

Aristotle's Two Intellects: A Modest Proposal*

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ABSTRACT

In *De anima* 3.5, Aristotle argues for the existence of a *second* intellect, the so-called "Agent Intellect." The logical structure of his argument turns on a distinction between different types of soul, rather than different faculties within a given soul; and the attributes he assigns to the second species make it clear that his concern here – as at the climax of his other great works, such as the *Metaphysics*, the *Nicomachean* and the *Eudemean Ethics* – is the difference between the human and the divine. If this is right, we needn't go on a wild goose chase trying to invent a role for the so-called Agent Intellect to play. God moves our intellects as he moves the heavenly spheres, "as a beloved": he constitutes the complete actualization towards which all of our intellectual striving is directed. Aristotle regards such final causation as an efficient cause, but not in a way that would make it part of what *we* would call the causal processes or mechanisms of human psychology. But, he would insist, it is essential for appreciating who we are and what our place is in the world.

In *De anima* 3.5, Aristotle famously argues for the existence of a *second* intellect, the so-called "Agent Intellect." The fifteen lines which follow (430a10-25) are some of the most controversial in his entire corpus: it is unclear whose intellect it is, how many there are, and exactly what it does.¹ In this paper, I shall suggest a modest proposal as to how this whole difficulty might be resolved.

Much of the tradition has become mired in difficulties because it has tended to concentrate on the analogies with which the chapter begins, rather than the logical structure of Aristotle's argument and the attributes he prosaically lists in the second half of the chapter. But these provide

* This paper develops at greater length some of the ideas adumbrated in my 1996, which derives from earlier work under Richard Sorabji's supervision at King's College London (1985-87). Although I am sure there is much he would disagree with, I am grateful for the vigorous discussions we had and his (as ever) sagacious advice. I would also like to thank Myles Burnyeat, Dominic Scott, Bob Sharples, John Sisko, and Michael Wedin, as well as the editors, for valuable comments on the penultimate draft.

¹ The history of interpretations is already a substantial field in its own right: see, e.g., Kurfess 1911; Brentano 1867, 5-36; Wilpert 1935; Grabmann 1936; Moraux 1942; Hamelin 1953; Barbotin 1954; Movia 1968, 35-67; Mahoney 1970; Poppi 1972;

the key. The structure of the argument concerns a distinction between different *species* within the genus of soul, if you will, rather than a distinction between faculties inside a given soul; and the attributes he assigns to the second species make it clear that his concern here – as at the climax of his other great works, such as the *Metaphysics*, the *Nicomachean* and the *Eudemian Ethics* – is the difference between the human and the divine. The intellect in question is nothing but its essence (a22-23), which is just actuality (a18), and it functions without interruption (a22) for eternity (a23) – characteristics ascribed only to God, who is unique (1074a35-37).

If this is right, we needn't go on a wild goose chase trying to invent a role for the so-called Agent Intellect to play in human psychology. God moves our intellects as he moves the heavenly spheres, that is, "as a beloved" (1072b3): he constitutes the complete actualization towards which all of our intellectual striving is directed, in emulation of his perfect state. Aristotle regards such final causation as an efficient cause, but not in a way that would make it part of what *we* would call the causal processes or mechanisms of human psychology. That story is complete without *De anima* 3.5. The tasks, therefore, which commentators have invented for the Agent Intellect to fill – such as abstraction, selective attention, or free choice – are factitious. They are not problems Aristotle even acknowledges; *a fortiori*, they cannot be the reasons he appeals to for the existence of a second intellect.

In *De anima* 3.5, then, Aristotle is simply putting human psychology in a cosmic perspective. It is not crucial for psychology as *we* understand it. But it is essential, he would insist, for appreciating who we are and what our place is in the world.

A few preliminaries

With such a long-running controversy, one may be forgiven for doubting whether anything new can be added to the subject, and so a brief word should be said about where the present solution stands with respect to previous interpretations. The closest similarity it bears is to the interpretation

Mahoney 1973; Moraux 1978; Moraux 1984; Kal 1988, 93-109; Kessler 1988; Ballériaux 1989; Blumenthal 1991; Huby 1991; Davidson 1992; Ballériaux 1994; Blumenthal 1996, chap. 11. In this paper, I will do little more than allude to these other interpretations – there are so many, and they are so well-entrenched, that one could not possibly do justice to them in so short a space, not to mention answer every challenge and rebuttal. For a recent full-length treatment of *De anima* 3.5, with references to the contemporary literature, see Wedin 1988, chs. 5-6; also Kal 1988.

of Alexander of Aphrodisias, insofar as it identifies the second intellect with God,² a thesis which has rarely been held after Thomas Aquinas' influential rejection of it.³ But the arguments offered here are wholly independent; and the "bottom line" differs on what I take to be the key point, namely, the role of the second intellect. The tradition of commentary has been unified in taking the second intellect to be a part of the causal mechanisms of thought: that is, it has generally been assumed that in the production of thought, there is some transition which is brought about by the second intellect, whether extrinsically or as a part of the human mind.⁴ And it is precisely this assumption that I think we should reject.⁵ The result is thus more radical: it suggests that in an important

² Alexander describes the so-called agent intellect as the "first cause, which is the cause and source of the being of all other things" at *De anima* 89.9-19, and the "first intellect" which "alone thinks nothing but itself" at *De intellectu* 109.23-110.3 Bruns; cf. also Them. *In De an.* 102.30-103.10 Heinze; Ps.-Philop. *In De an.* 535.4-5, 20-29 Hayduck. For an excellent survey of Alexander's views, with extensive references to the literature, see Sharples 1987, 1204-1214.

The identification of the second intellect with God is sufficient to distinguish this position from the more common "Averroistic" interpretation, according to which there is also only one second intellect, distinct from all human souls, but which is a separate substance and distinct from God himself. This much of the position can also be found in thinkers earlier than Averroes: not only in Avicenna, but still earlier in the Neoplatonist Marinus (*apud* Ps.-Philop. *In De an.* 535.5-8, 31-536.2 Hayduck) and even before that, arguably, in Albinus (*Didask.* 10, 164.19-23 Whittaker).

³ *ST* 1a q. 79 a. 4-5; *SCG* 2.76-78; *In III De an.* lect. 10; *Quaest. de an.* a. 5; *De spir. creat.* a. 10. Zabarella is one of the few to defend it at any length after Aquinas: see esp. ch. 13 of the *Liber de mente agente* in his commentary on the *De anima* (Frankfurt 1606, col. 936); for a more general treatment, Poppi 1972. Pomponazzi is often identified as a proponent of Alexander's interpretation; but he only identifies the agent intellect vaguely as "one of the intelligences," which may not be God: *De immort. an.* 150.11 Morra. (I would like to thank Professor Mahoney for valuable conversation on this question.) In the modern era, it has been just as scarce. Traces of it can be found in Ravaisson and Zeller (Brentano 1867, 32-36), while more recent interpreters have flirted with it without actually embracing it: Kosman (1992, 353 ff.), for example, seems to think the second intellect is divine, but not God (who is only a "paradigm" of the second intellect – see esp. 356); while Kahn accepts both Alexander's and Averroes' interpretations as possibilities, without deciding between them (1981, esp. 412-14). The only genuine exceptions to the rule I know of are Menn 1992 (562, n. 26) and Frede 1996 (on the latter, see n. 5 below).

⁴ This is true even of Alexander, even though his *De anima* is somewhat vague on details (see Sharples 1987, 1207-08): at any rate the second intellect is the cause of the human intellect's coming into a certain state (88.17-24; cf. 91.4-6). Such a view is fully elaborated, however, at *De intellectu* 107.31-108.7, 14-15, 19-24 Bruns.

⁵ After this paper was written, it came to my attention that Michael Frede arrives at a similar bottom line by means of independent arguments. See Frede 1996.

respect the second intellect does not belong to human psychology at all, but rather theology.

It should go without saying that where a text is so underdetermined, it is not possible to “disprove” and thus exclude all other interpretations – no interpretation of *De anima* 3.5 is in a position to do that. My aim here is only to show that a certain reading is *possible*. But once that has been admitted, the considerations in its favor make it extremely hard to resist: it is, exegetically, the simplest and most economical reading I know; and philosophically, it promises to free Aristotle’s psychology from the menagerie of doctrines that commentaries on this chapter long have nurtured.

Why two?

We should begin from a simple observation, to which I believe the tradition has not paid sufficient attention. The chapter begins by speaking of *two* intellects. Though rarely mentioned, this is as bizarre as the Emperor’s new clothes – one only has to attempt to explain it to a student uninitiated in the mysteries of Aristotelian exegesis to realize how bizarre it is. Why on earth should Aristotle have thought there were *two* intellects?⁶ On this question, commentators have often been as loyal as the Emperor’s councilors, pretending there isn’t a problem at all. They smooth over Aristotle’s plain talk of two intellects by speaking of two *functions* or *aspects* of a *single* intellect instead.⁷

This, of course, is precisely what we would have expected. One of the most distinctive features of Aristotle’s psychology is its drive towards unification. He is particularly anxious about the danger of dividing psychological “faculties” to infinity, individuating them as finely as the particular tasks we are able to perform (*De anima* 3.9, 432a24) – he rebukes Plato, for example, for having three types of desire, one in each part of the soul, rather than grouping them together as the functions of a single capacity (432b4-7). For Aristotle, the only real divisions are those that manifest themselves taxonomically. The division of the soul into the nutritive, perceptual, and noetic faculties is grounded in the fact that some living beings have nutritive capacities without perceptual ones, and some have perceptual capacities without noetic ones (*De anima* 2.3). But within these large

⁶ Or worse, *three* – the agent intellect, the potential intellect and the patient intellect – as is frequently claimed in the commentary tradition: see Kurfess 1911, *passim*.

⁷ This gambit recurs throughout the tradition, beginning arguably with Plutarch of Athens: *apud* Ps.-Philop. *In De an.* 535.13-16, 536.2-5 Hayduck.

groupings, he tends to consolidate different functions. Thus, the ability to reproduce and digest are functions of a single capacity (*De anima* 2.4, 416a19). Likewise, the capacity for *phantasia* (τὸ φανταστικόν) and for desire (τὸ ὀρεκτικόν) are each held to be “one and the same” as the perceptual part of the soul, though “different in being” (*De insomniis* 1, 459a15-17; *De anima* 3.7, 431a12-14). Even when it comes to distinct sense modalities, where there are discrete sense organs in different locations, he takes them to share the same kind of unity. While all the senses differ from one another in being, the capacity for perception is one and the same in number (*De sensu* 7, 449a16-20). Such capacities are inseparable from each other in actual fact, although they can be distinguished in theory: in this respect, they are like the road from Athens to Thebes and the road from Thebes to Athens (*Physics* 3.3, 202b12-14).

Aristotle does not use this formula when speaking about the intellect. But he speaks freely of many different intellectual abilities – the ability to understand essences, to think propositions, to calculate and infer, and to know or understand – without ever marking a distinction in faculties. He speaks of what can think (τὸ διανοητικόν) and the intellect (νοῦς) as if they were the same capacity (*De anima* 2.3, 414b18-19). Nor would our ability to distinguish these various abilities tell against their unity: Aristotle could always invoke the principle that they differ only “in being,” while remaining “one and the same.” Even when Aristotle speaks of the practical intellect (ὁ πρακτικὸς νοῦς) and the theoretical intellect (ὁ θεωρητικὸς νοῦς), we are inclined to take this only as a statement about two different capacities (3.10, 433a14-17). No one supposes for a moment that Aristotle is referring to two distinct *intellects*.

Why treat the two intellects of *De anima* 3.5 any differently, then? The reason is simple. Even if we could overlook the strong distinction Aristotle marks at the outset between two kinds of intellect (ὁ μὲν τοιοῦτος νοῦς ... ὁ δέ, 430a14-15), not to mention the causal distinction between the two, we cannot ignore the conclusion of the chapter. For these intellects differ in an essential property: while the first is perishable (φθαρτός, 430a25), the second is immortal and eternal (ἀθάνατον καὶ αἰδίον, 430a23). They cannot, therefore, be a single intellect – *one can exist in the absence of the other*. They must genuinely be two.

Looking around for something to do

Many commentators simply swallow hard at this point and try to justify Aristotle's insistence that there are two intellects. In particular, they search

for a gap in his account of cognitive functioning that could only be filled by a second intellect, with all the special characteristics he goes on to enumerate – a gap, it should be noted, that does not occur in the case of sensation and so require an “agent sense.”⁸ Such an interpretation would explain why Aristotle takes such a bizarre step, or rather why it was not so bizarre after all, once properly understood. His chief fault would only have been being so telegraphic on an issue so crucial to his psychology and relying instead on cryptic metaphors.

I have no doubt there are gaps in Aristotle’s psychology. From the extant texts, it is not entirely clear, for example, how we come to think of abstract qualities from having been affected by concrete objects; or why on a given occasion we think of one such quality rather than another, especially when these are coextensive (perhaps even necessarily so); or how he accounts for spontaneity in our thoughts or imaginings. There are *many* passages where Aristotle assumes we have an ability without offering an account of it at all. Thus, having an extra intellect on board with nothing else to do might seem like an opportunity not to be missed. We could solve two problems in one go.

But such a move is only of limited charity. For the appeal to a second intellect becomes a *deus ex machina*. It suggests that Aristotle was aware of a significant gap in his psychology and yet did not care to address it except in this cursory way, by invoking a magical problem solver – something which is certainly not very charitable, if indeed it is credible at all. We cannot plausibly conjecture, moreover, that Aristotle gave a fuller explanation in a lost part of the corpus. To judge from Theophrastus’ comments, not even his closest student and collaborator seems to have known more than the text we have before us.⁹ And in that text Aristotle never specifies what this allegedly necessary function is supposed to be, not to mention how the second intellect carries it out. The only clues such interpretations have to work with are the metaphors at the beginning of 3.5 – the comparison to *technê* and matter and the comparison to light and colors – and these have proven notoriously elastic through the centuries of commentary. The phrases are so underdetermined in context that any attempt to settle which interpretation best suits them seems hopeless.

I suggest we avoid this morass altogether. Instead of letting vague

⁸ As some medievals were later to postulate. For the controversy, see esp. Pattin 1988; also MacClintock 1956, Kennedy 1966.

⁹ *apud* Them. In *De an.* 107.30-108.35. On Theophrastus’ access to Aristotle, see Huby 1991, 129; also n. 29 below.

metaphors guide our interpretations, we should look rather to the structure of the text itself. For Aristotle begins by offering an *argument* for the existence of the second intellect (430a10-17), a feature which has rarely been taken into account; and he follows this up by listing eleven attributes of the intellect in question (430a17-25). Both of these features are clear and tractable, and they offer straight rails along which our efforts can run.

So, too, in the soul

Perhaps the most striking feature of the opening sentence of *De anima* 3.5 is that it is an *inference*, which proceeds from how things are in nature at large to how things are in the soul:

Just as in all of nature there is one thing that is matter for each genus and is potentially all those things, and another that is the productive *explanans* because it produces all things (as art stands with respect to matter); so too in the soul these differences must necessarily obtain: one intellect is of this sort by becoming all things and another by producing all things (as a sort of state, like light – for in a way, light also produces actual colors from potential colors). (430a10-17)

In short, Aristotle argues that *because* natural kinds in general exhibit certain differences, rational souls must as well. He takes the two cases to be exactly similar in the relevant respects, and the inference to have demonstrative force (ἀνάγκη, a13).

In fact, the opening sentence itself exhibits an elaborate parallelism, which can be broken down as follows:

- I. Ἐπεὶ δ' ὥσπερ ἐν ἀπάσῃ τῇ φύσει ἐστὶ τι
 - A. τὸ μὲν ὕλη ἐκάστῳ γένει (τοῦτο δὲ ὁ πάντα δυνάμει ἐκείνα)
 - B. ἕτερον δὲ τὸ αἷτιον καὶ ποιητικὸν τῷ ποιεῖν πάντα
 - i. οἷον ἡ τέχνη πρὸς τὴν ὕλην πέπονθεν
- II. ἀνάγκη καὶ ἐν τῇ ψυχῇ ὑπάρχειν ταύτας τὰς διαφοράς
 - A'. καὶ ἔστιν ὁ μὲν τοιοῦτος νοῦς τῷ πάντα γίνεσθαι,
 - B'. ὁ δὲ τῷ πάντα ποιεῖν
 - i'. ὥς ἕξις τις, οἷον τὸ φῶς·
 - a. τρόπον γάρ τινα καὶ τὸ φῶς ποιεῖ τὰ δυνάμει ὄντα χρώματα ἐνεργεῖα χρώματα.

As this diagram makes clear, everything hinges on the central analogy between nature and the soul, which Aristotle states in a strictly parallel fashion: 'just as in the whole of nature . . . so too in the soul' (ὥσπερ ἐν ἀπάσῃ τῇ φύσει . . . καὶ ἐν τῇ ψυχῇ, 430a10, 13). Ross is thus wrong to bracket the initial 'ὥσπερ' – far from wrecking the structure of the sentence (1961, 296), it forms part of its backbone.

Ross was led to this reading, no doubt, because of his interpretation of the phrase ‘in the soul.’ He insisted that ‘in the soul’ had to mean within each *individual* soul – that it could not mean in the case of the soul.¹⁰ This is, of course, pure bluff. Aristotle distinguishes *eight* different senses of the preposition ‘in’ (ἐν) at *Physics* 4.3, 210a14–24, including the sense Ross disputes. Our only guide, therefore, can be the context itself, and here the parallel structure of the sentence restricts the available meanings. ‘In the soul’ must be understood in the same way as ‘in the whole of nature.’ Otherwise, it will derail the argument.

A closer look at Aristotle’s language reveals it to be strikingly taxonomical. The opening clause states that a certain distinction can be found *in any kind or type* (ἐκάστῳ γένει, *De anima* 3.5, 430a11) found in nature; and he follows this up with the taxonomical term ‘differentia’ (διαφορά, 430a14; cf. 413b32–414a1) when he concludes that this distinction is also to be found in the soul. The phrases ‘in the whole of nature’ and ‘in the soul’ thus serve as *restrictions on the relevant kinds or types*: the opening generalization concerns all *natural* kinds, the conclusion *psychological* kinds, kinds which can be said to be in nature or in the soul in the exact same sense as a species can be said to be *in* a genus (*Physics* 4.3, 210a18). Aristotle’s argument is therefore a taxonomical one, establishing a difference between psychological kinds, and not parts within an individual soul. If this is right, Aristotle is not making bizarre claims about each individual having multiple intellects. The so-called “agent intellect” belongs to one type of soul and the “patient intellect” to another. To speak of two intellects is to draw a distinction between two *kinds* of mind.

It is less clear why Aristotle thinks this argument is demonstrative. It is straightforwardly valid if we assume that psychological kinds are simply a *subset* of natural kinds, even where intellects are concerned – in fact, if the inference is to work in this way, it must hold *precisely* when we are talking about kinds possessing intellect. In that case, the parallel is not so much an analogy, but rather an application of a generalization to one of the cases that falls under it.

But at points Aristotle hesitates as to whether the intellect is a part of nature and so studied by physics, or whether it falls outside of nature altogether. In *De partibus animalium* 1.1, for example, he worries that such considerations threaten to make physics a universal science (641a32–b4). The argument runs as follows. Correlatives must be subjects of the same

¹⁰ Ross 1949, 149, esp. n. 1; similarly Rist 1966, 8, although he acknowledges the claim requires further argument. The objection can be found as early as Themistius *In De an.* 103.4–6 Heinze, but without further argument.

study; but the intellect is correlative to what is intelligible (νοητόν); therefore, if the intellect belongs to the study of nature, so too must everything that can be thought. But the intellect is capable of thinking *all* things (cf. *De anima* 3.4, 429a18), including mathematical entities and even God himself; yet such things do not belong to the study of nature, but mathematics and theology, respectively (cf. *Metaph.* 6.1, 11.7). The intellect, therefore, must fall outside the boundaries of physics as well.¹¹

The suggestion that the soul straddles the natural and the nonnatural because of the nature of thought may be appealing to some. But in the present context it would be problematic. For if true, Aristotle's inference at the beginning of *De anima* 3.5 will rest on an *analogy* between natural kinds and kinds of intellect. Moreover, it will be a *causal* analogy, turning on agents and patients – precisely the sort of thing we would have expected to belong to the study of nature. Therefore, *even if* the intellect passes beyond the realm of nature on Aristotle's view, it must be *so similar* to natural kinds with respect to causality as to license an inference of this sort.

It may be valuable at this juncture, if I may anticipate somewhat, to point out that we are already acquainted with such a case in Aristotle's system. God, the Prime Mover, "moves" the heavenly spheres without undergoing change himself and so affects the natural world even though he does not belong to it himself. Causation, as Aristotle understands it, is not limited to the natural world, although the kind of "causation" at stake is of a very distinctive sort. In drawing an analogy between intellect and natural kinds, Aristotle may well be thinking of a very specific case. This is something to which we will return shortly.

Separating just what it is

The suggestion that Aristotle is speaking about two different species when he distinguishes two intellects will no doubt send some listeners to the barricades. Many interpreters have insisted, with Thomas Aquinas, that a distinct agent intellect belongs to each human being, *severing* at death to exist on its own immortally. In fact, John Rist has even claimed that this interpretation is required by the Greek. In speaking of the intellect which "alone is immortal and eternal" (430a22-23), Aristotle uses the aorist passive participle 'χωρισθείς', which, Rist claims, "implies a time when the Active Intellect is not separate from the Passive" (1966, 8). It should accordingly be translated as follows:

¹¹ For a close discussion of this argument, see Broadie 1996.

Once it has separated, it is solely that which it is and this alone is immortal and eternal.

Rist does not elaborate, but presumably his reasoning is that the aorist always signals an event – in this case, a severing of the intellect – taking place in the past.¹²

But this is simply not true. The force of the aorist is primarily aspectual and need not indicate past time.¹³ And if we needed an example, we have one earlier in *De anima*, where the same aorist passive participle is used to express a purely logical distinction: something straight, *when taken as something separate*, will not touch a bronze sphere at a point (οὐ μέντοι γ' ἄψεται οὕτω χωρισθέν τι εὐθύ, 1.1, 403a14-15), that is, a mathematical object as such does not touch a physical object. In this sentence, none of the tenses have their temporal value in a strict and literal sense: Aristotle surely does not mean to imply the straight line was once embodied and later severed. If anything, the aorist is used here primarily to *avoid* the suggestion of a temporal process, as would be implied by present or imperfect forms of the verb.

Sometimes, of course, Aristotle does use the verb 'χωρίζειν' to mean *sever*. Why couldn't that be the sense in *De anima* 3.5? The problem is that Aristotle uses 'separate' or 'separable' (χωριστός) in many different ways, ways which are crucial to his metaphysics and so naturally the subject of some controversy.¹⁴ At least three senses, though, are important to those who think Aristotle is affirming human immortality: the intellect is (i) separable from the body insofar as it lacks a bodily organ (cf. 2.1, 413a4-7) and so (ii) separates or *severs* from the rest of the soul at death (iii) to exist separately on its own, as a complete, self-contained substance. Notice that in all of these senses what is separate is some *individual thing*, a token and not a type. Moreover, some of these uses are *relative*, like (i) and (ii) – they involve being separate from some specific thing – while (iii) is not. And finally, of those which are relative, (ii) is *symmetrical*:

¹² The same argument is implicit in Ross 1949, 149, n. 1. It should be noted that Rist's views on *De anima* 3.5 have developed a good deal since this early article – for his most recent views, see Rist 1989, 177-82. I cite his earlier article here simply because it is the clearest statement of the reading in question (which he has not retracted or otherwise qualified in print).

¹³ On the aspect of aorist participles, see Kühner and Gerth 1898, Bd. 1, §389.3, 4, and esp. 6 (E) with Anm. 8.

¹⁴ See, e.g., the following debate (with full references to earlier secondary literature): Fine 1984; Fine 1985; Morrison 1985c; Morrison 1985a; Morrison 1985b.

A can be severed from B if, and only if, B can be severed from A.

But earlier in *De anima* Aristotle develops a entirely different notion of separability, based on the fact that psychological capacities are distributed unevenly among living things (2.2, 413b32-414a3; 2.3, 414a29-b1). For example, although animals possess both perceptual and nutritive capacities, plants possess only the nutritive ones. This shows, Aristotle believes, that the nutritive capacities are “separable” from the perceptual capacities. This is clearly not meant to imply that the nutritive capacities in an individual animal could be *severed* from the perceptual capacities and then exist on their own – on the contrary, Aristotle thinks that when certain animals are literally severed, each half contains *all* of the capacities that belonged to the animal originally (1.5, 411b19-27). All he means here is that there are *cases* where the nutritive capacities exist separately without the perceptual, and that therefore we can speak of this *type* of capacity as “separable” from another *type* of capacity. It is not a relation between specific tokens, but one that holds between the types to which they belong. Nor is it symmetrical. For, according to Aristotle, although the nutritive capacities are separable from the perceptual, the perceptual capacities cannot be found apart from the nutritive and so are *inseparable* from them (1.5, 411b27-30; 2.2, 413a31-b6).¹⁵ Notice that separability in this sense does not preclude cases where the relation holds in both directions; it is just that it does not entail it. The kind of separation at issue here, therefore, is *non-symmetrical* rather than *asymmetrical*.

Aristotle is thus concerned in *De anima* with the way *types* overlap and diverge in their extension, and not what occurs within a given token. A certain type of capacity “can be separated” from another just in case we can find an instance of one that is not an instance of the other

F is separable from *G* =_{df} *F* can be instantiated without *G* being coinstantiated

Because of its concern with extensions, call this “*taxonomical separability*.”¹⁶ Given Aristotle’s commitment to eternal species, the sense of possibility

¹⁵ Aristotle also applies this distinction to the five senses: touch can be separated from the other senses, but not they from it (*De anima* 2.2, 413b6-10): that is, the sense of touch is possessed by all animals have the sense of touch, the others senses only by some (*De anima* 2.2, 413b7; 2.3, 414b3, 415a3-6; 3.12, 434b10-11; *De somno* 2, 455a7, a27; *Historia animalium* 1.2, 489a17-18; 5.8 533a17-18, 535a5).

¹⁶ If Fine is right in connecting ‘separable in nature’ at *Metaph.* 7.1, 1028a31-b2 with the existential priority defined at *Metaph.* 5.11, 1019a1-4 (1984, 35-36; cf. n. 12 above), then the resulting “ontological separation” will be similar to taxonomical sep-

is quite weak. *F* will be separable from *G* just in case there *is* a species of living thing that has *F* but not *G*: thus, Aristotle can conclude that the perceptual powers are inseparable simply by surveying existing species; he does not have to consider merely possible ones.¹⁷

Armed with this distinction, we can now apply it to the case of intellect. Since God is nothing but intellect on Aristotle's view (*Metaph.* 12.7, 9), intellect can be instantiated without the nutritive or perceptual capacities and is therefore taxonomically separate from the other capacities. Aristotle thus accepts the following scheme:

Noetic capacity			✓	✓
Perceptual capacity		✓	✓	
Nutritive capacity	✓	✓	✓	
	Plants	Animals	Humans	God
	<i>Nutritive soul</i>	<i>Perceptual soul</i>	<i>Noetic soul</i>	

It is surely this kind of separability, moreover, that Aristotle is referring to when he writes *De anima* 2.2, 413b24-27:

About the intellect and the contemplative ability it is not yet clear, but it seems as if it were a different kind of soul (ψυχῆς γένος ἕτερον) and that this alone can be separated (ἐνδέχεται χωρίζεσθαι), just as the eternal is from the perishable.

The reference to a different *kind* suggests that Aristotle is thinking taxonomically here, of a broad group that includes species which live by intellect alone, like God (and perhaps the movers of the celestial spheres – cf. *NE* 6.7, 1141a34-b2). This is confirmed by context, which specifically concerns the distribution of powers across different types of living thing (413b27-414a3).

If we now return to the aorist participle 'χωρισθείς' in *De anima* 3.5, we can see it is likewise used to make a taxonomical point. What is at issue is not just any occurrence of the capacity to think, but rather the species where intellect occurs by itself, separate from other capacities:

aration, insofar as both relations hold in virtue of modal facts about the extension of each relational term. But they are not the same. A type *F* can be taxonomically separate from a type *G*, even if *F* is not ontologically separate from *G*: there can be instances of *F* that are not also *G*, even if no *F* can exist unless some *G* also exists.

¹⁷ For more on this kind of separation, see Broadie 1996.

When it occurs separately (χωρισθείς) it is solely that which it [essentially] is (μόνον τουθ' ὅπερ ἐστὶ), and this alone is immortal and eternal. (430a22-23)

I have added the word 'essentially' here to bring out the precise and technical terminology of this sentence: Aristotle often uses the phrase 'τουθ' ὅπερ ἐστὶ' to indicate the *essence* or *nature* of the species in question.¹⁸ Aristotle's concern in this passage is not, therefore, with events occurring in an individual at a given moment of time, but rather with the taxonomical relations that hold between certain species of soul and their differentia. What this clause states is that intellect, *when it occurs separately* (χωρισθείς), constitutes a species of soul that is nothing but its essence (μόνον τουθ' ὅπερ ἐστὶ) and that this alone is "immortal and eternal." Now, given that the essence of this intellect is said a few lines earlier to be activity as such (τῇ οὐσίᾳ ὧν ἐνέργεια, 430a18), it follows that this intellect is *nothing but activity* – it is something that lacks all potentiality. This, of course, is also a description Aristotle applies to God, who is just intellect (*Metaph.* 12.7, 1072b26-30). The intellect that occurs separately from the other powers is thus a distinct type of soul after all, differing "as the eternal does from the perishable."

The divine attributes

The suggestion that the second intellect is just the Divine Intellect is, of course, an old one, going back at least to Alexander of Aphrodisias and his teacher (see n. 2 above). But it deserves more consideration that it has sometimes received.

Consider again the structure of *De anima* 3.5. After offering his brief argument for the existence of a second intellect, Aristotle goes on to describe its nature. The second half of the chapter is little more than a list of its more distinctive characteristics. The second intellect is

1. separate (χωριστός, 430a17)
2. impassible (ἀπαθής, a18)
3. unmixed (ἀμιγής, a18)
4. in its essence actuality (τῇ οὐσίᾳ ὧν ἐνέργεια, a18)
5. more honorable (τιμιώτερον, a18)
6. the same as the object thought (τὸ αὐτὸ . . . τῷ πράγματι, a20)
7. prior in time to capacity in general (χρόνῳ προτέρα . . . ὅλως, a21)
8. uninterruptedly thinking (οὐχ ὅτε μὲν νοεῖ ὅτε δ' οὐ νοεῖ, a22)

¹⁸ Cf. *LSJ*⁹, s. ὅπερ II.5, p. 1262; Bonitz [1870] 1955, 533b36-534a23, esp. 533b59 ff.

9. solely what it [essentially] is (μόνον τουθ' ὅπερ ἐστὶ, a22-23)
10. alone immortal and eternal (μόνον ἀθάνατον καὶ αἰδίον, a23)
11. the necessary condition of all thought (ἄνευ τούτου οὐθὲν νοεῖ, a25)

Now, if we compare the attributes of the Divine Intellect discussed in *Metaphysics* 12.7-9, the list is not very different. The Divine Intellect is

- 1'. separated from sensibles (κεχωρισμένη τῶν αἰσθητῶν, 1073a4)
- 2'. impassible and unalterable (ἀπαθὲς καὶ ἀναλλοίωτον, 1073a11)
- 3'. without matter (οὐκ ἔχει ὕλην, 1074a33-34)
- 4'. actuality (ἐνέργεια οὐσα, 1072a25-26, b27-28)
- 5'. most honorable (τιμιώτατον, 1074a26; ἄριστον, 1072a35-b1, b28)
- 6'. the same as its object (ἡ ἐπιστήμη τὸ πρᾶγμα, 1075a1-5)
- 7'. prior in time to capacity (1072b25; cf. 1072b30-1073a3)
- 8'. eternally thinking (τὸν ἅπαντα αἰῶνα, 1075a10)
- 9'. just its essence, thinking (1075a1-5; cf. 1074a33-34)
- 10'. eternal (αἰδίον, 1072a25, 1073a4)
- 11'. the necessary condition of everything (1072b13-14; cf. 1075b24-26)

And, Aristotle points out, there can be *only one* such intellect, just because it *is* actuality (4 and 4'):

The first essence does not have matter – for it is actuality. Therefore the first mover is one, both in account and in number, since it cannot be moved. (1074a33-34).

Since this intellect exists only in full actuality, it has no potential for change and so no matter of any sort. But without any matter to be actualized in different ways, this essence cannot be multiply instantiated – nothing else can have the same essence. Therefore, unless we suppose the second intellect has a *different* essence, we must identify it with the Divine Intellect. But all the properties attributed to the second intellect are common to God; and Aristotle offers no further identifying characteristics. Without engaging in sheer speculation, then, the only reasonable conclusion is that the second intellect and the Divine Intellect are identical.

Two objections answered

But, someone might object, our hand is forced: we *have* to conjecture a difference between the two intellects, if we are to explain two of Aristotle's more peculiar remarks, which cannot be explained otherwise. If they cannot, the interpretation offered here cannot be made to stand.

A. *What we do not remember*

The list of attributes we considered above from *De anima* 3.5 almost exhausts the second half of the chapter, but not entirely. It is interrupted once, briefly and parenthetically, between (10) and (11), to compare the second intellect with the perishable human intellect. As standardly construed, this line reads as follows:

οὐ μνημονεύομεν δέ, ὅτι τοῦτο μὲν ἀπαθές, ὁ δὲ παθητικὸς νοῦς φθαρτός

We do not remember because, while this cannot be affected, the intellect that can be affected is perishable. (430a23-25)

On this reading, the first person plural suggests an *identification* between ourselves and this second intellect, an intellect that has just been said to exist eternally; if so, it assures us of some sort of existence beyond the boundaries of this life. The line itself can then be taken to imply either (a) that we cannot now remember our life prior to birth, because we lacked the faculties that would allow us to form a memory of it; or (b) that in some future, *post mortem* existence, we will not remember this life, because we will lack the faculties that would allow us to retain a memory of it. On either reading, the second intellect is literally a part of each individual human soul; and this alone makes it extremely improbable that it is Aristotle's God (on most conceptions, at any rate).

So understood, this brief remark packs quite a punch, and in context it is jarring. It shifts the focus suddenly from an enumeration of the second intellect's attributes to an anticipation of doubts that are nowhere expressed or even hinted at in the text:¹⁹ either, following (a), an empirical doubt, based on the fact that none of our experiences offer any confirmation of pre-existence; or, following (b), a speculative one, musing

¹⁹ It has often been suggested, at least since Themistius (*In De an.* 101.18-36), that Aristotle *does* raise this worry earlier in the *De anima*, in a passage where he has been taken to deny there can be memory or love after death (1.4, 408b25-29). On closer examination, though, the alleged parallels break down. The line in *De an.* 3.5 is supposed to explain a failure of memory because one of the two *intellects* is perishable, whereas in *De an.* 1.4 the failure of memory is due to the disintegration of the *body*. If we look more broadly at the context of this passage, Aristotle's point is that the soul and its capacities *in general* are not affected; the degradation of their activities is due rather to the disintegration of "something else within" (ἄλλου τινὸς ἔσω) that which possesses the soul (408b18-25). In fact, he argues for this in the case of thought precisely by appeal to what holds for *the senses* (νῦν δ' ὥσπερ ἐπὶ τῶν αἰσθητηρίων συμβαίνει, b20-21). The key concern throughout the passage, moreover, is with the feebleness that comes with *old age* (explicit at b19-24): the remark that "thinking and contemplation grow weaker when something else within *decays*" (φθιρομένου, b 25) is not

over what our future fate must be like. On either reading, moreover, Aristotle's exact answer and reasoning are extremely implicit and have to be teased out of the sentence with auxiliary assumptions – they are much more indirect, in fact, than the rest of the chapter, which consists of an explicit and elaborate inference (a10-17) and a straightforward list of attributes (a17-25). If these costs can be avoided, they should be. The traditional reading thus rests heavily on the claim that they cannot be.

But the line does not have to be read as it traditionally has been. The comma placed by later editors between 'δέ' and 'ὅτι' forces us to translate 'ὅτι' as 'because.' But the original text, being without punctuation, is ambiguous. 'ὅτι' can also be rendered as 'that':

οὐ μνημονεύομεν δὲ ὅτι τοῦτο μὲν ἀπαθές, ὁ δὲ παθητικὸς νοῦς φθαρτός

We do not remember that while this cannot be affected, the intellect that can be affected is perishable. (430a23-25)

The use of 'we do not remember' here is philosophical and urbane: it is used to recall agreements made earlier within the discussion in order to clinch an important point.²⁰ In the present context, Aristotle has just drawn the main conclusion of the chapter in particularly strong terms, repeating the adverb 'μόνον' for emphasis (a22, a23): *only* the second intellect *by itself* is eternal. Lest readers be surprised by this insistence, he immediately invokes the distinction underlying it, between what can and cannot be affected, a recurrent theme in the preceding discussions. Far from being an interruption, then, this sentence is an expansion and justification of the central conclusion of the chapter. Aristotle is reminding us of something we tend to forget in such discussions, namely, our vulnerability and mortality. Normally, he eulogizes our likeness to the divine. But he also recognizes the difference and here he chooses to emphasize it. A similar

concerned, after all, with the shadowy thoughts of a separated soul, but someone who has become decrepit with age. And similarly with regard to memory and love: because they are affections of the whole person, who is mortal (ἀλλὰ τοῦ κοινοῦ, ὁ ἀπόλωλεν, b28-29), they cease too as this decays (καὶ τούτου φθειρομένου, b27-28). The passage is a snarl of pronoun reference problems, but briefly: the neuters 'ἐκείνου' (b26, 28) and 'ἐκείνο' (b27 *bis*) refer back, like 'αὐτό' (b25), to the masculine 'ὁ νοῦς' (b18) – neither 'ἐν ᾧ' (b23) or 'τὸ νοεῖν' (b24) will make sense of the argument – while 'τούτου' (b27) picks up the 'τουδὶ τοῦ ἔχοντος ἐκείνου' earlier in the line. (I would like to thank John Sisko and Thomas Johansen for pressing me on this passage.)

²⁰ In the first person plural, Plato *Rep.* 5.480A2 and *Tim.* 18D8 (cf. *Laws* 2.665A7); in the second person, *Rep.* 3.408A2 and *Theaet.* 157C7. The briefer formula 'or don't you/we remember?' is naturally more common: *Euthyph.* 6E1, 15C3, *Lysis* 218B5, 222D8, *Euthyd.* 289A3, *Meno* 84E3, 94C5, *Ion* 540A2, *Rep.* 1.350D7.

reminder is reported from his dialogue *On the Good*, perhaps as a rebuke to his teacher Plato: "One must remember that one is human not only when one is fortunate, but also in the midst of proofs" (fr. 27 Rose³).²¹ To whatever extent we can become like God, we cannot attain his perfect state; and we certainly cannot bridge the difference between what can be affected and what cannot. No sane person ever literally forgets that he is human. But we frequently lose sight of it, whether as a result of vanity or, as here, wishful thinking.

B. *Whence the mind "from without" comes*

A second objection derives from Aristotle's seemingly bizarre claim in *De generatione animalium* that during the development of the human fetus the intellect alone comes "from without" (θύραθεν) and is "alone divine" (θεῖον μόνον, 2.3, 736b28; 737b9-10). This seems to imply that our intellect exists before our birth, which in turn suggests the eternal second intellect of *De anima* 3.5.

But closer inspection of the context shows that nothing of the sort is required. Aristotle's remarks are indeed strange, but for completely different reasons, having to do with the sexism of his embryology, not *De anima* 3.5. His argument concerns the contributions of both parents: how much is already present in each parent individually and how much results from the cooperation of both. Now since most of our abilities are based in a particular bodily organ, we cannot be said to have an ability, even in first actuality, until the matter of the organ is present and formed. But, on Aristotle's view, the father supplies only form (*De gen. anim.* 1.20, 729a9-11; 2.3, 737a12-16) and the mother only matter (1.20, 729a9-11, a24-33). Consequently, most of our abilities require contributions from *both* parents and so only arise after there has been sufficient development in the fetus (2.3, 736b21-27). But, according to Aristotle, the intellect does not have a specific bodily organ (736b28-29); therefore it alone of all human abilities comes entirely from outside the mother. That is, it comes exclusively *from the father*.²² Unlike the other parts of the soul, nothing more is required for the bare possession of this ability than what the father provides, and so the intellect can be said in some sense to be already present in the father's semen. On the other hand, because of the way in

²¹ I would like to thank Myles Burnyeat for pointing out this passage, as well as Stephen Menn for helpful discussion.

²² For a similar suggestion, see De Corte 1934, 288; Charlton 1987, 415-16.

which our intellect relies on perception and phantasia, it cannot rise to activity until the rest of the fetus has developed and is functioning, and so for this reason the intellect is the last ability to make itself manifest (736a35-b4). Aristotle's position is thus *fully traducian* – the one position Eduard Zeller claimed had not been, and could not be, attributed to Aristotle (1882, 1033-34).

The honorific adjective 'divine' is more straightforward. The intellect is "divine" in the sense in which Aristotle considers *males* in general and *bees* to be divine (*De gen. anim.* 2.1, 732a7-9; 3.10, 765a10): he believes that each possesses some superior characteristic and is thus similar to God in some respect (however strained). Since we, like God, have an intellect, our case is better than most: we can be said "alone of all animals, *or at any rate most of all*, to participate in the divine" (ἢ μάλιστα πάντων, *De part. anim.* 2.10, 656a7-8; cf. 4.10, 686a27-28). The alleged masculine origins of the intellect are no doubt in play here as well. But to be "divine" clearly does not imply identity with God or anything supernatural. When Aristotle says our intellect is divine in relation to the person as a whole and "the most divine thing in us" (*Nic. Eth.* 10.7, 1177a16, b27-30), he means only that by pursuing a life of contemplation we make ourselves "as immortal as we can" (ἐφ' ὅσον ἐνδέχεται ἀθανατίζειν, 1177b33-34), by coming as close to the perfection of God's contemplation as we are capable of coming, however briefly and intermittently (*Metaph.* 12.7, 1072b15-16, 24-25).

The end of all things

De anima 3.5 is meant to remind us of the difference between the human and the divine, much as the *Metaphysics*, the *Nicomachean Ethics*, and the *Eudemian Ethics* do in their climactic chapters. In the *De anima*, he builds up to this by ascending through the scale of psychological powers: from the nutritive powers (2.4), through the perceptual powers (2.5-3.2), to phantasia (3.3), until finally he reaches the intellect (3.4). At this point, Aristotle turns and gestures briefly toward the most supreme kind of intellect – a subject that strictly would take him beyond the bounds of natural science into theology – before turning back again to his main work, to finish explaining the remaining capacities of sublunary living things, namely, propositional thought, desire and action. In the chapters both before and after *De anima* 3.5, there is virtually no trace of the second intellect. It simply plays no role in the details of Aristotle's psychology.

But if the Divine Intellect makes only a cameo appearance in *De anima*, it is nevertheless a significant one for Aristotle. For a complete explanation of thought (or indeed any actualization) will ultimately make reference to God when pushed to its furthest limits: the heavens and all of nature depend upon God as a principle or source of change (ἐκ τούτου ἄρχῆς ἡρτηται, *Metaph.* 12.7, 1072b13-14). In this sense, God can correctly be described as a “mover,” as something that is responsible for change taking place. But he does not do this by entering into what we would call the chain of causation himself. Since God is “unmoved,” he cannot be an intermediate link, which effects change by undergoing change itself; and he cannot be the initial link, since Aristotle believes change is eternal and so has no origin in time. Instead, God effects change “in the way something beloved” moves one to action (κινεῖ ὡς ἐρώμενον, 1072b3): the heavenly spheres are drawn to God’s perfection as though by a kind of admiration and emulate him in the one way they are able, by actualizing their only potential and turning in place. This needn’t literally involve a desire or conscious state at all, any more than living things’ participation in the endless cycle of reproduction is literally the result of a desire to have a share in the eternal and the divine (ὀρέγεται, *De anima* 2.4, 415a25-b7) or the elements’ unceasing cyclical transformation is literally the expression of a desire to be perpetually in actuality or of conscious imitation (ὀρέγεσθαι/μιμεῖται, *De gen. et corr.* 2.10, 336b27-337a7). Rather, we understand this end as a final cause, as an endpoint towards which their activities ultimately tend – something we must refer to if their behavior is to be intelligible as such. In striving towards their own actualization, natural objects are *in effect* yearning after the godhead, that which is perfect actuality, being as such, “the one thing with respect to which all things are ordered” (πρὸς μὲν γὰρ ἐν ἅπαντα συντέτακται, *Metaph.* 12.10, 1075a18-19); and to this extent we can speak of God as what moves objects. Or so Aristotle is willing to put it in his more lyrical moments.

In some moments, he prefers to be more prosaic. In *De generatione et corruptione* 1.7, Aristotle remarks that

What is productive [τὸ ποιητικόν] is an explanans [αἴτιον] in the manner of that from which motion has its origin. But that for the sake of which [something occurs] is not productive, and so health is not productive, except in an extended sense [κατὰ μεταφωράν]. (324b13-15)

It is difficult not to read these lines as voicing some of our own misgivings

about the role of final causes. In general, the end towards which something tends does not exist at the inception of change; in fact, it may never come off, if the process is interrupted. So how could it be productive? Aristotle makes the point as follows:

For whenever what produces is present, what undergoes the change comes to be something. But when states [ἔξεις] are present, it no longer comes to be something, but already is [something]; and forms and ends are a kind of state. (324b15-18)

Even in cases where an end comes off, it is *too late* to bring about the change or transition leading to it; and it certainly does not reach back through time to bring about the action *a fronte*. A process may not be intelligible as the sort of process it is without reference to its endpoint. But a final “cause” is not a cause or productive in *our* sense at all.

Accordingly, we might be tempted to regard the sense in which a final cause is “productive” as an *improper* or *metaphorical* one in Aristotle’s eyes.²³ But to claim that a final cause is productive “in an extended sense” is not to deny that it is productive *tout court*. It is to distinguish it from the sense in which the term is *ordinarily* used; and an Aristotelian can, and typically will, accept both senses as having their rightful place.²⁴ That place need not be a marginal one either. For Aristotle not only accepts the extended sense, he elevates it to the most prominent case in his entire metaphysics: it is, after all, only in this sense that God produces change in the world. Nor can this be a mere *façon de parler*. Aristotle prides himself on having shown what his predecessors could not, namely, how motion can never fail because of a first principle that is both “*productive and motive*” (ποιητικὸν καὶ κινητικόν, *Metaph.* 12.10, 1075b30-35; cf. 12.6, 1071b12-20); and his solution requires that what produces motion should be identical with that for the sake of which there is motion (12.10, 1075b8-10). The problem, then, does not lie in showing that final causes are in some sense productive for Aristotle – all, strictly speaking, that the present interpretation requires – but in understanding just what that sense is.

²³ The first alternative is suggested by Philoponus, who glosses ‘in an extended sense’ with ‘καταχρηστικῶς’ (*In Gen. et corr.* 152.18); the second alternative can be found in both the Oxford Translation (Joachim) and Clarendon series (Williams).

²⁴ An especially clear case of this occurs in *Nicomachean Ethics* 7.5, when Aristotle acknowledges ‘another form’ of *akrasia* (ἄλλο εἶδος ἀκρασίας), which is not said to be *akrasia simpliciter*, but in an extended sense (1149a22-24). Cf. also *De an.* 2.8, 420a29; *Hist. anim.* 2.1, 500a3; *Metaph.* 5.16, 1021b25-29; *Eud. Eth.* 3.6, 1233a33; *Poet.* 25, 1461a16-20.

How to be productive

If we look at the larger context of Aristotle's remark in *De generatione et corruptione*, we can see that the ordinary sense of 'productive' is meant to apply to *moved* movers.²⁵ This is much as one would expect, given his admission in the previous chapter that "nearly everything we encounter moves by being moved" (1.6, 323a26-27). And it is also moved movers that produce "whenever they are present." On Aristotle's view, something is productive when, and only when, it is in mutual contact with things that belong to the same genus, but contrary species.²⁶ In fact, to be productive *in the principal sense* (κυρίως), an agent must be in mutual contact with what undergoes the change (322b22-29); and to be in mutual contact *in the principal sense* (κυρίως), it must have spatial location (322b32-323a1). Moved movers satisfy these conditions. Unmoved movers do not:

For the most part, what touches something is touched by it, since nearly everything we encounter moves by being moved, where it is both necessary and obvious that what touches something is touched by it. But it is possible that what moves touches the thing moved without being touched by it, as we sometimes say. (The reason it appears necessary that what touches something is also touched by it is that things that belong to the same genus move by being moved.) Consequently, if there is something that moves while being unmoved itself, it can touch the thing that is moved, while nothing touches it. For we say that a person who is grieving touches us, even though we do not touch him. (323a25-33)

Aristotle defends the idea that unmoved movers make "one-way" contact by appealing to ordinary speech: we do sometimes say, in Greek as in English, that something can touch, move or affect us even though it does not make direct physical contact, as, for example, in the case of intentional objects. Nevertheless, this is not contact in the principal sense, which is symmetrical. From this alone it follows that unmoved movers are not productive in the principal sense.

²⁵ Strictly speaking, it applies to a *species* of moved movers, insofar as Aristotle restricts 'ποιεῖν' in this context to change that consists in affection (πάθος, *De gen. et corr.* 1.6, 323a16-20). But for just this reason he takes general considerations about movement to apply equally to production; and so I will not mark the distinction in what follows.

²⁶ Mutual contact as a necessary condition: *De gen. et corr.* 1.6, 322b22-24, 323a22-25; *Phys.* 3.2, 202a6-7; 7.2, 243a32-35. Mutual contact as a sufficient condition: *Phys.* 8.4, 255a34-b1; *Metaph.* 9.5, 1048a5-7; cf. *De gen. et corr.* 1.7, 324b8-9. What is productive and what undergoes change must be in the same genus, but contrary species: *De gen. et corr.* 1.7, 323b29-324a9.

Nor do unmoved movers produce by the mechanical means moved movers do. An interaction between contraries can take place only if the agent belongs to the same genus as what it affects (1.7, 323b29-324a9). But only moved movers satisfy this condition (1.6, 323a30). Hence an unmoved mover cannot have the same matter as what it affects, since such matter serves “as a genus” to both contraries involved in the change; indeed, some unmoved movers, such as the art of medicine, will be without matter entirely (1.7, 324a32-b13; cf. *Metaph.* 7.7, 1032b13-14). Such movers also violate the dictum that “whenever what produces is present, what undergoes the change becomes something” (324b13-14). For the only sense in which the medical art is present when the doctor employs his expertise is an extended one that would apply equally well to final causes. If, therefore, unmoved movers are productive at all – as Aristotle clearly takes them to be (1.7, 324a24-b13) – they must be so in the extended sense.

What is it, then, in virtue of which both moved and unmoved movers are genuinely *productive*? Aristotle offers the following: “in general what is productive makes what undergoes the change similar to itself” (ὁμοιοῦν ἑαυτῷ, 324a10-11). This is a familiar principle in the case of moved movers: man begets man and heat begets heat. But in *Metaphysics* 7.7 Aristotle explains how it works in the case of an unmoved mover. When a doctor makes someone healthy through his knowledge of the medical art, “that which produces (τὸ ποιοῦν) and that from which the process of healing originates (ὅθεν ἄρχεται) . . . is the form that is in his soul” (1032b21-23), that is, the medical art. But the latter just *is* the form of health, according to Aristotle (b13; cf. b5-6); and so he can conclude that “in a way health comes from health” (b11).

The argument turns on his view that a thought is one and the same as its object, at least as regards objects such as essences, which are without matter, as health is taken to be (b14; cf. b1-2).²⁷ And in this case, significantly, the object is a final cause, that for the sake of which the medical art is employed and towards which its efforts are directed. Its role is ineliminable. For the medical art can be said to produce something “like itself” only by reference to the final cause, only by *being* the final cause in some sense – otherwise, the only thing the medical art could produce like itself would be other instances of the *expertise* (as, for example, when a professor of medicine teaches). The same holds for objects of desire more

²⁷ *De an.* 3.4, 430a3-5; *Metaph.* 12.9, 1074b38-1075a5. Cf. *De an.* 3.5, 430a19-20; 3.7, 432a1-2.

generally. While desires and other mental states are moved movers,²⁸ “the object of desire comes first of all, for it moves without being moved, by being thought or represented” (πρῶτον δὲ πάντων τὸ ὀρεκτόν· τοῦτο γὰρ κινεῖ οὐ κινούμενον τῷ νοηθῆναι ἢ φαντασθῆναι, *De anima* 3.10, 433b11-12).

Aristotle is not saying merely that mental states with a certain kind of object are productive. He is claiming, more strongly, that such states are productive *in virtue of* their object, which should itself be considered the first mover. In fact, it is precisely because of their primacy that Aristotle can extend his account of production to cases where *no* mental state is involved, which occur “on their own” (ἀπὸ ταῦτομάτου, *Metaph.* 7.7, 1032b21-26). The final cause *governs* the process, by determining which steps must be taken if the process is to be the kind of process it in fact is, such as healing. Of course, the way in which a final cause is productive is most familiar in the case of mental states. But mentality is not essential to the story. Aristotle notoriously takes art to be a paradigm for understanding nature, even when natural processes do not involve “art, inquiry, or deliberation” (*Phys.* 2.8, 199a9-32). The analogy turns on the role of final causes, not intentionality. It should be no surprise, then, that Aristotle takes the phrase ‘first mover’ (τὸ πρῶτον κινεῖν) to apply quite generally to the final cause, “that for the sake of which” (τὸ οὐ ἔνεκεν), as well as to the proximate moved mover, when he restricts his discussion to the latter in *Physics* 7.2 (243a32-33).

Such claims will sound odd so long as we do not remember that unmoved movers are not causes in our sense of the term. At most, moved movers are. The general notion of a mover concerns instead a kind of explanans, something referred to more broadly in causal explanations, even though this will not be a cause in our sense of the word in every case. Unmoved movers do not, therefore, introduce some kind of animism or magical action-at-a-distance; nor do they raise questions of causal competition, cooperation or overdetermination. They do not preempt the role of moved movers at all, precisely because they do not move things in the same way. What is distinctive is not Aristotle's views about causation, but rather his views about explanation. For even if we are liberal about explanation, we rarely think that final causes have the kind of prominence in causal explanations that Aristotle assigns them. In talking about movement, Aristotle puts teleology at the forefront.

²⁸ *De an.* 3.10, 433b14-18; *De motu anim.* 6, 700b17-19, b35-701a1; 7, 701a34-35; 10, 703a4-6; cf. 8, 702a11-21; 11, 703b18-20; *Nic. eth.* 6.2, 1139a31-33.

The production of thought

At the end of the *Eudemian Ethics*, Aristotle applies these views to thought and desire.²⁹ Why do we think or desire the things we do, to the extent this is not the haphazard result of environmental influences? If we always explain it by reference to earlier mental states, we can raise the exact same question again and again, and so produce an infinite regress (8.2, 1248a18-22). There doesn't seem to be anything problematic about an infinity of such states *per se*, since it could still be of finite duration, by forming a convergent series (as Peirce believed).³⁰ The problem is rather that such a series would not ultimately explain why there were any such thoughts or desires in the first place:

What is being sought after is just this: what is the source of motion in the soul? Clearly, it is just as God is in the whole universe and everything [is moved] by him,³¹ for in a way what is divine in us moves everything. Yet the source [ἀρχή] of intelligence [λόγος] is not intelligence, but something greater, and what could one say is greater than knowledge but God? (1248a24-29)

What is “divine in us” is just our intellect, and it is this which produces all intelligent behavior, which is not haphazard, but intelligible. But Aristotle does not think this is a complete explanation any more than when we say the heavens move all sublunary things in an orderly way. He is looking for some more ultimate ground of explanation. In both cases, he appeals to the Divine Intellect.

But while God is a productive cause, he does not literally trigger our first thought any more than he gives the outermost sphere a first spin. God directs us, as he does the universe, by being the point towards which we all tend. Once again Aristotle makes a comparison with health:

Since man is by nature composed of that which governs and that which is governed [ἐξ ἄρχοντος καὶ ἄρχομένου], each should live with regard to its own source [ἀρχή]. But this is said in two ways. For the medical art is a source in one way

²⁹ It is worth noting that Brentano, in one of nicer ironies of the controversy, had no difficulty seeing that these passages were straightforwardly incompatible with his own strongly Thomistic interpretation (1867, 224-25). Since he believed they were not written by Aristotle, but by his student, Eudemus, Brentano thought the only problem was to explain how Eudemus could differ so much from his teacher (as Brentano understood him) and from his fellow pupil, Theophrastus. Given that they are authentic, the problem, it would seem, lies rather with Theophrastus.

³⁰ See question 7 of Peirce [1868] 1982.

³¹ Following the mss., which all read καὶ πᾶν ἐκείνῳ.

and health in another – the former is for the sake of the latter. This, too, is the case with what can contemplate. *For God does not govern by commands.* Rather practical wisdom gives orders for his sake. (1249b9-15)

The medical art governs the doctor's actions insofar as it prescribes the necessary steps that will lead the patient to health; but health governs them by determining which steps are necessary, whether or not this is a conscious end. So, too, God governs our thoughts, not by intervening in the causal mechanisms that produce them or by being the conscious end of our thoughts and desires, but simply by being the end we must approach if we are to realize our natures. And in this case more than most, since, unlike the heavenly spheres, our actualizations are truly like God's.

The analogies

If we now look back at the opening of *De anima* 3.5, and in particular at the causal language used to contrast the two intellects, it is evident that they must be taken in quite a different sense than we typically understand. From our perspective, Aristotle could only have been speaking loosely when he compares the intellect that is “an explanans and productive” (τὸ αἴτιον καὶ ποιητικόν) to *art*, to *what* the artisan knows (τέχνη, 430a12-13); we expect him instead to speak of the *agent* who brings about the transition, the artisan who has the knowledge. The comparison with light only reinforces our misimpression, since on our view light *does* produce actual colors from merely potential ones through its reflection and absorption by the surfaces of bodies. But this is not Aristotle's conception of light: light is a static condition, the actuality of the transparent medium (*De anima* 2.7, 418b9-10); it is what allows *colors* to produce sensation and so make themselves actual colors, by being seen as they actually are (419a9-15). Aristotle has not chosen apt analogies, if he had our notion of causes in mind.

As we have seen, though, Aristotle's notion of production *is* much broader than ours. And the comparison with art is especially apt if the extended sense of production is the relevant one: the medical art is a paradigmatic example of an unmoved mover; and it is productive precisely insofar as it is the same as health, its final cause. The appeal to light points in the same direction. As has long been recognized,³² it is a clear allusion to the analogy of the Sun in *Republic* VI. But what is salient about the Platonic

³² At least as early as Themistius (*In De an.* 103.32-36) and more recently by Sprague 1972.

analogy is precisely its teleological character: it is the Form of the Good that is compared to the Sun and said to be the explanans of intelligibles' being what they are and being known (509B). If we insist on our notions of causation here, we are in danger of missing what is most distinctive about Plato's and Aristotle's attitude towards explanation, namely, their emphasis on teleology. "What produces all things" within a given genus, then, will simply be whatever makes, in the extended sense, an *F* an *F* – namely, the relevant final cause. In our case, where "our nature's end" is intellect (ὁ δὲ λόγος ἡμῖν καὶ ὁ νοῦς τῆς φύσεως τέλος, *Politics* 7.15, 1334b15), it will be the paradigm of intellectual activity, God.

If this is not something we would call "productive," that is all for the best, since forcing such a cause into the mechanisms of Aristotle's psychology can only create deformities. In interpreting Aristotle's use of the terms 'produce' and 'productive' all that matters is the senses *he* is willing to let them bear; and, as the case of God and the spheres makes clear, he is willing to use them in a very broad way indeed. But if so, then we shouldn't take the second intellect to be a moved mover at all.

Conclusion

In sum, *De anima* 3.5 voices a familiar set of Aristotelian themes, namely, the similarity and difference between the human and the divine. The chapter thus concerns two separate species of mind, and not divisions within a mind. More importantly, it does not involve what *we* would call a "causal" relation. It is one of final causality, which Aristotle controversially believes is the primary and ultimate explanation of why there is change in the first place.

Had those brief 15 lines constituting chapter 5 dropped out of the tradition, I do not believe we would have missed anything significant as regards the psychological *mechanisms* of thought. But we would have missed something of great importance to Aristotle: namely, how mind fits into the world and where it tends, and above all, how we, like the heavenly spheres, are moved in all we do through our imperfect imitation of God.

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