

Located in Space: Plato's Theory of Psychic Motion

Douglas R. Campbell

Soul drives (*ἄγει*) all things in heaven, on Earth, and in the sea, by means of its own motions, which go by the names of wish, examination, taking-care, deliberation, true and false belief, joy, grief, courage, fear, love, hatred, and all the prime-working (*πρωτουργοί*) motions akin to these that take over the secondary-working motions of bodies, such as increase, decrease, separation, combination, and those that follow these, such as heat, cold, roughness, smoothness, white, black, bitter, and sweet.¹ (*Laws* x 896e-897a)

At the foundation of Plato's psychology is the claim in the *Phaedrus* and *Laws* that the essence (*οὐσία*) of the soul is self-motion, and it is because the soul is a self-mover that it can be a source of motion in other things. The above passage identifies the motions by which the soul moves bodies and is the culmination of the theory of psychic motion that he works out in the *Laws* and *Timaeus*. Although we know that the soul's motions initiate bodily motions, it is at a first glance hard to see how they, especially, say, *joy*, could do this. Moreover, the *Timaeus* and *Laws* repeatedly describe psychic motion as circular, and it is hard to see what contribution a discussion of circles makes to Plato's psychology. I argue here that Plato thinks that the soul has, location, depth, extension, and surface, and that it is capable of contact and resistance. However, it is not a body. The chief motivation for this view is that it explains how psychic motions, such as examination, deliberation, and even joy or grief, can initiate bodily motion. The soul can move bodies because it is in contact with them.² In the first section, I argue that Plato is speaking literally when he describes the motions of *νοῦς* and

¹ All translations of Plato and Aristotle here are my own.

² It might be helpful to explain this problem with reference to Descartes' correspondence with Elizabeth of the Palatinate. Descartes thinks that bodies are essentially extended, whereas minds are not; however, minds and bodies still move each other. Elizabeth presses him on this point, asking him to explain 'how the soul of man (since it is but a thinking substance) can determine the spirits of the body to produce voluntary actions. For it seems every determination of movement happens from an impulsion of the thing moved, according to the manner in which it is pushed by that which moves it, or else, depends on the qualification and figure of the superficies of this latter. Contact is required for the first two conditions, and extension for the third' (May 1643). Descartes' response is that the union between mind and body is a basic truth that philosophers cannot explain. I am arguing that Plato is less Cartesian than he is sometimes received as by contemporary philosophers of mind, such as Putnam 1999, 97 and Priest 1991, 8-15, 57, and 162. As Elizabeth says, 'it is easier...to concede matter and extension to the soul, than the capacity of moving a body and of being moved, to an immaterial being' (June 1643), but I do not think Plato thinks that we have to concede *matter* in addition to extension.

δόξα as circular and that the circularity contributes both to an understanding of νοῦς and of the cosmos. I also argue that every motion, including psychic motion, happens in place, but that it does not follow that the soul is a body. In the second section, I discuss Plato's vocabulary and argue that the corporeality is defined by *visibility*, not extension or divisibility. The difference between sensible and intelligible objects is that the latter are invisible; the difference between psychic motion and bodily motion is only that the former is self-moved. Although many ancient Platonists roundly rejected the possibility of an extended soul, contemporary scholars have warmed up to the view.³ The view developed here builds on this recent work, but stands out by arguing, most emphatically against Carone 2005, that the soul is *not* a body.

Reading Plato in this way makes sense of the development of Greek psychology and science. Ancient medical writers, such as Galen, tended to read the *Timaeus'* discussion of disease as involving a soul capable of contact with bodies: consider the explanation of epilepsy as being caused by a mixture of bile and phlegm being sprayed against the rational part of the soul (85a-b).⁴ We can also trace the evolution of Stoic psychology as indebted to Plato.⁵ Aristotle in *De anima* i 3 gave a criticism of the *Timaeus'* psychology as if it held that the soul were an extended magnitude (μέγεθος); however, ancient and modern commentators alike have argued either that Aristotle misunderstood Plato or that Plato was not the target of the criticism at all.⁶ In the final section, I consider Aristo-

³ For example, Sedley 1997 and 1999 reject figurative readings of descriptions of circular motions in the *Timaeus*, and Johansen 2004 suggests this thesis, too. Carone 2005 has the most worked-out defense of this claim, although she argues not just that the soul is extended, but that it is *material*, corporeal, and depends on a body. She also argues that Plato rejected the idea that the soul is extended in the *Phaedo* (but came to accept it in the *Timaeus* and *Laws*), with which I disagree. Fronterotta 2007a pushes back against Carone in particular. Indeed, both Carone 2005 and Fronterotta 2007a think that what is at stake here is the traditional mind-body problem. I agree with this (as my quotation of Descartes and Elizabeth in n2 makes clear).

⁴ See Sorabji 2002 for a discussion of the ancient medical reception to the *Timaeus*.

⁵ Stoic views of the soul as a body and Plato's theory of psychic motion were motivated similarly: soul-body interactions could be explained easily. Moreover, both the Stoics and Plato thought a lot about locations in the body being home to the soul or the different kinds of soul (see Annas 1992 and Long 1999). There might be some affinity between the debt owed by the Stoics to Plato's ontology and the debt owed by them to Plato's psychology; see Brunschwig 1994 for more on the former.

⁶ Ancient proponents include Pseudo-Simplicius, Philoponus, Sophonias, and Themistius. Some modern commentators are Cherniss 1944, 405-406 and Lee 1976, 85-86. Usually this is paired with a figurative interpretation of the *Timaeus'* psychology that I reject in the first section. E.g., Nuyens 1973, 230n34 claims that 'Aristote, dans sa critique de Platon, prend le texte du *Timée* dans un sens certainement trop littéral.' Taylor 1928, 154 insists that 'the whole criticism, if it really is intended as serious censure of Plato, and not as a series of many verbal "scores", turns, as Aristotle must have known, on taking poetical fancies literally and confusing "likely tales" with science.' Claghorn 1954, 122 argues that the criticism is based on 'misunderstanding, or on mere verbalisms'. Ross 1961, 189 says that Aristotle 'may well be criticized as having taken the myth as if it were sober prose'. Meanwhile, the view here is that Plato is speaking literally, and that Aristotle is not misreading him. Among more recent scholarship, Carter 2017 and 2019, 59-78 take Aristotle to be targeting Plato with serious, not shallow, arguments, but Carter is reluctant to say that Plato does, in fact, hold the posi-

tle's objection in *De anima*, understood as giving a criticism of, and correctly interpreting, Plato's text, and generally the intellectual history of this account of Plato's psychology.⁷

1. Psychic motion happens in space

Sometimes Plato's contributions to his psychology are clear. The theory of the divided soul, for example, poses numerous questions to scholars, but he makes it explicit what motivates it and why it is worth talking about. The importance of the *Timaeus*' discussion of circles is less obvious. The soul is said to be composed of eight circles, but how this illuminates anything at all (and even whether it is literal or figurative) is unexplained. Part of the goal of this section is to determine Plato's motivations.

The dialogue, by and large, stresses the cognitive dimension of the soul. After all, it is apparently only to add intelligence to the world that the Demiurge puts a soul in the world-body: intelligence makes things better, and 'it is impossible for intelligence (νοῦν) to come to be in something apart from soul' (*Timaeus* 30b). The world-soul does engage in circular self-motion, but no other motion (34b). It is in this context that Plato describes the motion of νοῦς. For he says that continuous circular motion around an axis is the motion 'most connected to reason (περὶ νοῦν) and intelligence (φρόνησιν)' (34a), as well as that this rotation—specifically, of the circle of the same—is the motion by which the world-soul always thinks (διανοοούμενον) the same things about the same things (40a-b). This idea has an impressive heritage. Xenophon conveys in *Memorabilia* iv 4.6-7 that Socrates always says the same things about the same things, as opposed to Hippias' inconsistency. Socrates reproaches Callicles in *Gorgias* 491b for never saying the same things about the same things, in contrast to Socrates' own behavior. One need only look at the *Meno*'s image of the moving and tied-down statues to see that consistency mattered a lot in Platonic epistemology. There is no clearer statement than this *Laws* x passage:

Surely, then, if we said that in both cases—motion moving in one place and reason (νοῦν)—the motion was in relation to the same things, in the same way, in the same spot, around the same things, in the same direction, according to one formula and one order, and likened them to the motions of a sphere turning on a lathe, we would never appear to be inefficient makers of beautiful images in speech. (898a-b)

There are other passages where the operation of a soul is described as circular tions that Aristotle is criticizing.

⁷ This line of thought is incidentally pertinent to contemporary philosophy of mind. For instance, Kim 2015 argues that since 'non-physical' souls do not have a location in space, they cannot stand in the 'pairing' relations necessary for interaction with 'physical bodies'. Something like this is a motivation for Plato's view, as I interpret it here, and Kim's arguments against attributing spatial extension and location to souls (such as the difficulty of finding a particular soul at a particular location) meet their match in Plato, especially in the *Timaeus*, where he speaks about the locations of the soul (e.g., 'the three locations of the soul [πρὸς τε τοὺς τρεῖς τόπους]' at *Tim.* 87a).

motion: for example, a well-ordered soul in the *Phaedrus* has a charioteer, so to speak, who is carried in the same circular motion (περιφοράν) as the gods (248a).⁸ These passages, I shall argue, should be taken literally: Plato is saying that the activities of the soul involve spatially extended circular motion.⁹ Scholars have noted the importance of literal interpretations for preserving his explanations. Sedley 1997, 329-330 and 1999, 316-318 says that the ‘decisive reason’ is the shape of the human head: at *Timaeus* 44d, Plato explains that the shape of the human head accommodates the motions of reason, and if Plato had meant the comments about circularity figuratively, the explanation no longer holds up. Burnyeat 2000 points to the extension of the world-soul across the whole body of the cosmos at 34b. Johansen 2004, 140 exploits both these considerations and other cosmological ones.¹⁰ These are good collections of textual support, but we ought to add the philosophical reasoning.¹¹

The reasons why Plato thinks that there are circles in the soul are cosmological.¹² There were ancient debates about whether the world-soul’s chief operation was cognition or motion.¹³ Recent scholarship, such as Brisson 1994, has tended

⁸ There are similarities between this passage and the *Timaeus*. In both cases Plato is discussing only the well-ordered soul, and Plato expresses this in the usual manner of godlikeness. At *Timaeus* 89e-90d, restoring our circular motion, which is proper to the reasoning part of the soul, is a matter of assimilating ourselves to God, and at *Phaedrus* 248a, the image is following God.

⁹ It is not just νοῦς that involves inner, psychic circles; δόξα involves the circle of the different.

¹⁰ E.g., Johansen 2004, 140 (see also n7) says that ‘the circular motions of the planets are also the motions of the thinking world soul. The stars revolve around their own axis when they think about the same thing (40a7-b2). Here there seems no alternative to taking the notion of thinking as circular motion literally.’

¹¹ After all, it is opposed to Plato’s sensibility to ever explain the soul in terms of the body. The *Laws* makes this sensibility explicit in discussions of the ontological and explanatory priority (πρότερος) of the soul. In *Timaeus* 34c, he clarifies that although he described the world-body before the world-soul, nonetheless God ‘gave priority and seniority to the soul, in both its generation and virtue in order that it might be the body’s master and ruler’. The intelligible takes priority. Furthermore, this is an important part of Plato’s philosophy across the dialogues. For example, soul takes care of the soulless (*Phaedrus* 246c), and Plato in *Phaedo* 94ff. is ready to rule out Simmias’ account of the soul because it makes the soul follow the body, despite Simmias’ recognition that the former is divine. In both cases, there is a kind of dependence of the body on the soul that is being propounded.

¹² Plato was not alone in fascination with circles. It was part of his intellectual milieu. Consider the *Mechanics*. (Whether the author is Archytas or someone else is not important here, but I follow Mourelatos 1981, 8-9 and Krafft 1970, 78-96 in taking the *Mechanics* to be written contemporaneously with Plato’s career.) The author of this work declares that ‘the circle is the source (ἀρχήν) of every wonder (τῶν θαυμάτων)’ (848a11). The reason is that a smaller wonder should be caused by a greater wonder, and there is no greater wonder than the circle, which contains every contrary. The author lists some contraries present in the circle: for instance, when it moves along its axis, it is moving both forward and backward at the same time. (We might think of the spinning tops from *Republic* iv 436d-e.) Another is that the circle combines both motion and rest. Plato has similar thoughts. In *Laws* x 898c-d, he writes that circular motion ‘is the source (πηγή) of every wonder, because it bestows at the same time slowness and swiftness in harmony to both large and small circles’. Plato sounds like the author of the *Mechanics* yet again at *Timaeus* 33b, when he says that the sphere is the best shape for the world-body because it contains all the other shapes.

¹³ For the debate between Crantor and Xenocrates, see Plutarch, *On the Generation of the Soul*

to see the cognitive dimension as doing the explanatory work: there are circles of the same and the different, and the world-soul can apparently judge things only as same or different, and this theory of cognition connects in important ways to the *Sophist's* greatest kinds.¹⁴ It is tempting to see the cognitive and the cosmological as on a par with each other (Johansen 2004, 139 gives into this temptation). After all, the world-soul has only one motion, which means its thinking cannot be distinct from its circular motion. However, to a certain extent, the cosmological does take precedence. The cognition of the world-soul does not require in any way the division of the circle of the different into seven circles. We simply cannot explain why the world-soul has *eight* circles inside it except for cosmological reasons. Aristotle's treatment of the *Timaeus's* position ignores that the discussion of circular psychic motion is not just part of a theory of $\nu\omicron\delta\zeta$ but also a theory about the cosmos. This crucial oversight, most likely due to the focus of his work on the soul and $\nu\omicron\delta\zeta$, leads him to a misunderstanding.

The world-soul has the circles of the same and the different to explain the rotation of the heavenly bodies.¹⁵ There are seven circles of the different: one for the moon, another for the sun, and the remaining five for each of the planets known to the Greeks: Venus, Mercury, Mars, Jupiter, and Saturn (each is assigned its own circle at 38c-d). They go in different speeds and directions, and so these circles are of the different. The circle of the same, in contrast, is the circle that the whole cosmos moves in, and it carries each of the planets; accordingly, the circle of the same is dominant. It accounts for the daily rotation of stars from east to west, and its axis passes through the centre of the Earth, around which the whole cosmos rotates.¹⁶

Plato analyzes *human* souls in terms of circles because he thinks that their composition must map onto the composition of the world-soul in order to explain how the soul can perceive the world. His application of the like-knows-like principle is no secret: Aristotle, for example, says in *De anima* i 1.404b15 that Plato uses this principle. Plutarch testifies the same.¹⁷ Both thinkers are apparently relying on *Timaeus* 37b, where $\delta\acute{o}\xi\alpha$ and $\nu\omicron\delta\zeta$ are made possible by the mixture of the Same, Different, and Being that the Demiurge has blended together. The same goes for why there are circles in human souls. The affinity between our soul and the world does not end at the list of ingredients, but it continues to the struc-

in the Timaeus 1012-1013.

¹⁴ See Zeyl 2000 (especially xli n77), Brisson 1994, Betegh 2018, and Corcilius 2018 on the world-soul's cognition.

¹⁵ Consider Broadie 2016, 170's point that 'the great Cosmic god of the *Timaeus* is actually the *ultimate* god when it comes to directly studying *the physical universe as it is today*' (emphasis hers).

¹⁶ See Heath 1921, 310-315 for more information on Plato's astronomy, especially in the *Timaeus*.

¹⁷ Specifically, Plutarch testifies that 'Cranor and his followers, supposing that the function that belongs to the soul above all is to judge intelligible and sensible objects, as well as their differences and similarities, both among their own kind and in relation to either kind, claim that the soul has been blended together from everything, in order that it might know everything' (*On the Generation of the Soul in the Timaeus* 1012f-1013a).

ture: our soul has eight circles because the world-soul does. In addition to the claim that human souls are made from the leftovers of the world-soul (41d), we see the kinship between our soul and the world's in the fact that God gave us sight 'in order that we might observe (κατιδόντες) the rotations of intelligence in the heavens and apply them to our own thoughts, because there is an affinity (συγγενεῖς) between them' (47c). Again, the motions in the divine part of our soul bear 'an affinity to the motions of the thoughts and revolutions of the cosmos' (90d).

Now let us consider why someone would describe cognition in terms of circular motion. Plato wants to explain νοῦς in terms of the motion of the circle of the same along its axis because of its consistency, and he wants to explain sensation as the disruption of the circle of different because it similarly captures something about the feeling of sensation. The *Timaeus* explains key Platonic doctrines in terms of motion: for example, becoming divine is treated as the assimilation of the motions of the rational part of the soul to the motions of the cosmos at *Timaeus* 89e-90d, but Plato presents the doctrine without any mention of motion in the *Theaetetus* (see Merki 1952 for more). Other examples are forthcoming.

Consider this passage:

Because the soul has been mixed of the natures of Same, the Different, and Being, since it was divided up and bound together in various proportions, and because it revolved around itself, then, whenever it grasps something whose being can be scattered or something whose being is indivisible, it is stirred throughout its whole self, and it states what the thing is the same as, or what it is different from, and in what respect and in what manner, as well as when, that they happen to be the same or different. This holds for both the things that come to be and those that always remain the same. When an account comes to be that is just as true whether it is about what is different or about what is the same and is carried without utterance or sound within that which moves itself, then, whenever the account concerns a perceptible thing, the circle of the different goes straight and proclaims it throughout its whole soul, giving rise to stable and true opinions and convictions. Whenever, in contrast, the account concerns an object of reasoning, and the circle of the same runs smoothly and reveals it, knowledge and νοῦς are necessarily produced. (*Tim.* 37a-c)

We can see generally how δόξα and νοῦς are supposed to work: an object is discerned and then announced to the whole soul. Δόξα differs from νοῦς in that the former's object 'is sensible and has come to be, and it has always been borne along, both coming to be in a certain place and then perishing out of it, and it is comprehended in opinion (δόξη) with sensation' (52a). The account of sensation in the *Timaeus* is that it is a rectilinear motion hitting one of the circles of the different, then the circle in question somehow lets the whole soul know what it has

judged.¹⁸ The hitting is the most important part because it is in this moment that we are disturbed. The turbulence throws off us off balance and ruins the inner harmony that the soul had been enjoying (43b-e). When the person should have judged that ‘x was the same as y’, for example, he or she will now end up saying the opposite: the disturbances caused by sensation put us in error (44a). The worst part is that the circle of the same, which was supposed to carry and dominate the circles of the different, just as it does in the world-soul, now loses its rulership, and so the (confused) subordinate parts of the soul end up ruling over it. It is an important part of the *Timaeus*’ moral philosophy that we ought to re-establish our ‘original condition’ by studying the cosmos and restoring in us the rule of the circle of the same (e.g., 89e-90d).¹⁹

What is attractive to Plato about this account of sensation is that it is stating, in the terms of natural philosophy (i.e., physically or kinematically), the sorts of things he has said about sensation elsewhere. Just as the *Timaeus* makes good on the *Phaedo*’s promise to describe how the world is constructed with a view to what is best, it also advances that dialogue’s line on sensation. There are many passages in the latter (e.g., 66b-e and 82d-83e) about how sensation deceives the soul and is the source of false beliefs. Yet, there are, curiously, no details about how this happens. Here we can explain this: since sensation is a motion that disturbs our natural motions, we end up judging badly but are not even aware of this. This accounts for how sensation deceives us: it (literally) throws us off balance. More than that, *Timaeus*’ account of sensation was meant to capture the phenomenology of sensation: chiefly, that it is involuntary and that stimuli impinge on us.

Plato’s theory of noetic activities in the *Timaeus* reflects their consistency and sameness. Νοῦς’ objects are those things that exist themselves by themselves, that never come to be, and that are never destroyed; these things belong to ‘understanding (νόησις) to study’ (52a). Plato argues (51b-e) that νοῦς is distinct from δόξα only if these objects—which are ‘objects of νοῦς alone’ (51d)—exist. Remember that earlier we saw Plato state what the motion of νοῦς is like: it is in relation to the same thing, in the same way, in the same spot, around the same things, in the same direction, in accordance with one formula and one order (*Laws* x 898a-b). What is important about this (and very heavily emphasized) is sameness. The rotation of the circle of the same is that by which one ‘always thinks the same things about the same things (περὶ τῶν αὐτῶν ἀεὶ τὰ αὐτὰ ἑαυτῷ διανοουμένῳ)’ (40a-b).

So, Plato has to posit circles in the world-soul in the first place to account for

¹⁸ Lee 1976, 79 says that the *Timaeus*’ ‘model is not advanced as any quasi-empirical theory of the “psychic mechanics” underlying actual processes or experiences of thinking; not, that is, as an explanation for the occurring of noetic acts (whether in individual experience, or in the cosmos at large)’. However, if we adopt this reading, then this explanation of sensation has no content, and the same goes for the brief explanation of δόξα and νοῦς at 37a-c. In these passages, it is hardly an overstatement to say the *only* thing Plato is aiming to do is explain how cognition works.

¹⁹ Sedley 1997 and 1999, as well as Mahoney 2005, offer good discussions of the *Timaeus*’ moral philosophy in this light.

the empirical matter of the movements of the heavenly bodies, and there are circles in human souls in virtue of our affinity with the world-soul. Out of this, Plato can build explanations of νοῦς and δόξα that are attractive to him, given what else he has said about those activities elsewhere. None of this is intelligible if there are no circle-shaped things in the soul moving around. This is not far-fetched to someone who, like Plato, for independent reasons thinks that fire, air, water, and earth are made of tetrahedra, octahedra, icosahedra, and cubes respectively. The rational soul is similarly made up of eight circles: one of the same, and seven of the different.

It is not clear, on the basis of these considerations alone, what sort of extension the soul has. Some scholars have held that Plato thinks that the soul is a mathematical object with *geometrical* extension.²⁰ To have geometrical extension is just to be a geometrical figure. Consider that even an ideal, intelligible circle has a circumference, twice the radius multiplied by Pi, but it does not exist *in space*. On this view, the soul really *is* a composite of circles, for nothing was meant figuratively; yet, it does not take up space because Plato envisions geometrical objects as existing on their own, in between the intelligible and sensible.

I disagree. The *Timaeus* says that the circle of the same moves toward the right, whereas the circle of the different moves towards the left (36c-d). Only objects in space can move to the left or right; there is no reason to take the direction of the movement figuratively, either, since it would then connote nothing at all. Plus, the rectilinear motions of sensation throw off the revolutions of these circles, and this could not happen to a geometrical object (43a-44c). Still, we might need more evidence that the sort of extension at issue here is *spatial* extension, the same enjoyed by bodies, and we shall turn to that now.

Plato says that God ‘set (θείς) the soul in the middle [of the world-body], stretched (ἔτεινεν) it throughout the whole world, and covered the outside of the body with it’ (34b). The idea is that the world-soul is the soul of the *whole* world and has to be in all of it. Figurative readings of this passage, and of ‘the soul being in a body’, leave it unexplained just how the soul can be the soul of the *world* without being in it. In other words, it is unclear how the soul can vivify *my* body in particular without being in it. There would be nothing obvious in virtue of which it would be animating my body as opposed to anyone else’s. When we think of the passages in the *Phaedo* where my body impedes the activity of my soul (e.g., 65a-b), it is, on the one hand, hard to see how this could happen without the soul being *in* my body. On the other hand, these considerations cannot be decisive.²¹ The phrase ‘the soul is in the body’ can mean any number of things:

²⁰ E.g., Karfik 2004, 190 claims that ‘die Weltseele ist also ein stereometrisches Gebilde’. (What he calls ‘stereomorphic extension’ I call ‘geometric extension’.) Tricot 1969 and Robin 1919 agree, and Hicks 1907, 254 suggests the same. Cornford 1937, 64n2 believes that it is ‘too speculative’ to be resolved but connects the claim that the soul is intermediate between divisible and indivisible Being with the status of mathematical objects.

²¹ Consider Olshewsky 1976, 397 that argues that Plato’s psychology relies on seeing the body as the container of the soul, but this ‘container model requires modeling the soul as a substance analogous to body, and allowing their relation only by undercutting their distinction’, and he concludes

Aristotle counts eight kinds of *being-in* relations in *Physics* iv 3, and Plotinus adds another, according to which the *body* is in the *soul*. I shall argue that the soul is in the body in what Aristotle calls the ‘strictest sense’ of the phrase ‘being-in’, in place (210a24).²²

The *Laws* provides us with a list of every kind of motion: circular motion, locomotion, separation, combination, increase, decrease, generation, and destruction; the final two are motion that moves others but not itself, and self-motion, which is the characteristic motion of soul (893c-894c). Right before presenting the list, in the same breath, the Athenian stranger says that moving things move, and stationary things stay still, ‘in some place (ἐν χώρᾳ τινί)’ (893c). Nothing in the text suggests that the final item in the list of motions is exceptional. In this case, we get more confirmation that the psychic motion happens in space. Later, Plato considers whether the soul of the sun moves it from inside the sun’s body, which seems to be a way of asking *in which* place in particular the soul is moving. Specifically, he considers three options: (i) the soul of the sun is inside it, like a charioteer driving a chariot; (ii) the soul is outside the sun and uses some body, such as air or fire, to move the sun; and (iii) the soul is devoid of body altogether (ψιλῆ σώματος) and uses ‘some other excessively amazing powers (δυνάμεις ἄλλας τινὰς ὑπερβαλλούσας θαύματι)’ to move the sun (898e-899a). Plato does not tell us which option is right. Mayhew 2008, 150 says that this is because it was not necessary in the context of the discussion with Kleinias and Megillus, and this is surely right: all that the Athenian stranger needs to do at the moment is show that soul is prior to nature.²³ It is not important to the local context where precisely the soul is. Yet, if we are warranted to refer back to the myriad passages in the corpus where our soul is *in* our body, or the *Timaeus*’ attempts to locate the parts of the soul in bodily organs (e.g., 70a) it seems that we have our answer.

That the soul is located in space is tied to its intermediate ontological status between the intelligible and sensible, reported first in the affinity argument of the *Phaedo*. There, Plato identifies ‘two kinds of existing things (δύο εἶδη τῶν ὄντων)’, the invisible, and the visible (79a). The visible kind never stays as it is; the invisible kind always remains in the same state. The discussants then wonder which kind the body is ‘more like’ and which kind the soul is ‘more like’ (ὁμοιότερον, 79b). Note that the adjective is comparative. It is eventually clear that the soul is able to cognize the Forms after death in virtue of some kind of affinity with them, if the soul is sufficiently ‘pure’ (81b). The soul is depicted here as something intermediate between the Forms and sensible objects: which that Plato’s theory is ‘inadequate’ compared to Aristotle’s. We shall see that we can maintain that the soul is located within and thus *contained* by the body without admitting that the soul *is* a body.

²² The images Plato hands down to his reader might be clues, but it is hard to know what parts of the images are worth stressing. E.g., *Phaedo* 62b says that the soul is in the body like a prisoner in prison: prisoners are surely located *in* the prison, but at a first glance Plato might only want his reader to know that the soul is separable from a body but is currently bound up with it as a punishment.

²³ Jaeger 1948, 142 notes that all three positions were defended in the early Academy, although he says that Plato likely held the first view.

one it is most like depends on how the person has lived his or her life. The philosopher will live such that their soul after death ‘ceases to wander and stays always in the same state’, and this state is wisdom (79d). The soul cannot be a straightforward member of either class of existing things, for it has properties of both. The most prominent examples in the *Phaedo* are that of recollecting and forgetting: we might not know the Forms now, but we can recollect them. As well, our souls are affected by bodily pleasures in ways that the Forms could never be. Thinking of the soul as entirely unchanging is incompatible with the message of the dialogue: we are meant to *make* ourselves as much like the Forms and as pure as possible; this very fact implies mutability.

Consider the way that the soul is created in *Timaeus* 35a-b. The Demiurge takes some of both indivisible and divisible, corporeal (τῆς αὖ περὶ τὰ σώματα γυνομένης μεριστῆς) Being, and he mixes them together. He does the same for Sameness and Difference; then, he mixes the three piles together and creates the generic soul-stuff that God slices and combines in the appropriate proportions. Exactly half of the soul’s ingredients belong to the corporeal.²⁴ Ancient and modern commentators have long acknowledged that the upshot of this composition is that the soul is intermediate between the different kinds of existence (οὐσίας εἶδος, 35a), even though today’s scholars tend not to articulate concretely what this means for a list of the soul’s properties.²⁵ If we want to purge Plato’s conception of the soul of all traditional hallmarks of the corporeal, then we render his claim that the soul is intermediate empty.²⁶ A soul that is incorporeal yet shares many key features of the corporeal would be intermediate, and it would explain how the soul interacts with this or that body in exactly the way that Plato thinks it does.²⁷ This captures the importance of being intermediate for both cognition *and* movement. The possibility of contact with bodies, guaranteed by the soul’s intermediate status, allows it to *move* bodies and come to know them, for cognition at *Timaeus* 37a-c is explained in terms of contact with the objects of cognition. One problem with Carone 2005’s view that soul is corporeal, pointed out by Fronterotta 2007a, is that it reduces the soul to something no longer intermediate but

²⁴ This is why, when I talk about the soul’s intermediate status, I do not have in mind the vexed question of intermediate objects from Aristotle’s *Metaphysics* (from which the talk of ‘intermediacy’ might be more familiar) but instead the fact that the soul is *made up* of two kinds of Being, Sameness, and Difference, which makes it apparently unique in Plato’s world-view.

²⁵ A sample of those who have observed this include Plotinus, Proclus, Cornford 1937, Olszewsky 1976, Frede 1996, Vlastos 1975, Fronterotta 2007b and 2015, Robinson 1970, and Betegh 2018.

²⁶ Another interpretation of the intermediate status of the soul, suggested by Cornford 1937, 64n2 and argued for by Robin 1919, 51-52, is that the soul is a geometrical object, in between the sensible and intelligible realms, like all mathematical objects for Plato. The considerations in this section rule out this reading: phlegm and bile cannot be sprayed on the number two, but they are sprayed on the rational part of the soul to cause epilepsy; in other words, the explanations in the *Timaeus* do not fit mathematical objects.

²⁷ See Johansen 2017 for more on this idea of sharing properties between, as he puts it, the mental and the bodily.

instead squarely on the corporeal side of the divided line. Most other interpretations of the soul's ontology are lop-sided as well but in the opposite direction: the soul is squarely on the intelligible side. The soul is somewhere in the middle but, as per the *Phaedo's* affinity argument, much closer to the intelligible.²⁸

The ancient Platonists, with Plotinus as the leader, opposed the extension of the soul (and with it, location, surface, depth, and the possibility of contact and resistance) apparently on the grounds that extension and, especially, divisibility are marks of bodies, but Plato's reception outside these circles tells a different story. Galen, in *The Capacities of the Soul Depend on the Mixture of the Body*, cites passages in which Plato says that climate affects intelligence (24c), that psychic disorder is caused by bodily disease (86b-87b), and that the revolutions of the soul are thrown off by the rectilinear motions of sensation (43a-44c).²⁹ Medical writers might have also been moved by Plato's explanation of epilepsy as caused by a mixture of phlegm and bile being sprayed on the rational part of the soul (85a), or maybe the claim that medical regimens should treat the soul as much as the body (*Charmides* 156b-157b). Mothers of sleepless newborn babies should gently rock their child to sleep in their arms, such that the 'internal motion' (ἐντὸς κίνησις) might be overpowered by the external motion of the rocking (*Laws* 790d-791a).³⁰ This reception helps us get a comprehensive picture of his psychology, and it highlights something else important for the author of the *Timaeus*: that the different kinds of soul are located in different parts of the body. Consider the claim that the rational kind of the soul needed to be stained as little as possible by the other parts, so the gods put the latter in the lower part of the body and increased the distance between them by inventing the neck (69d-e). It is unclear what Plato means by this if he does not mean it literally: perhaps it would just be an expression of how dangerous the mortal kinds of the soul are to the rational kind. He certainly does mean *at least* that, but on that interpretation, he is not explaining the existence and purpose of the neck at all. When we read it metaphorically, there is no explanatory power left.³¹ This would be (at the very

²⁸ For this reason, it would be a mistake to think that *everything* in Plato's world-view is extended in space. The soul is extended, even though it is not corporeal, precisely because it is intermediate between corporeal things and intelligible and un-extended things. One might think of the soul as how the intelligible world interacts with the corporeal; it is how the un-extended acts on the extended.

²⁹ See Gill 2000 for an interesting study of Galen's appropriation of the *Timaeus'* account of psychic disorders. Gill's view is another lop-sided view that I am opposing. Gill 2000, 67, following Galen, does not think that 'we can square the idea of a psyche as an independent, separate, immortal entity' with these passages (esp. 86b). However, I think that the soul is still independent, separate, and immortal, but its ontological status is intermediate between intelligible and corporeal.

³⁰ Plato says that the evidence for this is that experts (e.g., nursing mothers and those who treat so-called Corybantism, a kind of frenzy and insomnia) actually practice this and recognize its utility (*Laws* 790d). A similar recommendation appears at *Tim.* 89a.

³¹ This consideration is crucial for navigating the difficult interpretative problems posed by the *Timaeus*, especially because Timaeus has called his speech a likely story. We can see what is meant literally if meaning something literally is necessary for an argument or explanation, which is the case here. (Along the same lines, Plato's text *must* be interpreted figuratively some of the time, too, espe-

least) weird, since this is a part of the dialogue where Plato is explaining, say, that the pounding of the heart is due to fire (70c). Plato gets away with an incorporeal soul that looks corporeal because, unlike later Platonists, for him, extension is not the mark of the body.³²

The Plotinian view that only bodies are divisible—which entails that the soul is not divisible because it certainly is not a body, for Plotinus—is hard to find in Plato’s dialogues.³³ It seems more plausible that this account of bodies was developed as a way of saving Plato’s psychology from Aristotle’s criticism of him in *De anima* i 3 that portrays the soul as an extended magnitude (μέγεθος), perhaps alongside other Aristotelian arguments that *voûs* must not be extended. The Platonists responded in the same way that many 20th-century scholars did: Aristotle misread the *Timaeus*’ extended-seeming language, although the ancient Platonists had ways to avoid outright accusing Aristotle of this, which we shall consider later. Plotinus opposes spatial understandings of the soul-body relation in iv 3.21-23 and interprets ‘in’ in a way that does not entail extension or divisibility, like a voice that is ‘everywhere in the air, not as one voice divided, but as a

cially when the argument or explanation is better suited to that interpretation.) Moreover, *Timaeus*’ speech is called an εἰκὸς μῦθος (‘a likely story’) three times (29d2, 59c6, 68d2), but it is called an εἰκὸς λόγος (‘a likely account’) seven times (30b7, 48d2, 53d5-6, 55d5, 56a1, 57d6, 90e8); see Brisson 2012 for more on the *Timaeus*’ double status.

³² This does allow him to explain how the soul moves the body. How precisely this would happen is unclear, but the *Timaeus* gives us the biological mechanism, even if not spelled out exactly. In the background is a mistaken bit of ancient science. Ancient Greeks believed that the vascular system started in the head, not in the heart; see van der Eijk 2008, 403 for a larger discussion of this error. Reason, by being able to come into contact with bodily organs, uses the vascular system to transmit orders to the rest of the body, enforced by spirit, which can sensitize, e.g., the limbs through ‘narrow vessels’ in the blood (70a-b). Reason can thus communicate to the body ‘let this thing go’ or ‘move over there’ by initiating a physiological chain of events; the psychic circles themselves feature in this only insofar as they are that which initiates the chain of events. It is unlikely that Plato thinks that the blood carries some special soul-encoded messages. More likely, the full explanation would mention his belief that that blood vessels do not contain just blood but also air: this air might help facilitate the contraction or expansion of different muscles. Nevertheless, we cannot reconstruct this more fully since Plato never speaks about muscles or even uses the word for them.

³³ Specifically, Plato never distinguishes between the corporeal and the intelligible on the grounds of divisibility, preferring instead, as we shall see in section 2, to distinguish them on the grounds of *visibility*. However, it is not always clear whether Plato believes that the soul itself is divisible. The *Phaedo*, for instance, never says anything about the parts of the soul and features arguments that seem to rely on indivisibility as a requirement for immortality (e.g., 78c-d). Yet, Socrates’ reply to Simmias relies on the picture of virtue as a harmony in the soul, implying that it has parts (94c-e). This view of virtue as harmony appears again in the *Republic* when the soul is explicitly depicted as having parts (e.g., iv 443c-e). However, the *Republic* later cryptically hints that the soul’s true nature does not have the parts that we see when it is disembodied (x 611b-e). The *Timaeus*, meanwhile, depicts even the rational kind of soul as having parts, namely, eight circles. The *Timaeus* clarifies an important feature of Plato’s views of composites: a composite *can* exist forever without coming undone, if it is put together in the best way. The reader learns that the Demiurge has made the world-body such that it could be undone only by him (32c; cf. 41b). In fact, this appears in the *Republic*, too: ‘it is not easy for anything composed of many parts to be immortal *if it is not put together in the finest way*’ (x 611b, emphasis mine). Even in the *Republic*, then, Plato perhaps had his mind on the composition of the rational kind of soul, something never addressed in the *Phaedo*.

one which is everywhere whole' (vi 4.12.10-11, Gerson *et al.* trans.). He also reverses the relation and says that the body is in the soul.³⁴ This line does not avoid just Aristotle's criticism, but it also gives Plotinus room to criticize Stoic accounts of the soul: for example, Plotinus is interested in how the soul can permeate the whole body, and he thinks that this is impossible for a corporeal substance, which is a problem for the Stoics (iv 7.8).

2. Corporeality and incorporeality in Plato's vocabulary and ontology

If the soul has a location in space, as I argue it does, without being corporeal, this forces us to revise our understanding of corporeality.³⁵ In this section, I consider Plato's vocabulary and concepts, such as what a σῶμα (body) is, the possibility that the soul is a μέγεθος (extended magnitude), and the importance of the distinction between visibility and invisibility.

The closest that Plato ever comes to defining σῶμα is in the *Philebus*. There, he says that 'when the elements we were just now speaking about are gathered together (συγκείμενα) into a single unit, we call that a body' (29d). Fire, earth, air, and water are indeed ingredients of bodies, but this does not seem like it can be a full-fledged definition, since Plato calls each one on its own a body (at, e.g., *Tim.* 53c). There is some close connection between these four and the idea of the corporeal since Plato shrinks from calling them the more-familiar 'elements' (στοιχεῖα) and opts to call them σώματα (*Tim.* 48b). This bears directly on our investigation into the soul. For soul is composed partly of the being, sameness, and difference that bodies have (περὶ τὰ σώματα, 35a).

One important area of overlap between Plato's ontology of the soul and of bodies is that the descriptions of both are geometrical. All bodies are reducible to polyhedrons. The *Timaeus* argues that the soul is similarly reducible to eight circles. Most of Plato's own vocabulary here is spatial. ('Visibility' is an exception that we shall attend to shortly.) He talks about the locations (τόποι) of the soul at 87b. These are the places in the human body where the appetitive (liver), spirited (heart), and rational (brain) kinds of soul exist. He talks about the circles that make up the rational kind of soul moving to the right (δεξιὰ) and to the left (ἀριστερά, 36c-d). We have seen the description of psychic motion, like all motion, as happening 'in some place (ἐν χώρῃ τινί)' (*Laws* 893c). Noting this vocabulary does not answer the further question of how to interpret it, of course: someone might think that this is all intended figuratively, but the previous section contained arguments that we ought to take Plato literally.

An important omission here is *extension*: he never uses the word μέγεθος in this context. The word is used quite frequently in the corpus—around a hundred times, in fact—and it always means something like greatness or size. In the *Par-*

³⁴ Caluori 2015, 180-186 offers a good discussion of this claim and of the different being-in relations considered by late ancient philosophers. He connects Plotinus' view with *Timaeus* 36d, where he claims that God fashioned 'everything corporeal inside [the world-soul]', which Plotinus seems to refer to directly at iv 3.22.9-10.

³⁵ For studies on some early Greek conceptions of (in)corporeality, see Curd 2009 and 2013.

menides, for instance, it is usually paired with *σμικρότης* (smallness) or *ισότης* (equality). The more technical meaning of *μέγεθος* as an extended magnitude does not appear in Plato's texts, and I suspect that Aristotle is responsible for this meaning of the word. While we might infer from this that extension *as such* does not matter to Plato very much, still we can reason out that the soul is an extended magnitude.³⁶ If the soul is composed of eight circles and exists in space, it is divisible in a way that only magnitudes are. This is the reason why Aristotle, whose reading of the *Timaeus*' psychology in *De anima* i 3 I agree with, says that for Plato the soul is a *μέγεθος* (406b26–407a20).³⁷ So, we cannot add extension or *μέγεθος* to Plato's vocabulary of the soul, but we can find a home for the idea in his account of the soul. We can, instead, add divisibility or *μεριστός* to his vocabulary, for he describes the components of the soul as divisible (*Tim.* 35a–b).

We can reason similarly for other qualities, such as surface (*ἐπίπεδος*) and depth (*βάθος*). These two are explicitly attributed to the corporeal (*τὸ τοῦ σώματος εἶδος*) in *Timaeus* 53c.³⁸ This is different from saying, however, that *only* bodies have surface and depth but the relationship that Plato imagines between soul and bodies, such that, say, phlegm or bile can be sprayed (*ἐπισκεδάννυμι*) against the soul, requires filling out an understanding of the soul with surface, depth, and even contact and resistance (85a). The fact that these belong to *τὸ τοῦ σώματος εἶδος* illuminates the importance of the soul's composition and perhaps even explains why Plato begins a dialogue on natural philosophy with an account of the soul being partly made of corporeal stuff. The soul, throughout the text, sounds a lot like a body.

It is essential that Plato does not think that being extended with location, surface, and depth makes something corporeal. The distinction between soul and body is one of the most important Platonic ideas. The mark of the corporeal is *visibility*, not extension, divisibility, or location. When Plato says that there is a visible kind of existence and an invisible kind in the *Phaedo*, he means just that: the distinction is cut along those lines, not lines of spatial extension.³⁹ In other dialogues, too, Plato uses 'visible' and 'invisible' to refer to corporeal and intelligible objects respectively: for example, *Republic* vii 529b–c. The *Timaeus* employs the distinction through the creation of the world: a telling example is: '[the intelligible] Living Thing has and encompasses within itself all the intelligible living things, just as the cosmos brings together us humans and all the visible

³⁶ I am not sure we *can* safely infer that extension *as such* is unimportant to Plato. See Pfeiffer 2018, 122ff. for the reading, for Plato, that a body's extension is its matter.

³⁷ Speusippus also attributed extension to at least the world-soul, see Thein 2018, 80.

³⁸ Johansen 2000, 91–92 thinks that the materials from which God creates the world-soul are two-dimensional and lack depth, but in this case, either it has to be the two-dimensional extension that belongs to only two-dimensional mathematical objects, discussed above, or Plato would have to hold the view that something can exist in space (as Johansen thinks the soul does in the *Timaeus*) but not in all three dimensions.

³⁹ In fact, it would even be in some sense wrong or unwarranted to talk about corporeality *as such* in Plato's philosophy (as opposed to speaking exclusively about visible and invisible things instead), were it not for the occasional use of *τὸ σωματοειδής* (e.g., at *Tim.* 36d).

creatures. For since God above all wanted to make the cosmos similar to the best of all the intelligible things and perfect in every way, he made it a visible living thing that had inside it all the living things that have an affinity to it in their nature' (30c-31a). Plato is clearly using 'intelligible' (νοητόν) in opposition to 'visible'. Moreover, the word for 'corporeality', or 'bodily form', (τὸ σωματοειδής) sometimes gets paired with 'visible' (ὄρατόν). He says, for instance, that just as the best part of the soul was led to 'contemplate (θεάν) the best thing among what exists, the clearest part of the body was led to the clearest thing in the corporeal and visible realm (ἐν τῷ σωματοειδεῖ τε καὶ ὄρατῷ τόπῳ) (*Rep.* vii 532c-d). These ideas evidently go hand-in-hand, and the conjunction καὶ might well be used exegetically.

It is not clear whether Plato is using 'visible' as shorthand for perceptibility in general, and besides, he does think that fire, air, water, and earth are all visible. At first it seems that they cannot *all* be visible or even perceptible.⁴⁰ For he says that 'that which comes to be needs to have bodily form (σωματοειδής), and be both visible and tangible, but nothing could ever become visible without fire, nor become tangible without something solid, nor become solid without earth' (31b). This passage makes it seem like only fire is visible, only earth is tangible, and then water *qua* water, or air *qua* air, would not be perceptible at all.

However, the final account is more complicated. Plato explains that the 'soul is an invisible thing, but fire, water, earth, and air have all become visible bodies' (46d), providing yet another contrast between the invisible and visible, corporeal things. It is possible that visible water, for example, is water mixed with fire: he does say that the kinds of bodies can mix together and even has a discussion of the kind of water that is mixed with fire (59d-e). Yet, this would say nothing about the visibility of water *qua* water, but at 46d, and similar passages, it seems that he is talking about water as a visible body apart from fire. The solution is that Plato thinks that there are two kinds of visibility. Each of the four kinds of bodies are composed of polyhedrons—for example, earth is made of cubes—and Plato describes these minute polyhedrons thus: 'we must think that all these things are so small that, due to their smallness, not a single one of each kind is visible to us, but when many are put together, their masses can be seen' (56c).⁴¹ So, in one sense, the minute bodies that make up, say, earth are invisible to us since they are so small, but it seems that if we had better eyes, they would not be, so in another sense they *are* visible.⁴² There are visible things that we just cannot see, even

⁴⁰ The fact that air in particular seems to us to be invisible is a thorny problem for Plato here.

⁴¹ We might have in mind the explanation of why atoms cannot be seen by an optical microscope: they are too small. The size of an atom is about 10^{-10} m, which is 10,000 times smaller than a wavelength of light. Atoms are just too small to be visible on their own because they cannot change the reflection of the light, but they can be seen if they are grouped together in large quantities. Along the same lines, think of how the rivets that the gods use to connect the so-called elements when constructing the body are 'invisible on account of their smallness' (43a). This is not the same kind of invisibility that, say, numbers have, and Plato's distinction is tracking that.

⁴² Plato in the *Phaedo* is not concerned with a distinction between visibility *simpliciter* and visibility *to us humans* (79b). The natural-philosophical context of the *Timaeus* requires that he draw this

though different beings might be able to.⁴³

When Plato says that fire makes things visible, what he means is that fire enables us to see bodies, not that water *qua* water is invisible. The theory of how vision works (45b-46a) explains that vision depends on there being fire in our eyes that forms a visual stream that presses against an object; as well, this relies on the fire of the sun, since the visual stream is joined by daylight (45c). On this account of vision, there does not have to be any fire *in* the object to make it visible, which makes sense because it is only about a page later that Plato says earth, air, and water are visible (46d). Being visible *to us* depends on fire, but the other kinds of bodies are visible too in their own right.

We can see that there is the tight connection between being corporeal and existing in space, which makes it reasonable for the soul to exist thus: it is intermediate between the Forms and bodies, and so of course we should expect it to have some of the properties of corporeal things, such as location. Plato has specifically to solve the problem of how the soul moves the body. The only difference between psychic motion and bodily motion is that the former was not initiated by something else, whereas the latter was; the *Laws* x passage above where Plato says that all motion happens in some place and includes psychic motion on that list is strong evidence.

3. Intellectual history

I now briefly survey the history of the idea that the soul is extended, has location, and so on, in antiquity, especially among Platonists. This is important because the view that the corporeal is defined by extension in three dimensions is one most closely linked with Descartes (*Principles* I §53). I suspect, however, that we tend to project it backwards and, therefore, mistakenly conclude that Plato thinks that the soul is not extended on the grounds that it is not a body.⁴⁴ Similarly, I think that the closely related view that the soul cannot be divisible because only bodies are divisible was invented by later Platonists and projected back to Plato in order to save him from Aristotle's criticism. I am not interested in saving Plato from this criticism, but instead in surveying the history of the reception of the *Timaeus*' psychology.

There is immense controversy over whether the criticism even has Plato as its target. Ancient commentators, including not just Themistius, but also Philoponus, Pseudo-Simplicius, and Sophonias, did not think that the target was Plato: while Themistius thought it was simply the views of Timaeus the character, which are not Platonic, other ancient commentators thought it was early Academic interpretations of the *Timaeus*. This sort of interpretation was taken up again in the 20th century, too.⁴⁵ The more popular strategy among modern schol-

distinction that he did not earlier.

⁴³ Harte 2002, 247 prefers to call the polyhedrons 'sub-visible'.

⁴⁴ See Broadie 2001 for a compelling defense of the differences between Cartesian and Platonic soul-body relationships on grounds very different from those explored here.

⁴⁵ Tarán 1981, 370, e.g., thinks that the view being reported by Aristotle here is Speusippus'. See

ars, however, has been to argue that Aristotle misunderstood Plato. For example, Ross 1961, 189 says that Aristotle ‘may well be criticized as having taken the myth as if it were sober prose’. Even very recent studies of the criticism, such as Carter 2017, 75, feature the disclaimer: ‘regardless of whether Aristotle really understood the deeper intentions of Plato...’. Aristotle interpreted Plato completely in line with the picture sketched above. Here is the bulk of Aristotle’s criticism in *De anima* i 3:

In the same way, Timaeus does natural philosophy regarding how the soul moves the body: by itself being moved, the soul moves the body on account of having been joined to it.⁴⁶ For after he had put the soul together out of the elements and divided it according to the harmonic numbers in order that it might have an innate perception of harmony and that the world might be carried in harmonious motions, he then bent the straight line into a circle. After he had divided the one circle into two and joined them together at two points again, he then divided one circle into seven, so that the motions of heaven were the motions of the soul.

Then, firstly, the soul is not rightly said to be magnitude (μέγεθος). For it is clear that he wants this sort of world-soul to be what is called νοῦς (for it is not of the perceptive sort, nor of the appetitive sort; for the motion of those is not circular); but νοῦς is one and continuous just as reasoning (νόησις) is, and reasoning is just as the objects of reason (νοήματα) are; these are one in a row (ἐφεξῆς), just as numbers are, but not as a magnitude is. For this reason, νοῦς is not in this way a magnitude, but is either indivisible (ἀμερής) or is something continu-

Dillon 2003, 80-94 and Brisson 1994, 275-312 for discussions of early Academic attempts to demythologize the *Timaeus*.

⁴⁶ The verb φυσιολογέω is difficult to translate, and Aristotle uses it only two other times: at *De caelo* 298b29 and *Meta.* i 988b27. In both cases, Aristotle is using a participle from the verb substantively, such that it means the same as the noun *physiologos*, that is, a natural philosopher. So, it is strange when translators of *De anima* i 3 render the verb in roundabout ways. Shields 2016 defends a translation as ‘to offer a physical account’, for instance. Menn 2002, 84’s preference for ‘physicizes’ appropriately stresses the connection with what natural philosophers do, but it misses the fact that the verb is derived from their name. Tricot 1969’s ‘le *Timée* donne une explication physique’ is helpful, except that it is unlikely that Aristotle means to single out the dialogue instead of the speaker. Given that Aristotle means simply ‘natural philosopher’ by ὁ φυσιόλογος, I conclude that the right translation of the verb here is ‘to do natural philosophy’, as in, Plato in the *Timaeus* is doing natural philosophy and is relying on the principles common to the natural philosophers—such as that like can be known only by like—when constructing the soul. Hussey 2012 does an insightful job collecting Aristotle’s opinions on early natural philosopher and points out that Plato as the author of the *Timaeus* is placed alongside Heraclitus, Empedocles, Anaxagoras, Democritus, Leucippus and even some unusual candidates for natural philosophers, such as Parmenides, Melissus, and the Pythagoreans. There is a parallel debate about whether the verb marks a contrast to the *Timaeus*’ conception of μυθολογεῖν, as Vlastos 1939, 73n8 claims, or whether it saddles Plato with a mechanical view of the soul’s relationship to the body, as Cherniss 1962, 392n314 claims.

ous not as a magnitude is. (406b26-407a10)

We should not read too much into Aristotle's attribution of the doctrine to Timaeus, rather than to Plato, which was Themistius' mistake. Aristotle does sometimes refer to Platonic dialogues by their names (e.g., 'Socrates in the *Republic*...' at *Politics* 1342a32), but he *is* likely referring to the character here, not the dialogue. Such constructions as 'the *Phaedo* says...' are modern, and Aristotle usually refers to characters in the dialogues with the definite article *ho*, which is included at 406b26's ὁ Τίμαιος.⁴⁷ However, Aristotle is notoriously lax with usage of speakers' names. Consider that at *Politics* 1265a11, he attributes the content of the *Laws* to Socrates, who is not present in the dialogue at all; as well, at 1260a22-28, while clearly referring to the *Meno*, he acts as though Gorgias were present in the dialogue, when, in fact, he is not and some of his views are merely reported there. Themistius' position requires that Aristotle take very seriously references to speakers in Platonic dialogues, and that is not something he does.⁴⁸ Philoponus, in contrast, can motivate his view that the target is early Academics because he is reading a slightly different version of the text, which supports his view: whereas our text reads 'then, firstly, the soul is not rightly said to be magnitude. For it is clear that he wants (βούλεται) this sort of world-soul to be what is called νοῦς' (i 3.407a1-4), Philoponus' text reads 'for it is clear that they want (βούλονται)...' (*In De Anima* 124.26-27).⁴⁹

Themistius, thanks to his view that the target is not Plato, is able to develop a different account of psychic motion that is in harmony with Aristotle's.⁵⁰ He understands Plato as talking about what Aristotle calls activities (ἐνεργεῖται). After all, Aristotle does eliminate motions from the soul, on several different grounds: the soul is a form, which is pure actuality, so it cannot undergo a motion, which is defined as the actualization of a potentiality *qua* potentiality (*Phys.* iii 1); and only what is divisible can change (μεταβάλλω), but the soul is not divisible (*Phys.* vi 4). The distinction Themistius draws is that an activity is always 'perfect in respect of each part of the time in which it occurs, as with both seeing and thinking', whereas motions are imperfect and 'continuously adding on successively different things', such as place or size (18.20-30). Themistius is not quibbling over the words κίνησις or ἐνέργεια, and he thinks that Plato made this distinction without developing the accompanying vocabulary.

Themistius' view is based on the distinction in *Metaphysics* ix 6 between perfection (which is also translated sometimes as completeness) and imperfection, or incompleteness. Activities are perfect in the sense that when an agent is doing one, he or she has done it. When you see, you *have* seen at every moment in the

⁴⁷ See Ross 1924, xxxix-xli for an endorsement of this rule.

⁴⁸ Regarding the *Timaeus*, Aristotle has no problem attributing to Plato its content. For instance, he says in *Physics* iv 2, 'Plato in the *Timaeus* says that matter and space are the same' (209b11-12).

⁴⁹ Pseudo-Simplicius might have read the same text as Philoponus, but both Themistius and Sophonias read βούλεται.

⁵⁰ See Gerson 2005, 1-23 and Gertz 2010 for a discussion of the harmony of Plato and Aristotle in antiquity, the latter especially on the soul.

seeing. Motions are imperfect in the sense that they are relative to an end. You have not baked a cake until you have finished baking the cake, even at every single step of the baking. Similarly, Aristotle thinks that motion is an event that is divisible into temporal moments that themselves form a magnitude (*Phys.* vi 4.235a11-24). In contrast, again, ἐνέργεια occupies time only insofar as what it accompanies does: the example, the enjoyment of a walk (*NE* 1174b6-15). This seems to be another way of re-framing the point from *Metaphysics* ix 6 about the perfection of activities as opposed to the imperfection of motions. Whenever we are seeing, we have already seen, and so the activity of seeing does not happen over a series of moments. Even if an episode of seeing lasted for ten minutes, each consecutive moment would not add to the seeing itself: it is in this sense perfect.

Plato's description of psychic motion in the *Timaeus* tells against their inclusion as activities, in virtue of their description as incomplete, or relative to an end. Consider *Timaeus* 37a-b again, where Plato describes νοῦς and δόξα as the results of two-staged processes.

The first stage: 'Whenever [the soul] grasps something whose being can be scattered or something whose being is indivisible, it is stirred throughout its whole self, and it states what the thing is the same as, or what it is different from, and in what respect and in what manner, as well as when, that they happen to be the same or different' (37a).

The second stage, in the case of δόξα: 'When an account comes to be that is just as true whether it is about what is different or about what is the same and is carried without utterance or sound within that which moves itself, then, whenever the account concerns a perceptible thing, the circle of the different goes straight and proclaims it throughout its whole soul, giving rise to stable and true δόξα and πίστεις' (37b).

In the case of νοῦς: 'Whenever, in contrast, the account concerns an object of reasoning, and the circle of the same runs smoothly and reveals it, νοῦς and ἐπιστήμη are necessarily produced' (37b-c).

These psychic motions do not satisfy any of Aristotle's criteria of activities.⁵¹ They happen over time, so they have temporal parts. The soul is described as having parts and is divisible. The processes are relative to an end. Νοῦς is produced (ἀποτελέω). Δόξα arises (γίγνομαι). However, Themistius can avoid these complications because he does not think that the *Timaeus* represents Plato's views at all. In other words, this reading of Plato's text gets off the ground precisely because it jettisons the dialogue as a possible source for Plato's views.

The Neoplatonist Calcidius correctly perceived the issues I have been pointing out. He says that 'the body possessed by living beings, which has the force of soul breathed into it, certainly has surface area and it has solidity. Since, then, soul was to permeate both surface area and solidity with its life force, it had to be

⁵¹ However, I grant that Themistius might be entitled to claim that the Demiurge's νοῦς is best understood as an *energeia*, since it is atemporal and thus presumably not a process that involves any parts and the end has always been reached, since its νοεῖν happens eternally.

endowed with powers resembling both solidity and surface area, since like joins with like' (§33).⁵² Calcidius does not explain what he means by characterizing the soul as *resembling* something spatially extended, but he has his finger on a real problem, namely, how the soul can move the body without being extended.⁵³ Damascius does not go as far as Calcidius, in contrast, and interprets the comments about the rational part of the soul being in the head figuratively: 'the head has a certain affinity with the soul, in so far as it is primarily fit to receive the light of knowledge that the soul eradicates, just as the heart receives its life-giving power; in a similar way one might say that God is in heaven, though he is everywhere or nowhere' (I §92, Westerink trans.). I have already expressed what is wrong with figurative interpretations of 'the rational part of the soul is in head' above, but in general, the shortcoming of taking the claim to be just that the rational part is *similar* to the head is that it usually embedded in an explanation that is empty if it is not intended literally.

However, the Middle Platonists take a different approach to the *Timaeus*. Here is Proclus reporting the view of Eratosthenes, a Middle Platonist: 'So we won't tolerate saying that it [that is, the world-soul] is intermediate, having something of the incorporeal and the corporeal, as Eratosthenes thought; nor will we attribute to its substance geometrical extension, as Severus thought' (*in Tim* ii 152.24-27, 8-O in Boys-Stone trans.). He also says something like this about Plutarch and Atticus:

Others consider it [that is, the substance of the soul] physical, and say that divisible substance is an irrational soul that exists before the rational, and that indivisible substance is a divine soul; and from the two they make the rational soul—the one as bringing order, the other as underlying. Such are Plutarch and Atticus (*in Tim* ii 153.149-153, 8-L in Boys-Stones trans.).

Here, Proclus is referring to the view that the world-soul is created out of pre-existing irrational stuff. Plutarch makes the analogy to musicians: musicians do not make sound, but they make sound tuneful and rhythmical (*On the Generation of the Soul in the Timaeus* 1014B-E, 8-T in Boys-Stones trans.).⁵⁴ In both the above passages, we find ancient Platonists working out the soul's intermediate status and interpreting it as the claim that the soul is between corporeal and incorporeal. Specifically, Plutarch's view is motivated by the fact that half of the world-soul's ingredients are the corporeal Being, Sameness, and Difference, which he is interpreting as pre-existing disorderly material that the Demiurge

⁵² I am using John Magee's translation of Calcidius' commentary on the *Timaeus*.

⁵³ I read Fronterotta 2007b, §4 as wrestling with the same problem when he analyzes the *Timaeus*' account of world-soul's cognition: 'this contact [between knower and known] is not sensible and material, and so is in some sense metaphorical, it has to be sufficiently real to produce what we call knowledge or intellection, which is an affection of the soul, a passion, and so, in some sense, a modification of it'. I think that Calcidius and Fronterotta would have an easier time explaining how there could be contact between the soul and its object if they adopted the view outlined here.

⁵⁴ In this passage, Plutarch says even that the 'substance of soul he [that is, Plato] has called "the indefinite" in the *Philebus*'.

orders, not creates. The view of Eratosthenes, Plutarch, and Atticus is closer to the view developed here. Severus' view that the soul is extended geometrically is tempting but, as I argued above, it does not sit with the *Timaeus*' and *Laws*' description of psychic motion as happening in space.

The interpretations of Middle Platonists get replaced in antiquity by Neoplatonists who bring different exegetical principles to the text.⁵⁵ However, it is important to not paint with a broad brush, when we can help it. While many Neoplatonists, such as Themistius, stress the harmony of Plato and Aristotle when it comes to their psychologies, Proclus apparently refuted Aristotle's criticisms from *De anima* i 3. He refers his reader (*in Tim.* ii 278-279) to a work that contained his refutations, but it is unfortunately lost. The picture I am painting here cautions us to avoid projecting later views backwards. There is no doubt that Aristotle understands magnitude as something divisible with parts, and bodies are three-dimensional magnitudes. Yet, in Plato, there is no category of 'magnitude' at all, and only an inchoate account of corporeality as marked by visibility.

Perhaps Aristotle's criticisms would have disabused Plato of his commitments.⁵⁶ Many Neoplatonists seem convinced that no body is capable of $\nu\omicron\delta\varsigma$, if not by the considerations in *De anima*, then by the independent arguments in *Metaphysics* xii and *Physics* viii. The criticism in *De anima* clearly weighs heavily on later philosophers, but their attempts to deflect the argument onto other thinkers or the character Timaeus give us a skewed picture of intellectual history and of Plato. If we take the approach I have been outlining, we get a sensible picture of Aristotle as a more careful reader and correcting Plato, the integration of some Middle Platonist attempts to wrestle with Plato's texts, and an appreciation for the *Timaeus*' explanations of epilepsy, the neck, the shape of the human head, and so on, as having explanatory force.⁵⁷ Finally, and perhaps most importantly, it is easier to see how the soul can be the source of motion in bodies.

Department of Philosophy
University of Toronto
Toronto Ont M5R 2M8, Canada

⁵⁵ A longer telling of the history of Platonism would feature the Cambridge Platonists, such as Henry More 1713, 41, who argued that extension was 'an intrinsic or essential Property of *Ens quatenus Ens*, as the Metaphysicians phrase it' (*Dial.* 1 §25). In his view, *everything* that exists is extended and has a location in space, including the soul. He denies that it follows that the soul is divisible. See Reid 2003 for a discussion. I am grateful for the reviewer for *Ancient Philosophy* who pointed me to Henry More.

⁵⁶ Some say he *did* convince him. Carter 2017, 58n30 says that it is 'plausible' that Plato meant for the soul to be extended in the *Timaeus*, read Aristotle's criticisms in *On Philosophy*, and then changed his view in the *Laws*. The dating of *On Philosophy* by Chroust 1966 and 1967 makes this possible, even though Chroust 1996, 287 claims that 'it is highly improbable, however, that a man of Plato's stature and maturity should have been influenced by one of his own pupils, even an Aristotle'. What tells against this view is that every $\kappa\acute{\iota}\nu\eta\sigma\iota\varsigma$ is still said to happen in place in *Laws* x.

⁵⁷ Von Perger 1997, 216 says that part of Aristotle's criticism is 'schlechthin unsinnig'. Recall Claghorn 1954, 122's claim that the criticism is based on 'misunderstanding, or on mere verbalisms'. On the view defended here, neither of these two claims is correct.

BIBLIOGRAPHY

- Annas, Julia. 1992. *Hellenistic Philosophy of Mind*. Berkeley: University of California Press.
- Atherton, Margaret. 1994. *Women Philosophers of the Early Modern Period*. Indianapolis: Hackett.
- Barnes, Jonathan ed. 1984. *The Complete Works of Aristotle*. Princeton: Princeton University Press.
- Betegh, Gábor. 2018. 'Cosmic and Human Cognition in the *Timaeus*' 120-140 in J. Sisko ed. *Philosophy of Mind in Antiquity*. London: Routledge.
- Boys-Stones, George. 2018. *Platonist Philosophy 80 BC to 250 AD: An Introduction and Collection of Sources in Translation*. Cambridge: Cambridge University Press.
- Brisson, Luc. 1994. *Le Même et l'Autre dans la structure ontologique du Timée de Platon. Un commentaire systématique du Timée de Platon*. 2nd edn. Sankt Augustin: Academia.
- Brisson, Luc. 2012. 'Why is the *Timaeus* Called an *Eikōs Muthos* and an *Eikōs Logos*?' 369-391 in C. Collobert, P. Destrée, and F.J. Gonzalez edd. *Plato and Myth: Studies on the Use and Status of Platonic Myths*. Leiden: Brill.
- Broadie, Sarah. 2001. 'Soul and Body in Plato and Descartes' *Proceedings of the Aristotelian Society* 101: 295-308.
- Broadie, Sarah. 2016. 'Corporeal Gods, with Reference to Plato and Aristotle' 159-182 in T. Buchheim and D. Meissner edd. *SOMA: Körperkonzepte und körperliche Existenz in der antiken Philosophie und Literatur*. Hamburg: Felix Meiner.
- Brunschwig, Jacques. 1994. *Papers in Hellenistic Philosophy*. Cambridge: Cambridge University Press.
- Burnet, John ed. 1922. *Platonis Opera*. 5 vols. Oxford: Oxford University Press.
- Burnyeat, Myles. 2000. 'Plato on Why Mathematics is Good for You' *Proceedings of the British Academy* 103: 1-81.
- Caluori, Damian. 2015. *Plotinus on the Soul*. Cambridge: Cambridge University Press.
- Carone, Gabriela R. 2005. 'Mind and Body in Plato' *Archiv für Geschichte der Philosophie* 87: 227-269.
- Carter, Jason W. 2017. 'Aristotle's Criticism of Timaeon Psychology' *Rhizomata* 5: 51-78.
- Carter, Jason W. 2019. *Aristotle on Earlier Greek Psychology: The Science of Soul*. Cambridge: Cambridge University Press.
- Cherniss, H.F. 1944. *Aristotle's Criticism of Plato and the Academy*. vol. 1. Baltimore: John Hopkins University Press.
- Cherniss, H.F. 1962. *Aristotle's Criticism of Plato and the Academy*. New York: Russell & Russell.
- Chroust, Anton-Hermann. 1966. 'The Probable Date of Aristotle's Lost Dialogue *On Philosophy*' *Journal of the History of Philosophy* 4: 283-291.
- Chroust, Anton-Hermann. 1967. 'The Probable Dates of Some of Aristotle's "Lost Works"' *Rivista Critica di Storia della Filosofia* 22: 3-23.
- Claghorn, George. 1954. *Aristotle's Criticism of Plato's Timaeus*. The Hague: Nijhoff.
- Cooper, John ed. 1999. *Plato. Complete Works*. Indianapolis: Hackett.
- Corcilius, Klaus. 2018. 'Ideal Intellectual Cognition in *Timaeus* 37A2-C5' *Oxford Studies in Ancient Philosophy* 54: 51-107.
- Cornford, Francis M. 1937. *Plato's Cosmology: The Timaeus of Plato*. London: Routledge.
- Curd, Patricia. 2009. 'Thought and Body in Heraclitus and Anaxagoras' *Proceedings of the Boston Area Colloquium in Ancient Philosophy* 25: 1-20.
- Curd, Patricia. 2013. 'Where are Love and Strife? Incorporeality in Empedocles' 113-138 in J. McCoy ed. *Early Greek Philosophy: The Presocratics and the Emergence of Reason*. Washington DC: The Catholic University Press of America.
- Descartes, René. 1983. *Principles of Philosophy*. V.R. Miller and R.P. Miller trans. Dordrecht: Reidel.
- Diehl, Ernst ed. 1904. *Proclus Diadochus in Platonis Timaeum Commentaria*. Tuebner: Leipzig.
- Dillon, John. 2003. 'The *Timaeus* in the Old Academy' 80-94 in G. Reydams-Schils ed. *Plato's Timaeus as Cultural Icon*. Notre Dame: University of Notre Dame Press.
- Dillon, John ed. 2017. *Plotinus: The Enneads*. Lloyd Gerson, George Boys-Stones, John M. Dillon,

- R.A.H. King, Andrew Smith, and James Wilberding trans. Cambridge: Cambridge University Press, 2017.
- Frede, Dorothea. 1996. 'The Philosophical Economy of Plato's Psychology: Rationality and Concepts in the *Timaeus*' 29-58 in M. Frede and G. Striker edd. *Rationality in Greek Thought*. Oxford: Oxford University Press.
- Frösterotta, Francesco. 2007a. 'Carone on the Mind-Body Problem in Late Plato' *Archiv für Geschichte der Philosophie* 89: 231-236.
- Frösterotta, Francesco. 2007b. 'Intelligible Forms, Mathematics and the Soul's Circles: an interpretation of *Tim.* 37a-c' *Les études platoniciennes* 4: 119-127.
- Frösterotta, Francesco. 2015. 'Plato's Conception of the Self. The Mind-Body Problem and Its Ancient Origin in the *Timaeus*' 35-58 in D. De Brasi and S. Föllinger edd. *Anthropologie in Antike und Gegenwart*. Freiburg/München: Karl Alber.
- Galen. 2013. 'The Capacities of the Soul Depend on the Mixtures of the Body' in P.N. Singer ed. *Galen: Psychological Writings*. Cambridge: Cambridge University Press.
- Gerson, Lloyd. 2005. *Aristotle and Other Platonists*. Ithaca NY: Cornell University Press.
- Gertz, Sebastian. 2010. 'Do Plato and Aristotle Agree on Self-Motion in Souls?' 73-87 in J. Finamore and R. Berchmann edd. *Conversations Platonic and Neoplatonic: Intellect, Soul, and Nature*. Sankt Augustin: Academia.
- Gill, Christopher. 2000. 'The Body's Fault? Plato's *Timaeus* on Psychic Illnesses' 59-84 in M.R. Wright ed. *Reason and Necessity: Essays on Plato's Timaeus*. London: Duckworth and the Classical Press of Wales.
- Harte, Verity. 2002. *Plato on Parts and Wholes: The Metaphysics of Structure*. Oxford: Oxford University Press.
- Hayduck, Michael ed. 1882. *Simplicius: In libros Aristotelis De Anima commentaria*. Commentaria in Aristotelem Graeca. vol. 11. Berlin: Reimer.
- Hayduck, Michael ed. 1883. *Sophonias: In libros Aristotelis De Anima paraphrasis*. Commentaria in Aristotelem Graeca. vol. 23 part 1. Berlin: Reimer.
- Hayduck, Michael ed. 1897. *Philoponus: In Aristotelis De Anima libros commentaria*. Commentaria in Aristotelem Graeca. vol. 25. Berlin: Reimer.
- Heath, Thomas. 1921. *A History of Greek Mathematics*. vol. 1. Oxford: Clarendon Press.
- Hicks, Richard. 1907. *Aristotle De Anima*. Cambridge: Cambridge University Press.
- Hussey, Edward. 2012. 'Aristotle on Earlier Natural Science' 17-45 in C. Shields ed. *The Oxford Handbook of Aristotle*. Oxford: Oxford University Press.
- Jaeger, Werner. 1948. *Aristotle: Fundamentals of the History of His Development*. 2nd edn. R. Robinson trans. Oxford: Oxford Clarendon Press.
- Johansen, Thomas. 2000. 'Body, Soul, and Tripartition in Plato's *Timaeus*' *Oxford Studies in Ancient Philosophy* 19: 87-111.
- Johansen, Thomas. 2004. *Plato's Natural Philosophy: A Study of the Timaeus-Critias*. Cambridge: Cambridge University Press.
- Johansen, Thomas. 2017. 'The Separation of the Soul from Body in Plato's *Phaedo*' *Philosophical Inquiry* 41: 17-28.
- Karfik, Filip. 2004. *Die Beseelung des Kosmos: Untersuchungen zur Kosmologie, Seelenlehre und Theologie in Platons Phaidon und Timaeus*. München: K.G. Saur.
- Kim, Jaegwon. 2015. 'What Could Pair a Nonphysical Soul to a Physical Body?' 335-347 in K. Augustine and M. Martin edd. *The Myth of an Afterlife: The Case against Life after Death*. Maryland: Rowman & Littlefield.
- Krafft, Fritz. 1970. *Dynamische und statische Betrachtungsweise in der antiken Mechanik*. Wiesbaden: Franz Steiner.
- Long, A.A. 1999. 'Stoic Psychology' 560-584 in K. Algra, J. Barnes, J. Mansfeld, and M. Schofield edd. *Cambridge History of Hellenistic Philosophy*. Cambridge: Cambridge University Press.
- Magee, John ed. 2016. *Calcidius: On Plato's Timaeus*. Cambridge MA: Harvard University Press.
- Mahoney, Timothy. 2005. 'Moral Virtue and Assimilation to God in Plato's *Timaeus*' *Oxford Studies in Ancient Philosophy* 11: 71-100.

- Mayhew, Robert. 2008. *Plato: Laws 10*. Oxford: Oxford University Press.
- Menn, Stephen. 2002. 'Aristotle's Definition of the Soul and the Programme of the *De Anima*' *Oxford Studies in Ancient Philosophy* 23: 83-139.
- Merki, Hubert. 1952. *Ὁμοίωσις Θεῶν: Von der platonischen Angleichung an Gott zur Gottähnlichkeit bei Gregor von Nyssa*. Freiburg in der Schweiz: Paulusverlag.
- More, Henry. 1713. *Divine Dialogues*. 2nd edn. London: Joseph Downing.
- Mourelatos, Alexander. 1981. 'Astronomy and Kinematics in Plato's Project of Rationalist Explanation' *Studies in the History and Philosophy of Science* 12: 1-32.
- Nuyens, François. 1973. *L'évolution de la psychologie d'Aristote*. Louvain: Éditions de l'Institut Supérieur de Philosophie.
- Olshewsky, Thomas. 1976. 'On the Relations of Soul to Body in Plato and Aristotle' *Journal of the History of Philosophy* 14: 391-404.
- Pfeiffer, Christian. 2018. *Aristotle's Theory of Bodies*. Oxford: Oxford University Press.
- Plutarch. 1976. *Moralia. Volume XIII: Part 1: Platonic Essays*. H. Cherniss trans. Loeb Classical Library. Cambridge MA: Harvard University Press.
- Priest, Stephen. 1991. *Theories of the Mind*. New York: Houghton Mifflin.
- Putnam, Hilary. 1999. *The Threefold Cord: Mind, Body, and World*. New York: Columbia University Press.
- Reid, Jasper. 2003. 'Henry More on Material and Spiritual Extension' *Dialogue* 42: 531-558.
- Robin, Leon. 1919. *Études sur la signification et la place de la physique dans la philosophie de Platon*. Paris: F. Alcan.
- Robinson, Thomas. 1970. *Plato's Psychology*. Toronto: University of Toronto Press.
- Ross, William D. 1924. *Aristotle Metaphysics. A Revised Text with Introduction and Commentary*. vol. 1. Oxford: Oxford University Press.
- Ross, William D. ed. 1961. *Aristotle: De Anima*. Oxford: Oxford University Press.
- Sedley, David. 1997. "'Becoming like God" in the *Timaeus* and Aristotle' 327-339 in T. Calvo and L. Brisson edd. *Interpreting the Timaeus-Critias: Proceedings of the IV Symposium Platonicum*. Sankt Augustin: Academia.
- Sedley, David. 1999. 'The Ideal of Godlikeness' 309-329 in G. Fine ed. *Oxford Readings in Philosophy: Plato*. vol. 2. Oxford: Oxford University Press.
- Shields, Christopher. 2016. *Aristotle: De Anima*. Oxford: Oxford University Press.
- Skemp, Joseph B. 1942. *The Theory of Motion in Plato's Later Dialogues*. Cambridge: Cambridge University Press.
- Sorabji, Richard. 2003. 'The Mind-Body Relation in the Wake of Plato's *Timaeus*' 152-162 in G. Reydamas-Schils ed. *Plato's Timaeus as Cultural Icon*. Notre Dame: University of Notre Dame Press.
- Tarán, Leonardo. 1981. *Speusippus of Athens: A Critical Study with a Collection of the Related Texts and Commentaries*. Leiden: Brill.
- Taylor, Alfred. 1928. *A Commentary on Plato's Timaeus*. Oxford: Clarendon Press.
- Thein, Karel. 2018. 'Soul and Incorporeality in Plato' *Studia Graeca et Latina* 54: 53-95.
- Themistius. 1996. *On Aristotle's On the Soul*. R.B. Todd trans. Ithaca NY: Cornell University Press.
- Tricot, Jean. 1969. *Aristote: De l'âme*. Paris: J. Vrin.
- Van der Eijk, Philip. 2008. 'The Role of Medicine in the Formation of Early Greek Thought' 385-412 in P. Curd and D. Graham edd. *The Oxford Handbook of Presocratic Philosophy*. Oxford: Oxford University Press.
- Vlastos, Gregory. 1939. 'The Disorderly Motion in the *Timaios*' *The Classical Quarterly* 33: 71-83.
- Vlastos, Gregory. 1975. *Plato's Universe*. Oxford: Oxford Clarendon Press.
- Von Perger, Mischa. 1997. *Die Allseele in Platons Timaios*. Stuttgart: B.G. Teubner.
- Witt, Charlotte. 1992. 'Dialectic, Motion, and Perception: *De Anima*, Book I' 169-183 in M. Nussbaum and A.O. Rorty edd. *Essays on Aristotle's De Anima*. Oxford: Clarendon Press.
- Xenophon. 2013. *Memorabilia. Oeconomicus. Symposium. Apology*. E.C. Marchant and O.J. Todd trans. rev. by J. Henderson. Loeb Classical Library. Cambridge MA: Harvard University Press.
- Zeyl, Donald J. 2000. *Plato, Timaeus*. Indianapolis: Hackett.