



Embodied Intelligent (?) Souls: Plants in Plato's *Timaeus*

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Abstract

In the *Timaeus*, plants are granted soul, and specifically the sort of soul capable of perception and desire. Also in the *Timaeus*, perception requires the involvement of *to phronimon*. It seems it must follow that plants are intelligent. I argue that we can neither avoid granting plants sensation in just this sense, nor can we suppose that '*to phronimon*' is something devoid of intelligence. Indeed, plants must be related to intelligence, if they are to be both orderly and good. Plants must have individual souls if they are to be distinguished from each other, each with an orderly life; but the intelligence their perceptions require is not similarly individuated, for their ultimate good is only derivative: it is only as completing the body of the cosmos that plants are good things. Plants have their own perceptions and desires in virtue of the intelligence ordering the cosmos as a whole.

Keywords

plants, intelligence, perception, *Timaeus*

In the *Timaeus*, Plato has the natural philosopher, Timaeus, tell a tale of degenerative creation:

The Demiurge creates the most perfect beings: subordinate, created gods, the soul of the cosmos, and – with the leftovers – countless rational souls which will become embodied in order to complete the body of the cosmos. Only when the lesser gods provide these rational souls with bodies, and suitable psychic functions to go with them, will the cosmos embody (as nearly as possible) the perfect Living Thing.

Human beings 'create' in turn all the other animals – those that fly, swim, and go by land – through becoming morally corrupt: the less rational a human being manages to make his soul, the more morally corrupted it is; such a soul then requires, for its next incarnation, the sort of body which mirrors the corruption of his soul: greedy,

lustful men, for example, become bulls or tigers; flighty, superficial men become birds, and so on.

In a related paper,¹ I investigated the difference between human beings and other animals on such a view, and argued that – in principle – there was none: animals, like humans, are engaged in the very same project of attempting (though usually failing) to restore the natural motion of their rational souls, so that they can become better, inheriting after death bodies corresponding to such rational activity, and eventually no bodies at all, as they return to their native stars.

As animals just are degenerate forms of human beings, it would (I argued) be no more appropriate to eat animals than it is to eat humans. But if we cannot decently eat animals, we can at least eat plants. In fact, we see Plato's recognition of this implication in the express purpose for which plants have been provided.

Of necessity, however, it came about that he [the mortal animal] lived his life surrounded by fire and air, which caused him to waste away and be depleted, and so to perish. The gods, therefore, devised something to protect him . . . These are now cultivated trees, plants and seeds . . . (*Timaeus* 77a1-3, 6)²

This seems straightforward enough. And if we are interested in ways of embodying *intelligence*, we might think we could end this discussion of plants here, before it has begun.

But in fact, matters are not, and cannot be, so simple in Plato's universe. For 'soul' has a dual role: it hosts intelligence, as we have seen; and it imports life. And these two features are not so easily prised apart.³ In order to see this, we may start with what appears to be a technicality.

Timaeus says we may count plants among the ζῷα because, after all, they ζῆν – and “everything that partakes of ζῆν ought justly to be most correctly called a ζῷον” (*Timaeus* 77b1-2). The oddity of this move is hard

¹ “Embodying Intelligence: Animals and Us in Plato's *Timaeus*” in *Platonism and Forms of Intelligence*. Marie-Elise Zovko, ed. Berlin: Akademie Verlag 2008: 39-56.

² Translations largely follow Zeyl in Cooper, ed. (*Plato: Complete Works*. Indianapolis, IN: Hackett 1997), with some divergences.

³ See *Sophist* 249a, for example, where these are drawn closely together. It might be that in this Plato is following, while modifying, the views of his predecessors; see on this Menn's interesting discussion in Chapter 5 of *Plato on God as Nous* (*Journal of the History of Philosophy* Monograph Series. Carbondale: Southern Illinois University Press 1995), esp. 29-30.

to capture in English. It is a bit as if Timaeus were saying that plants get to be called ‘living beings’ because they ‘partake of living’ – this at least captures the etymological connection on which the argument rests. But it does so without capturing why it is something that need be argued at all, or even mentioned. We could instead translate “Everything animate is rightly called an animal”, if it were generally agreed as obvious that plants are animate. The sort of force with which the claim should strike us ought to be something more (though not exactly) like a philosopher stipulating that all plants are rightly called ‘animals’ because they ‘are alive’. True, ζῶον does not exactly mean ‘animal’; but its ordinary extensions from that central meaning commonly include things like representations of animals, hence statues, and then depictions of all kinds. Thus the etymological argument gets its bite: since plants indisputably ζῆν (live), there can be no objection to counting them ζῶα (‘animals’/living things).

But since plants are ζῶα, they must have souls. These they are immediately granted, although with substantial qualifications.

What we are talking about now [plants] partakes of the third type of soul... the type totally devoid of judgement, reasoning and intelligence [δόξης μὲν λογισμοῦ τε καὶ νοῦ], though it does share in sensation, pleasant and painful, with desire [αἰσθήσεως δὲ ἡδέιας καὶ ἀλγυνῆς μετὰ ἐπιθυμιῶν]. (*Timaeus* 77b3-6)

Allowing plants only the lowest sort of soul may seem both obvious and innocuous, until we recall the description of sensation earlier in the dialogue (64b3-6):

When even a minor disturbance affects that which is easily moved by nature, the disturbance is passed on in a chain reaction... until it reaches *to phronimon* (64b5) and reports the property that produced the reaction.

According to this model of sensation, there is no sensation (αἴσθησις) without the involvement of τὸ φρόνιμον, the intelligent part. Plants are granted sensation and even desire. Are they, then, intelligent? We seem to have four options:

- OPTION 1: Plants have a *phronimon*, and so are intelligent.
- OPTION 2: Plants have a *phronimon*, but *phronimon* was not intended to indicate intelligence in the first place, but rather something else, more minimal.
- OPTION 3: Plants do not have a *phronimon*, and so sensation in plants is different from sensation in all other living beings.
- OPTION 4: Plato simply overlooked the implication, and so did not notice the problem.

OPTIONS 1 to 3 all look unpalatable in one way or another. So I begin with what to many may seem the least unpalatable, OPTION 4.

Now, it might be that Plato simply did not see the problem. At 64b, *Timaeus* is well into his detailed physical account of the various modes of perception; by 77b, the discussion has moved on, and he has a different concern altogether in view – namely, to provide for the nourishment of animals. It seems a short space of text for Plato not to have put the two together; but perhaps with the emphatic turning of attention at 77a, Plato is no longer writing with his preceding psychological claims in view. Let it be, then, that the apparent tension here was inadvertent. Nevertheless, it is worth asking how it is that Plato ended up with this muddle (if it is that), and whether it might easily be resolved.

It is not difficult to imagine how the situation might have arisen. Plato, setting out the necessary conditions of perception, has primarily human desires and sensations in his sights; and these arguably *do* arise in an intelligently inflected way – or at least, it seems likely Plato thought they do. When he comes to speak of plants, however, his main concern is to acknowledge that they are alive. He duly casts about for some sort of soul to grant them, and chooses the most primitive sort available to him – the sensing-desiring kind. He would have gone for a still lower form of soul, if it had been available to him, if he had thought of it. Plato, on this view, is crying out for Aristotle's conception of 'nutritive soul', but just misses it.

This seems to me to suppose a gross failure of imagination on Plato's part. Surely the author of the *Phaedrus* and the *Republic* could have thought up a different sort of soul if he had felt the need – unless we are to suppose he was exhausted by the sheer inventiveness of the *Timaeus*. Such imaginative failure becomes perhaps plausible, and relevant, if regarded as stemming from a conceptual gap: Plato lacks not just Aristotle's 'nutritive soul' but also Aristotle's concept of the purely biological for which 'nutritive soul' stands.⁴

This might be right, that Plato lacked a concept of the 'purely biological'; in truth, I am not sure that *I* have a clear concept of the 'purely biological', unless one just means by that the recognition of the faculties Aristotle separates off and groups together as 'nutritive soul'. But if it suggests that Plato recognizes no distinction between the way plants are alive

⁴) My thanks to Sarah Broadie for raising this point in conversation.

and the way animals are alive, this cannot be right. For Plato marks the distinct character or place of plants in several ways.

First, plants are not needed to complete the perfect animal. When the Demiurge looks to the Living Thing Itself, in order to create as good an instance as possible, he lists the various kinds of living things proper to the Idea; plants are not among the kinds enumerated.

He determined that the living thing he was making should possess the same kinds and numbers of living things as those which, according to the discernment of the intellect, are contained within the real Living Thing. Now there are four of these kinds: first, the heavenly race of gods; next, the kind that has wings and travels through the air; third, the kind that lives in water; and fourth, the kind that has feet and lives on land. (*Timaeus* 39e7-40a2)

This suggests at least that Plato observed a significant difference between plants and animals.

Second, plants are given their own moment of creation. It is just *before* the introduction of plants that Timaeus concludes with satisfaction, “So all the parts, all the limbs of the mortal living thing came to constitute a natural whole” (*Timaeus* 76e7-77a1). After this, he makes a fresh start in his discussion, introducing the creation of plants.

Finally, plants are not descended from animals. Not only does Timaeus make a fresh start in the narrative, but the gods too engage in a new activity, turn to make a new kind of thing.

They caused to grow a nature, akin to our human nature, though endowed with different forms and sensations [ἄλλαις ιδέαις καὶ αἰσθησέσιν] so that it is a different living thing [ὅσθ' ἕτερον ζῶον εἶναι]. (*Timaeus* 77a3-5)

Plants must be made out of similar materials; they must be suited to humans and animals, and so be congenial to them. But they are freshly created for that express purpose, and not degeneratively created by the reincarnation of an especially stupid worm. However far into mindless viciousness an intelligent soul descends, it does not stoop so far as to take on the life of a plant. Plato observes a real discontinuity here, between the animal world and plants.⁵

⁵ As Luc Brisson notes in “Myths in Plato’s Ethics”, “Within the psychic scale mentioned above, we note two discontinuities: 1) A discontinuity between the souls of gods and of

In short, Plato recognizes that although plants belong *with* animals, and not rocks, in respect of 'being alive', they are not *among* animals, or alive in the same way.

If, then, the recognition of the 'purely biological' means a recognition that plants differ from other living beings, while yet being living things, then Plato does indeed recognize this; and it remains an open question what we should say this difference in 'ways' of being alive consists in. The purely biological might, for instance, be conceived from the first as distinguishing plants from animals precisely with respect to agency (including desires) and sentience – 'purely biological' in that case would *just mean* 'life without desire or perception', or 'non-conscious life'. But why should we believe in advance that just this is the correct way of marking the difference between animal and plant life? In fact, *if* purely biological is taken to mean 'non-conscious life', and if this in turn suggests a sort of living consisting in a series of purely mechanical processes,⁶ then it might be just this notion of non-conscious, non-agentive, non-experiencing 'life' that Plato is carefully guarding *against* in assigning plants the very same sort of soul shared by animals, and hence assigning them real sensations and desires of their own.⁷

But need we think this is indeed the very same sort of soul? I have already called attention to the ways in which Plato carefully distinguishes plants from other living things in the *Timaeus*. This might incline us by

demons, which never fall into a body subject to destruction; and the souls of human beings and of animals, which inhabit destructible bodies with diverse appearances. 2) A discontinuity between the souls of human beings and of animals, which are endowed with a rational part, and the souls of plants, which are reduced to the desiring part, or *epithymia*." (*Plato Ethicus: Ethics is Life*. M. Migliori and L. M. Napolitano Valditar, eds. Sankt Augustin: Academia Verlag 2004: 63-76, 72).

⁶ It need not suggest this, but one can see how it might: if a life is non-conscious, and yet there is growth and other change to account for, then these changes should be explained by the physical principles of motion governing the smaller parts constituting the plant. Or so one might naturally think. Stephen Menn discusses the importance of non-reductive explanation to Plato's motivations for citing *nous* as a source of change in Chapter 6 of *Plato on God as Nous*, esp. 40-42.

⁷ Again, *Phaedrus* 245c-e is relevant here: All soul must be self-moving, "this is the very essence and principle of a soul, for every bodily object that is moved from outside has no soul, while a body whose motion comes from within, from itself, does have a soul, that being the nature of a soul" (*Phdr.* 245e4-7). My thanks to Anja Burghardt for helpful discussion of what gets lost if we deny plants desires.

now to find OPTION 3 more attractive. Timaeus does introduce plant-kind as “a different living thing”, with “different forms and sensations”. Perhaps this means that we should suppose one of those differences to be a radical difference in the necessary conditions for sensation.⁸ If plant perception happens differently, then it may not need any intelligent part, as animal perception does. On this view, not just forms *and* sensations, but forms *of* sensation would be different for plants.

The first problem for this view is that Plato does not say this, although it would not have been difficult for him to have done so. Even if Plato did not wish suddenly to introduce an entirely different sort of soul, never described before, he has ready enough ways of indicating mere similarity rather than sameness. Yet he has Timaeus say that plants have the third sort of soul, not a soul ‘in some ways like the third’ sort. He specifically grants plants perceptions of pleasure and pain, and desires – not things ‘that are in a way akin to’ perception and desire.

Moreover, if ‘sensation’ in plants took different forms from that taken by sensation in *all* other creatures, then we should be entitled to wonder with what right it should be called sensation at all. This is not idle Socratic mimicry. If the mechanisms of sensation varied widely from animal to animal, particularly in respect of the relationship to intelligence, then there would presumably be some other reason that all these were rightly considered the same sort of thing. And plants would share in that. As it is, however, the one thing that all sensing has in common – through all modalities, and across all variations in material realization – is this process of communicating a physical event through the body to the soul via *to phronimon*. So if plants lack this, then they have sensation only metaphorically, or by analogy; they have ‘as if’ sensation, and not the real thing. But if plants are meant to be a different sort of living being *in just this respect*, why explicitly give them the third sort of soul – the sort of soul that is all about sensations and desires – rather than some different sort of soul altogether?⁹

⁸ Indeed, it looks as if pseudo-Porphry, in the *ad Gaurum*, took it in just this way (IV.6). I thank Luc Brisson for drawing my attention to the relevance of the discussion in the *ad Gaurum*, and for providing me with the materials on which he and colleagues are working, on this text.

⁹ Again, even if merely artistic considerations prevented him introducing here a never-mentioned fourth sort of soul, Plato has resources enough for indicating that plants have only quasi-perception, and pale imitations of the desiring-sensing soul.

There is a more crucial issue at stake, part of which will arise again when we consider OPTION 2. Suppose that some kind of sensation can occur in a quite different way. We then have to concede that in the generic description no work is being done by specifying the terminus of the communicated motion as ‘the intelligent part’. Rather, more specifically, no work is being done by *to phronimon* in perception *as such*. Perhaps it is relevant to the sort of perceptions distinctive of humans, or – as Plato thinks – distinctive of humans and animals together. But its involvement in the process does not make the difference between a motion’s being a perception rather than not. Instead, it only makes the difference between a perception’s being ‘our sort’, rather than some other sort – some other, more ‘bare’ perception. But this latter does not look like the contrast that Plato is drawing. As will be discussed further below, he seems here at *Timaeus* 64b to be concerned with the difference between a mere unperceived (non-perceptual) change, and the kind of change that constitutes perception.

It is worth considering, then, what we think *to phronimon* is meant to be contributing in the first place. Is it supposed to be granting something like ‘conceptual content’ to otherwise contentless bare sensations? The *Theaetetus*, for instance, can be read as a clarification of perception through distinguishing it from any sort of cognition whatsoever;¹⁰ and so it might be thought that Plato endorses a notion of ‘bare’ perception. If so, this might in turn support the hypothesis that here, in the *Timaeus*, plants are supposed to perceive via a different mechanism from that spelled out for animals at 64b (OPTION 3) – though even here, it must be remembered that the ‘bare’ perception perhaps carved out in the *Theaetetus* was presumably meant to be a description of perception in all percipient beings, so that we still lack support for the hypothesized equivocation.

Or should we rather suppose that *to phronimon* is responsible in some inarticulate way for the fact that some motions are *sensations* at all? And if

¹⁰ This is perhaps a dramatic way of putting Michael Frede’s point in his remarks on “Perception in Plato’s Later Dialogues” (*Essays in Ancient Philosophy*. Minneapolis: University of Minnesota Press 1987, 3-8); Myles Burnyeat also shows Plato making perception less cognitive, from the *Republic* to the *Theaetetus* (“Plato on the Grammar of Perceiving”, *Classical Quarterly* 26 (1976): 29-51). But as his emphasis is on the work contributed by the sense/sense-organs as opposed to the *psyche* (presumably this, and not *noûs* is what he refers to as ‘mind’), the question of whether there might be, for Plato, some utterly unintelligent soul with which one *merely* perceives does not arise.

so, how? The exact meaning of ‘*to phronimon*’ here is not clear, and is disputed – it may imply no suggestion of intelligence or reason at all. This will be a feature which OPTION 2 appeals to, so I will discuss it in detail below. But it is worth keeping in mind that, even if we do accept the translation I’ve offered (‘the intelligent part’), ‘intelligence’ need not mean anything grand or ‘Platonic’. Even when Plato speaks of *phronēsis*, of things being *ἔμφονα*, or of *to phronimon*, it may yet be an open question what this intelligence consists in – whether, for example, it requires any necessary connection to eternal Forms, and even if so then to what sort.¹¹ If that is so, then what precisely the involvement of *to phronimon* is meant to supply to the process initiated by bodily movements is uncertain.

And whichever way we go, we should remember that we will have to say the same thing about ‘desire’, also integral to the ‘third part of the soul’. And this is part of why I think it in fact best, particularly in the *Timaeus*, to regard intelligence – in general, and in the case of perception – to be working differently, neither as the giver of conceptual content (as OPTION 3 would have it), nor as the giver of awareness (as OPTION 2, discussed below).¹² Intelligence introduces normativity and teleology. But since this will be equally relevant to considering the next two options, I will leave this aside for the moment, and leave open the question of OPTION 3. If granting plants perceptions and desires utterly dissociated from *to phronimon* could do the work meant to be accomplished in assigning them perception at all, then it is still possible (though unlikely, it seems to me, and although he says nothing to indicate it) that Plato meant to be assigning plants merely an *ersatz* perception and desire.

Instead of *αἴσθησις* being something different in plants, might it rather be that *to phronimon* involved in *all* perception is different from what we might expect (OPTION 2)? Perhaps plants have genuine sensations and desires, just as animals do, but in neither case is the *phronimon* involved meant to be especially intellectual. Perhaps *to phronimon* integral to sensa-

¹¹ But see Luc Brisson’s “Plato’s Theory of Sense Perception” (*Boston Area Colloquium in Ancient Philosophy* 13 (1999): 147-176), 159-160. By contrast, I think even if we do conclude that *to phronimon* is ‘the intelligent part’ this need not automatically entail that it has to do with recollecting eternal Forms in particular acts of perception; whether it does so will depend upon further views, and arguments, about what thinking for Plato is like.

¹² My aim is not the strong claim that intelligence *does not* provide these things; rather, only that there is some other work that intelligence does – perhaps even some other, more illuminating way of regarding that same work.

tion does not indicate intelligence at all, but only bare ‘awareness’.¹³ It is at least occasionally appropriate to translate φρονέω and cognate words as ‘in one’s senses’, and this nearly means simply ‘to be alive’ or perhaps ‘to be conscious’.¹⁴

But I find this option even less promising than the previous one. First, even if φρονέω is occasionally used to indicate whether someone lives, it does this *through* its primary meaning of ‘being wise, thinking, being minded, understanding’, not by dropping this meaning. For example, consider ἐμπνεῶ, which has a literal meaning of ‘having the breath in one’: since breath is one of the distinctive features of some (but not all) living beings, its presence or absence will coincide with the aliveness or otherwise of such beings.¹⁵ When φρονέω or ψυχοῶ is used to mean ‘alive’ as opposed to ‘deceased’, this is through a reference to the being in question having or lacking some distinctive mark of living things of the relevant kind – *viz.*, whether they are minded, or ensouled, respectively. In neither case need we suppose that the root meaning of the word has been lost; and so φρονέω should not be supposed to mean ‘*merely* conscious’ as opposed to intelligent. When φρονέω-words are used to mean alive, they do so through the primary meaning of the word, namely ‘having one’s wits about one’, ‘being smart’ – that is, where one’s mode of living is distinctively characterized by intelligence. Thus, LSJ cite several instances of the phrase “ζῶν καὶ φρενῶν”, which they appropriately render “alive and in his right mind”.¹⁶

¹³ Denis O’Brien argues for this interpretation in his “Perception et intelligence dans le *Timée* de Platon”. (*Interpreting the Timaeus-Critias: Proceedings of the IV Symposium Platonicum*. Tomás Calvo and Luc Brisson, eds. Sankt Augustin: Academia Verlag 1997: 291-305).

¹⁴ LSJ offer as the IVth entry under φρονέω: “*to be in possession of one’s senses*, sts. almost = ζῆν”.

¹⁵ Similarly with θαλπῶ: those living things which generate their own heat cease to do so when they die; thus, to say of such creatures that they have or lack heat can refer to their being, or not being, alive. Or again, the dead – at least the long dead, or the dead and buried – are no longer visible or manifest to us, while the living are always visible or manifest (at least in principle). So, one might use ἐπιφάντος to refer to the mark of ‘visibility’ as a euphemism for indicating whether one is still among the living.

¹⁶ Not, as O’Brien would have it, “alive and conscious”. He points out that “even a chorus of Aeschylus will not simply say of someone dead that he is not alive” (“Mais même un chœur d’Eschyle n’ira pas jusqu’à dire, de quelqu’un qui est mort, qu’il n’est donc pas vivant. Ce dont il est ici question, c’est la conscience.”); 301); but it is hardly less vacuous

In the specifically Platonic context, reading *to phronimon* in a way that does not indicate some sort of intelligence goes even more obviously against the grain.¹⁷ Plato classes *phronēsis* together with cognitive success-terms too consistently to suppose he means us completely to dismiss those now, even if it is Timaeus, a natural philosopher, speaking.¹⁸ More importantly, he does this in the *Timaeus*. For example, Timaeus describes the world-soul as providing “a divine source of unending and rational [ἔμφορον] life for all time” (*Timaeus* 36e4-5). As a description of the world-soul, and the motions in which its sole activity consists, it is hardly credible to translate ἔμφορον βίου with something so weak as ‘(merely) conscious life’. When these motions become embodied in the heavens, the motion of the Same is described as “the single and most intelligent [φρονιμωτάτης] of revolutions” (*Timaeus* 39c2). Again, φρονιμωτάτης here can hardly be taken for mere consciousness.

Or consider the first introduction of soul into body:

And they went on to invest this body – into and out of which things were to flow – with the orbits of the immortal soul. These orbits, now bound within a mighty river, neither mastered that river nor were mastered by it, but tossed it violently and were violently tossed by it... All these disturbances [παθήματα] are no doubt the reason why even today and not only at the beginning, whenever a soul is bound within a mortal body, it at first lacks intelligence [ἄνους]. But as the stream that brings growth and nourishment diminishes and the soul’s orbits regain their composure... their

to say, “he is dead and no longer conscious”, which is O’Brien’s preferred translation of οὐ φρονοῦντι (at 517 of Aeschylus’ *Choephoroi*). Taking φρονοῦντι to mean ‘have one’s wits’ at least tells us what is relevant, and lamentable, in being dead.

¹⁷) LSJ cite only one dubious instance from Plato, *Sophist* 249a.

¹⁸) Monique Dixsaut’s discussion of *phronēsis* (*Platon et la question de la pensée*. Paris: Vrin 2000, 94-100), indicates how consistently Plato associates *phronēsis* with value, virtue, and intelligence (see esp. 106-109). She argues that *phronēsis* is invoked particularly when the point is that intelligence is a quality of living things, that it is souls that have intelligence. One might, perhaps, dispute whether *to phronimon* should necessarily be read as relating to *phronēsis*; perhaps only the latter form of the root ‘*phron**’ is imbued with value. But since, apart from various other forms of φρονεῶ marking intelligence-words, *to phronimon* is used by Plato in the *Republic* to mean ‘the intelligent part’ (at 530b6-c1 and 586d4-e3), the burden is to show that it does not mean the same thing here at *Timaeus* 64b. O’Brien attempts to show it cannot mean the same thing (“Perception et intelligence”, 299-300); but his argument seems to be that since the mortal part of the soul feels the pleasures, *to phronimon* cannot be the immortal and rational part of the soul. But the claim was only ever that the soul has perceptions *in virtue of* ‘*to phronimon*’ (the rational part), not *in* it.

revolutions are set straight, to conform to the configuration each of the circles takes in its natural course. They then correctly identify what is the same and what is different, and render intelligent [ἔμφορον] the person who possesses them. (*Timaeus* 43a4-7, 44a7-b7)

When first embodied, *Timaeus* tells us, soul is ἄνοος, unreasoning, due to the disturbances created by physical change; however, when the circles of Same and Different are re-established in their proper courses, this renders a person ἔμφορον. Here again, ἔμφορον must mean *intelligent*, not merely conscious,¹⁹ since this same regular turning of the circles of the Same and the Different is what νοῦς, and even ἀληθῆς δόξα consists in (see especially *Timaeus* 36c-37c). This very form derived from φρονεῖω will appear again, in another disputed passage (*Timaeus* 75a1-6, discussed below). So there is some reason to think that not only being φρόνιμος, but also being made ἔμφορον, is a matter of intelligence, not some bare awareness or mere consciousness.

Now consider again more closely the role that *to phronimon* plays in the process of an event or affection (πάθος, 64b4, c2, c3) becoming a sensation. This will also be relevant to our consideration of ΟΡΤΙΟΝ 3, left open. First, both here at *Timaeus* 64b ff. and at the parallel passage in the *Philebus* (33d ff.), Plato is careful to specify that there is no αἴσθησις without a soul's being affected by some bodily change:

Instead of saying that the soul is oblivious when it remains unaffected by the disturbances of the body, now change the name of what you so far called obliviousness to that of non-perception [ἀναίσθησίαν]... But when the soul and body are jointly affected and moved by one and the same affection, if you call this motion perception [αἴσθησις], you would say nothing out of place. (*Philebus* 33e10-4a5)

There is no 'unconscious' perception (αἴσθησις), because having a sensation *is* being aware of a bodily event. If αἴσθησις just *is* the awareness or consciousness associated with bodily disturbance, there is no need to suppose an extra element, *to phronimon*, to play that role, to *be* the awareness. *To phronimon* must rather be part of *the way* in which some disturbances come to cause moments of awareness in us. The question is, *Which* part?

¹⁹⁾ which would in any case be odd – are we to think that we are not conscious of the strong influx and efflux characteristic of youth?

What is *phronimon* doing, that it must be involved in the process of bodily changes amounting to moments of perception or awareness?

Let us go back to *Timaeus* 64b, where Timaeus makes the claim that αἴσθησις requires *to phronimon*.²⁰ The passage continues by contrasting these moments of perception with unperceived disturbances:

On the other hand, something that is hard to move remains fixed and merely experiences the disturbance without passing it on in any chain reaction. If it does not disturb any of its neighbouring parts, so that in the absence of some parts passing on the disturbance to others, the initial disturbance affecting them fails to move on into the living thing as a whole and renders the disturbance unperceived. (*Timaeus* 64b6-c3)

The *pathos* must reach the whole creature (τὸ πᾶν ζῶον, c3) if there is to be perception. If there is a role for *to phronimon* in perception, if there is some reason for it to be included in the process, it could very well be responsible for explaining how it is that the creature *as a whole* is affected by a specifically located bodily change – how it is, for example, that a pain in the finger is not just the concern of the finger, and not just felt *by* the finger, but is rather something that a person can recognize as painful and decide to do something about. No one part of the soul, inasmuch as it is just a part, will be able to play this role. But intelligence in its soul-unifying role is just what is needed. A recollection of the *Republic* has opened the *Timaeus*, and so we might recall here that, in the *Republic*, this distinctive feature of intelligence as concerned for the whole is quite explicit: “Isn’t it appropriate for the rational part to rule, since it is really wise and exercises foresight on behalf of the whole soul . . . ?” (*Republic* IV.441e4-5).²¹ The rational part of the soul, I suggest, is distinguished by its ability to take account of the whole, and so to communicate what is of concern to the whole creature. This suggests that *to phronimon* ought to retain its connection with intelligence.

²⁰) *Timaeus* 64b3-6, quoted above: “When even a minor disturbance affects that which is easily moved by nature, the disturbance is passed on in a chain reaction . . . until it reaches *to phronimon* and reports the property that produced the reaction.”

²¹) The connection intelligence and unity of the whole is also a running *motif* of the *Philebus*, another closely related dialogue – see especially *Philebus* 28d-30c, where intelligence is the *cause* of unity of body and soul, responsible for the fact that the universe is well-ordered, rather than chaotic.

Since the *Timaeus* and *Philebus* offer strikingly similar accounts of perception, we might do well to consider the consequences of this starting-point in the moral psychology of the *Philebus*. Pleasures, Socrates goes on to argue there, can be true and false. How? The argument Socrates pursues appeals to the inter-connected nature of mental life, which interconnectedness is governed by cognitive, truth-seeking capacities. Pleasures, it is first observed, never arise apart from the soul being moved as in perception; and when the soul is moved, as in perception, the opportunity arises for deliberation, decision, judgement. The example Socrates offers is of perceiving a shape in a distance, and trying to discern whether it is a statue or a man (*Philebus* 38c-e). This, “if memory and perceptions concur with other impressions at a particular occasion” (*Philebus* 39a1-2a), he likens (with some embellishment) to conceiving a hope (*Philebus* 39e4-6), which is a kind of pleasure.

Pleasures can become true or false in this way: as something necessarily perceived, they take shape through taking a place within the whole of our psychological economy. And when a mental event (a *pathos* of the *psuchē*) does that, it becomes related to and answerable to judgement and understanding. These are then able to become experiences relevant to the whole person – thus, the conclusion Socrates draws here is that good persons generally have pleasures of a similar kind (*Philebus* 40a-c). The movement of the soul which is pleasure, then, becomes assessable as true and false, and becomes a characteristic of the whole person because, in moving the soul, judgement and memory – that is to say, intelligence in some form – also get involved. In short, here too, a *pathos* ‘reaches the soul’, becoming a matter for the whole soul, in virtue of intelligent activity – which is just to say that sensation must involve *to phronimon*. One might object that this should count only for human souls, or only for those souls that have intelligence. But in the *Timaeus*, animal souls are in exactly the same condition – and the very question at issue is whether plants are, too.

We should consider a further passage, a curious discussion of flesh and joints – for it looks at first as though this may support the ‘mere awareness’ reading of *phronimos*, and its cognates. In fact it supports the notion that being alive and intelligence are, for Plato, inextricably interwoven.

All those bones that were more ensouled [ἐμψυχότατα] than others he proceeded to wrap in a very thin layer of flesh, while those that were less ensouled [ἀψυχότατα] he wrapped in a very thick layer of dense flesh. And indeed at the joints of the bones...

he introduced only a thin layer of flesh, so that the ability of the joints to flex would not be impeded, a condition that would have made it very difficult for the bodies to move. Another reason was this: if there were a thick layer of flesh there packed extremely densely together, its hardness would cause a kind of insensibility [ἀναίσθησίαν], which would make thinking [διάνοιαν] less retentive and more obscure [δυσμνημονευτότερα καὶ κωφότερα]. (*Timaeus* 74e1-10)

Now it might be weird to suppose that more flesh equals less sensitivity, and less flesh equals more sensitivity; and it might be bizarre to speak of joints – of all things – as being ‘sensitive’. All the same, if he had just left it there, we might suppose that the very fact that he speaks of joints as ‘sensitive’ demonstrates conclusively that Plato cannot mean sensation to be something involving intelligence. Instead, however, Plato here has *Timaeus* immediately link less sensitivity to decreased cognitive capacity; and he uses for this the undeniably cognitive word, διάνοια.

It is clear, then, that here at least Plato is linking sensitivity to intelligence. And this, it seems to me, counts as much against OPTION 3 (equivocation on sensation-desire) as against OPTION 2. Intelligence and sensitivity run in tandem, coming together in greater and lesser degrees.²² It remains only to see that intelligence here is not something different from *phronēsis* or *to phronimon* – and that the passage give us almost immediately.

This explains why thighs and calves... and all other bodily parts where there are no joints... are all fully provided with flesh. It is because they have only small amounts of soul [ὀλιγότητα ψυχῆς] in their marrow, and so are devoid of intelligence [κενά ἐστιν φρονήσεως]. On the other hand, all those bodily parts that do possess intelligence [ὄσα δὲ ἔμφορνα] are less fleshy, except perhaps for a fleshy thing – the tongue, for example – that was created to be itself an organ of sensation [αἰσθήσεων]. (*Timaeus* 74e10-75a6)

Here *phronēsis* (75a4) is used as if interchangeable with διάνοια (74e10); and the tongue being sensitive means it is among the bodily parts that are intelligent. Thus what it means to ‘be more sensitive’ is not simply to be more conscious,²³ but to be more intelligent.

²²) <more ensouled> tracks <more *emphroneined*> tracks <more sensitive>.

²³) And, again, it would be peculiar to suppose consciousness was something that came in degrees; ordinarily, either one is conscious, or one is not.

This is why Timaeus points next to the un-fleshiness of the skull. The skull, we learn, has much less flesh than needed to protect itself, so that the head – house of immortal soul – can be the most sensitive, *emphronēined* bit of us. Since

a shorter life-span was in every way preferable for everyone to the longer but inferior one... the head [lacks flesh, and instead] has turned out to be more sensitive and intelligent [εὐαισθητοτέρα μὲν καὶ φρονιμωτέρα]... (*Timaeus* 75c1-2, 5-7)

The head was designed to house the intelligent part of the soul (69c-d, where it is called ‘divine’). So the point of the head being φρονιμωτέρα ought to be that it is the more intelligent part of the body, not that it is the “more conscious” part, where “conscious” has the sense of bare, or unintelligent consciousness.

It does not look, then, as if we can make granting plants a *phronimon* palatable by making the attribution something so weak as mere ‘consciousness’.

And so we are left to consider ΟΡΤΙΟΝ 1, and the unpalatable possibility that plants are intelligent.

If *to phronimon* retains its connection to *phronēsis*, so that its proper place is among the ‘thinking’-terms, with νοῦς, ἐπιστήμη, διάνοιαν, and so on; and *if* the process of a bodily change causing a sensation to arise goes via this *phronimon*; and *if* plants have sensation – *then*, plants have a *phronimon*, and so are intelligent, in some sense.

Let us think again about why intelligence and perception run in tandem, and about why Plato should want to assign such a thing to plants. Recall that the third part of the soul is responsible for desire as well as for sensation, and plants are being granted *both*. If it seems absurd to suppose plants perceive, surely it is even more absurd to suppose they have *desires*. But desire and sensation are deeply embedded in one another, not accidentally bundled together – to have the capacity for sensation is to be able to sense things *as pleasant* and *as painful*, and *therefore* to want the one and want to avoid the other; this, in turn, is related to the phenomenon mentioned above, that a pain in one part of the organism belongs to the whole, and elicits appropriate responsiveness from the organism.

If Plato gave the matter any thought at all, in assigning the third sort of soul to plants, what sort of perceptions and desires could he have thought they had? Presumably he had in mind the way that plants are responsive

to their environments as being either threatening or nourishing, and they grow accordingly. Leaves turn towards the sun, roots seek water. Whole plants bend in one direction, towards a congenial environment, and away from an uncongenial one. We might now explain these phenomena otherwise, but it is not far-fetched to suppose that for Plato these were manifestations of a plant's minimal ability to respond to some things as 'good', and others as 'bad'.²⁴

But responding to anything *as good*, therefore wanting anything, is the most minimal and generic teleological behaviour there is, especially as this responsiveness explains the organized, regular and unified nature of plants – in contrast, for example, to mountains, which are not living things. If such teleological behaviour is supposed to happen entirely dissociated from any intelligence whatsoever, it is unclear that Plato could accept it as genuinely teleological and as genuinely explanatory. Among the two sorts of causes recognized in the *Timaeus*, reason and necessity, the latter would never be explanatory all on its own.²⁵ If intelligence alone introduces genuine explicability and normativity, it seems unlikely that sensation – bound up as it is with desire – could do any of the work it is supposed to do in explaining the organized growth and responsiveness of plants, if it were some special sort of perception utterly dissociated from all intelligence, or if perception and desire *as such* did not involve intelligence, in some way. The point of granting plants percipient soul at all would be undermined if that soul had no association with intelligence – whether because its perception-desiring is mere *ersatz* perceiving-desiring, or whether because *all* perception (and desire?) as such had connection only to bare unintelligent consciousness.

²⁴) Being limited to the third part of the soul, all plants *could* ever take to be good is pleasure, and pain is the only thing that could from their perspective be bad. Even animals can do more than that! They can want to reproduce, for example, and since this implicates them in a minimal sort of sociality, perhaps it is even related to the fact that animals, but not plants, can get angry (*Republic* IV).

²⁵) James Lennox, "Plato's Unnatural Teleology" (*Platonic Investigations*, D. O'Meara, ed. Washington DC: Catholic University of America Press 1985: 195-218), 210-12, makes this point, in the discussion of Plato's wider commitment to intelligence as reasoning 'for the best', and the contrast between this and the mere materials which are so arranged, across several dialogues, including the *Timaeus*.

There is, however, a large and obvious objection to this conclusion. The passage dealing explicitly with plants – the same passage that credits them with sensation and desire – explicitly denies them “judgement, reasoning and understanding” (δόξης μὲν λογισμοῦ τε καὶ νοῦ, 77b5); plants have only “the third type of soul” (*Timaeus* 77b3-4).

What exactly is it that plants lack, having only ‘the third kind’ of soul? Might there be some far inferior sort of intelligence that they have, while lacking “judgement, reasoning, and understanding”? *Timaeus*’ account of plants goes on to specify exactly what plants lack, and it seems a fairly comprehensive exclusion:

For throughout its existence, it is completely passive; and its formation has not entrusted it with a natural ability to discern and reflect upon any of its own characteristics, by revolving within and about itself, repelling movement from without and exercising its own inherent movement. Hence it lives [ζῆ], and is not other than a ζῶου, but it stays put, standing fixed and rooted, since it lacks self-motion [ἑαυτοῦ κινήσεως]. (*Timaeus* 77b6-c5)

The text is dense here; but lacking intelligence seems to bring together lacking (a) self-awareness, (b) self-reflection, and (c) activity, particularly the ability to originate motion. This pretty well denies plants any version of that activity definitive of intelligence, as described for example at *Timaeus* 89a1-3:

The best movement is the one that occurs within oneself caused by oneself [ἐν ἑαυτῷ ὑφ’ αὐτοῦ, for this is most akin [συγγενές] to the thinking [δαινοητικῆ] and to the motion of the universe.

In denying plants νοῦς, λογισμός and even δόξα, it seems clear that *Timaeus* intends to deny them all forms of intelligence.

A Suggested Solution

The problem remains so far insurmountable: Plants lack reason; yet sensation, which plants have, requires reason. To resolve the riddle we must think seriously – and creatively – about ways in which plants might both have and lack intelligence.

This will not be accomplished by granting plants one kind of intelligence, but not another. We must rather find some distinctive *way* that

plants might have or 'partake of' intelligence – the relation plants have to intelligence will be different from (1) the relation animals have to intelligence; and so from (2) the way in which animals manifest desire and all the functions of the third kind of soul.

Plants occupy a strange half-way place in the *Timaean* universe. Rocks and rivers are a part of the body of the cosmos by being merely functional, constitutive elements. Their 'living' just is the living of the cosmos – they have no lives of their own. Plants differ in precisely this respect: they do have individual, distinct lives, and so have their own goals and souls. Because they have aims internal to themselves and not merely prescribed by the necessities of the world-soul's body, they have each their own soul, responsible for perceiving this or that *as* 'good and attractive' or the opposite.

Plants are thus responsive to their environments, and not in some mechanistic way, reducible to the motions of their parts. To attribute desires to plants is to recognize that they are responsive to their circumstances in their (still unexplained) ability to recognize something as a Good Thing, or a Bad Thing, and respond accordingly. And these goods are recognizably good *for this individual plant*.

But plants differ after all from animals in their 'aiming'. For animals, however confused, are *trying* to aim at *the* good. They try to achieve *for themselves* the same good that the world-soul – and perhaps even the Demiurge's soul, if that is different – aim at. And their good consists in their achieving a clear and true understanding of this same good and gaining that. Being 'good-*qua*-horse' (if it even makes any sense in the *Timaean* universe) does not count for much, for horses like every other animal are ultimately trying to restore the revolutions of their souls to that appropriate to the perfect beings which they once were. All substitutes for this true good are failures. Plants' highest and only aim, by contrast, is their own immediate good. To be responsive to what is immediately good and bad for its staying alive in the state it is in counts as *success*, for a plant. Unlike horses and jackdaws, plants can be 'good of their kind', and this *counts*. It counts as success for a plant because plants have, of themselves, no higher aim.

But then it is not obvious that it should be a good thing *simpliciter* for plants in general to achieve their specific ends. If it is good, it cannot be because they have attained The Good. The only reason it is a good thing is because the universe as a whole has been organized in such a way that

plants doing what they want contributes to the good-ordering of the cosmos as a whole. Local teleology contributes to the goodness of the universe in virtue of the nature and structure of the cosmos – and not in virtue of the individual organism's end itself being good. In this respect, plants resemble rivers and rocks. Their pursuit of their local ends is used to constitute the healthy cosmic body, and it is *only* a good thing because of the place it holds in that rational structuring.

This dual nature of plants, regarding their place in the universe, suggests a solution to our riddle of plant intelligence. The explanation of plant functioning, we saw, was 'split': we must consider a plant simultaneously as a distinct living thing, *and* as ultimately only a mere constitutive part of the body of the cosmos. Each plant has its own soul, and so is a ζῷον – a living individual, distinct from all others; but this is only a vestigial soul, abbreviated into the functions that are posterior to, and attendant upon intelligence – an intelligence plants do not have, at least not of their own. Could it be, then, that plants partake of immortal soul in the same way that stones do: merely in virtue of their functional role within a living being with an immortal soul?

Plants would still differ categorically from rock and water and fire, by having some soul or another, some life or another, to call their own – plants have the requisite physical and psychic machinery for individuation, with a distinct basis for sensations of pleasure and pain, and for corresponding desires. Their physical and psychological capacities are enabled, however, not via some intelligence which is their own, but in virtue of their connection to the intelligent whole they help to constitute. So their sensation does indeed occur, like all sensation, in virtue of *some* intelligence – but it is the intelligence of the world-soul, and not their own. This is the concrete correlate to the teleological point: Plants have ends of their own; but this is only a genuine *telos* and source of order because of its relation to the cosmos and *its* intelligent ordering. This might, then, count as a version of the discarded OPTION 3, inasmuch as perception and desire happen differently in plants and in animals. But it will differ from OPTION 3 by insisting on preserving the vital link between perception, desire and intelligence.

Such a solution is pure invention: Plato simply hasn't said, and it is tempting to think that Plato did not care much about plants – or about animals, for that matter. His project is a moral one, and his physics and

cosmology should be an improving one: we should understand nature in the way that is most edifying for us.²⁶

But the problem, even regarded as ethically motivated, will not go away that simply: Plato needs plants to be sufficiently different from human beings that eating them is appropriate.²⁷ He needs them to be sufficiently the same, however, that he can provide a unified, non-mechanistic account not only of soul, but of the cosmos.

To put this in more familiar Platonic terms, some causes are teleological – that is, directed towards the good, however remotely or confusedly; other causes are what I have been calling ‘merely mechanistic’ – “those things which, being moved by others are compelled to move others” (*Timaeus* 46e1-2). Unlike the former, these latter “only produce chance effects without order or design” (46e5-6).²⁸ This distinction between primary and secondary causes is described at 48b as the distinction between intelligence and necessity. As this second way of marking the distinction indicates, the only non-mechanistic source of cause and explanation that Plato recognizes is intelligence.

The problem, then, is not so much that Plato cannot imagine Aristotle’s ‘nutritive soul’; it is rather that such a so-called ‘soul’, if conceived as utterly disconnected from rational causation, cannot be the principle of the *organized* life found even in plants. If divorced entirely from reason, it cannot be distinguished from the sort of accidental unity that rocks and rivers have. On the other hand, if the intelligent principle informing plant life is internal to each individual plant, then plants cannot be categorically distinct from animals. In being responsive to the environment, orderly in its changes, and evaluable in terms of success/thriving or otherwise, plants must have recourse to some governing principle – that is, to intelligence.

²⁶ See, e.g., Thomas Johanson, “Body, Soul, and Tripartition in Plato’s *Timaeus*” (*Oxford Studies in Ancient Philosophy* 16 [2000], 87-111; Gabriela Roxana Carone, “The Ethical Function of Astronomy in Plato’s *Timaeus*” (*Interpreting the Timaeus-Critias: Proceedings of the IV Symposium Platonicum*. Tomás Calvo and Luc Brisson, eds. Sankt Augustin: Academia Verlag 1997), and her *Plato’s Cosmology and Its Ethical Dimensions* (Cambridge: Cambridge University Press 2005).

²⁷ *Timaeus* 77a1-6, quoted above.

²⁸ except insofar as their motion is guided by the former. See James Lennox, “Plato’s Unnatural Teleology”, 210.

But this governing intelligence is not distinctive of, or personal to, each plant. Their desires and perceptions – their responsiveness to their specific environments – is organized and evaluable as good only by reference to its role in the orderly organization of the cosmos as a whole. A plant's only good lies in being food for animals capable of becoming good in their own right.²⁹ Thus desiderative-perceptive soul individuates each plant as having its own life-trajectory; but this non-mechanistic responsiveness is enabled by the participation of the plant in the wider intelligibly ordered world.

The neo-Platonists would later wrestle with essentially the same problem, in the context of trying to determine the status of a foetus, which is in some sense alive, but lacks the sort of independence required for having a life (as in, 'a life of one's own').³⁰ The conclusion they draw is similar – the foetus has its own soul of the lower sort, which lives vicariously off the higher soul of its mother. We might be inclined to think that this problem, no less than its strange split-soul solution, is just Plato's problem – so much more reason not to be a Platonist. But I think it does raise an interesting question: How are we to think of something that has to be sure a life of its own, but *only* in virtue of the fact that this life is organized by its functional role within an organized whole? More generally, how are we to do justice to the individuality of each living organism, with its orderly changes and internal unity, and yet mark the radical discontinuity between the sort of living plants enjoy and the sort shared by animals – the sort of difference that makes it at least potentially a moral issue whether we eat animals, as it just cannot become with regard to eating plants?

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²⁹⁾ Perhaps also in maintaining the temperate climate in which animals thrive; but, unlike food, this is not mentioned by Plato, and may be an anachronistic thought.

³⁰⁾ Again I am indebted to Luc Brisson, for drawing my attention to this, and providing me with the edited text and French translations of the *ad Gaurum* (see especially section VI).

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