixed according to many different ratios. The argument would be structurally identical: the body is composed of many homoeomerous parts, mixtures of different proportions of elements. Living things have only a few souls, so the soul couldn't be a ratio of the mixtures which contribute to composing the body. For Aristotle it is a live issue whether or not a living thing might have more than one soul. Consider what he asks when enumerating the capacities of the soul in *On the Soul* 2.2. Nutrition, perception, locomotion and thought are all faculties attributable to the soul (413b11-13).

Whether each of these is a soul or part of a soul (ἐκαστόν ἐστὶ ψυχή ἢ μέρος ψυχῆς), and if a part, whether it is such as to be separable in account only or also separable in place, are questions to which it is not difficult to answer in some cases, but others are puzzling. (413b13-16)

Although he doesn't make any decisive claims here about whether the capacities mentioned above are souls or parts of the soul, Aristotle is leading his readers toward the latter view. Much more of the chapter is taken up with question of separability than with the question of whether the faculties attributed to soul are themselves souls. Since what follows (413b16-a3) is taken up with a discussion of *how* certain parts of the soul are separable from others, we are left to suppose that the faculties listed above are parts of the soul and not souls themselves.

Curiously enough, however, Aristotle argues that the soul has no parts at the end of *On the Soul* 1.5. We've seen parts of the argument before (§6.5), but now it is worth looking at the whole thing:

Some say the soul has parts (*μεριστήν*) and that we think with one part and desire with another. What then holds the soul together, if it has parts by nature (*μεριστή πέφυκεν*)? For it's certainly not the body; rather it is quite the opposite: The soul holds the body together; when it departs the body dissolves and decays. So if there is something else which makes the soul one, that would be the soul all the more. But again we must ask whether *it* is one or has many parts. For if it is one, why not straightaway say the soul is one? If it has parts, again one must ask what holds those parts together, and so on to infinity. (411b5-14)

To say that the soul has parts, this argument suggests, sends us off on an undesirable regress. It was the soul that is supposed to hold the parts of the body together. If the soul has parts, what is responsible for the unity of those parts? If the soul is responsible for holding the parts of the soul together, it seems more reasonable to suppose straightaway that the soul is one and does not have parts by nature than to suppose the alternative is true.⁷⁸ The soul, therefore, does not have parts by nature.

This puts us in a puzzling situation. We've seen above that Aristotle seems to endorse the view that each living thing has only one soul. If something has more than one capacity attributable to the soul, it's not the case that it has

⁷⁸ This puts one in mind of the suggestion at *Metaphysics* H.6.1045b17-23 about the unity of composite objects: "Anything that doesn't have matter is, without qualification (*ἀπλῶς*), one." That we ought to suppose the soul is straightaway one, without worrying about how it achieves that unity, seems to suggest (though doesn't, strictly speaking, imply) that the soul doesn't have matter.

more than one soul; rather, the soul is just composed of more than one part. The argument we've just looked at, however, suggests the opposite is true—the soul cannot, on pain of regress, have parts.

Despite appearances, Aristotle is not arguing at cross-purposes. When he denies that the soul is composed of parts, he is operating with a different conception of parthood than when he admits the partite nature of the soul. To see this we need to look at the broader context in which the argument *against* the view that the soul has parts arises. This argument is found within a discussion of whether the parts of the soul are separable from one another and which parts, if any, are separable. The question at issue is not whether the parts of the soul are distinguishable in account or even whether they are 'taxonomically separable.'⁷⁹ Rather the question at issue is whether the parts of the soul are divisible in the same way the bodies of some plants and insects are; that is, whether the parts of the soul are *severable* from one another.⁸⁰

The parts of the soul are not severable from one another, and Aristotle has empirical evidence that proves it. Plants and certain insects can be cut in two and survive with all the parts of the soul in each of the sundered bits (*On the*

⁷⁹ See Caston 1999, 207-211. A capacity of the soul is *taxonomically separable* from the others just in case something could exist with that capacity and none of the others. The noetic and nutritive capacities are taxonomically separable from one another. Plants have the capacity for self-nutrition, but not for sensation, locomotion or intellect (*On the Soul* 2.3.414a32-33; 3.12.434a22-30). Likewise for the intellect. God, who on Aristotle's view is pure intellect (*Metaphysics* A.7 and 9), exists without any of the other capacities attributable to the soul (cf. *On the Soul* 2.2.413b24-27; 3.5.430a22-23).

⁸⁰ For some parts to be severable from another, those parts must be spatial.

Soul 1.5.411b19-30). A cutting can be taken from a plant, and both the plant and the cutting retain the capacity for self-nutrition. The cutting can put roots down and grow upwards and so on. Certain insects can be cut in two, retaining the powers of locomotion and perception in each half. These observations are the crucial evidence needed to establish that the faculties of the soul (i.e., its parts) are not severable from one another, though the body is. Aristotle runs the argument as follows. Each member of a species has the same *type* of soul but numerically different instances of it (411b20-21). Now imagine an earthworm. All earthworms have the same type of soul, one capable of nutrition, locomotion and some rudimentary perception (e.g., touch). Now cut the earthworm in half and call the left half ‘Lefty’ and the right half ‘Righty.’ Both Lefty and Righty continue to live and move and perceive, just as the original earthworm did. In other words, Lefty and Righty have all the parts of the soul that the original earthworm had. And so Lefty and Righty have the same type of soul as one another (and as the intact earthworm). This wouldn’t be possible unless the capacities of the soul were not severable from one another; otherwise there might be cases where Lefty and Righty were left endowed with different capacities (e.g., Lefty capable only of nutrition and Righty capable of locomotion and perception, but not nutrition). Since such a case isn’t possible, Aristotle concludes that the parts of the soul are not severable from one another (411b26).

Aristotle seems both to accept and deny that the soul is composed of parts. I’ve suggested that he has a different conception of parthood in mind when he makes both claims—the kinds of parts the soul has are different from the kinds

of parts it is not composed of. How do we cash out this difference? The answer has to do with the *severability* of the parts.⁸¹ The soul is not composed of parts which are severable from one another, though it is composed of parts qua capacities.

It is a category mistake to think that the parts of the soul are severable from one another in the way that the halves of an earthworm or the elements of a material composite are—the soul is just not the sort of thing that might be severable into parts. This gives us a quick argument for the immateriality of the soul. Every natural or perceptible body (in the sublunar sphere) is ultimately composed of elements or is itself an element. The elements which compose every natural or perceptible body are, in principle, severable from one another. This is shown, as we've seen in §6.1, by the fact that the elements tend to move toward their natural places in the cosmos and will in fact do so, unless they are hindered. As Aristotle's experiment with plant cuttings and insect bisection shows, the various parts of the soul are not severable from each other.⁸² Every natural or perceptible body has a property the soul lacks, either being an element or ul-

⁸¹ See Caston 1999, 207-211 for a discussion of the sorts of separability at issue in *On the Soul*. My account of severability derives in large part from that discussion.

⁸² Here one might object that the structure-laden parts of living bodies—those parts which are the sorts of parts they are only when they are parts of a functioning whole—are not severable either. Relying on Aristotle's principle of homonymy, a hand or eye is not severable from the whole of which it is a part. A severed 'hand' or 'eye' is a hand or eye in name only and so such parts are not severable from one another either. But the parts of the soul and the structure-laden parts of a living body are not severable for very different reasons. The structure-laden parts of a living body are ultimately composed of the four elements; the parts of the soul aren't.

timately severable into elements.⁸³ And so the soul is not a natural or perceptible body. Since every natural or perceptible body is *material*, we can conclude that the soul is not material.

Everything that is ultimately composed of elements tends toward dissolution. We've seen that the elements move toward their natural places in the cosmos unless hindered. So everything that is ultimately composed of elements is subject to destruction through the dissolution of its parts. The soul is not composed of the sort of parts which could be dissolved and so *ipso facto* isn't subject to this sort of destruction. This doesn't commit Aristotle to the immortality of the soul, only its immateriality. As we've seen in §6.5, the soul is ontologically dependent on the material parts of the body. Even though the soul is not composed of parts which are severable from one another, the persistence of the soul still stands or falls with the persistence of the body.

6.6 Conclusion

Themistius was right. Those who say that the soul is a *harmonia* are none too close, nor yet too far from the truth. Despite the superficial similarity between them, the *harmonia* theory fails to capture much of what Aristotle thought about what the soul is and how it is composed. The soul is a substance, but a substance insofar as it is the form of a natural, living body (a body which is itself a *harmonia*). It is neither matter nor composed of matter, although it is responsible for the unity of the material parts of the body. The soul is the ab-

⁸³ See *On Generation and Corruption* 2.6.334a10-11: "It is also absurd if the soul be composed of elements or be some one of them."

stract structure of the body; but unlike a typical structure of this sort, the soul has genuine causal powers of its own, powers it doesn't have in virtue of the causal powers of the material parts of the body. Although the soul is not composed of material parts and so is not subject to destruction through dissolution, it is nonetheless ontologically dependent on the material parts of the body. The soul persists only as long as the body's elemental fire does. But for all those differences, Aristotle remains a *harmonia* theorist in one of the Platonic senses: the soul is the abstract structure of the living body.

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