On Professor Berti's Interpretation of the Causality of the First Unmoved Mover

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FOR much of his academic life Professor Enrico Berti held what he calls the "traditional interpretation" about the causality of the first unmoved mover.[1] According to this interpretation, the first unmoved

[1] Berti speaks of the contrast between his earlier and later views in, for instance, Enrico Berti, *Nuovi studi aristotelici: II—Fisica, antropologia, metafisica* (Brescia: Morcelliana, 2005), 8 and Enrico Berti, *Aristotele: Dalla dialettica alla filosofia prima, con saggi integrativi* (Milan: Bompiani, 2004), 83–85. Other places where he treats the theme are: Enrico Berti, "Da chi è amato il Motore immobile? Su Aristotele, *Metaph.* XII 6–7," *Méthexis* 10 (1997): 59–82; Enrico Berti, "Il movimento del cielo in Alessandro di Afrodisia," in *La Filosofia in Età Imperiale: Le Scuole e le Tradizioni Filosofiche* (*Atti del Colloquio Roma, 17–19 Giugno 1999*), ed. Aldo Brancacci (Naples: Bibliopolis, 2000), 227–43; Enrico Berti, "La causalità del Motore immobile secondo Aristotele," Gregorianum 83 (2002): 637–54; Enrico Berti, *Struttura e significato della Metafisica di Aristotele* (Rome: EDUSC [Edizioni Università della Santa Croce], 2006), 135–59, and Enrico Berti, "Ancora sulla causalità del motore immobile," *Méthexis* 20 (2007): 7–28. The two articles where Berti's position is set out most concisely are those published in 1997 and 2002 (see below, note 3). Henceforth, these two articles will be referred to as Berti, "Da chi?" and Berti, "Causalità," respectively.

A couple points of translation. First, Berti often speaks of "il Motore immobile" when he clearly means the first unmoved mover. The title of one of the articles we shall be studying, "Da chi è amato il Motore immobile?" is a case in point. In the present essay, I tend to use the fuller expression. Secondly, Aristotle posits a number of celestial spheres (by one count, 49), each of which is called a "heaven" (in Greek, οὐρανός). The first heaven—or the farthest sphere—is sometimes understood as embracing the whole "sky" and, in such cases, the term "the heaven" (ὁ οὐρανός) is equivalent to our "the heavens." But to use the expression "the heavens" in such contexts would cause confusion since the term

mover moves the first sphere—the celestial sphere most distant from earth, to which are attached the fixed stars—as its final cause. That is, as Aristotle says in *Metaphysics* XII 7, it moves the first sphere in the way proper to "the object of desire and the object of thought, [which] move without being moved"; or, as he puts it a few lines later, the first unmoved mover moves the first sphere "as object of love, and by means of that which is moved it moves the other things."[2] Professor Berti has now rejected this interpretation, arguing first in 1997 that the first unmoved mover is not the final cause of the first celestial sphere but only of itself, and then in 2007 that the same mover is not final cause at all but only efficient cause. In this essay, I will be defending the traditional interpretation—at least with respect to the idea that the first unmoved mover is the final cause of the first celestial sphere.

My procedure will be as follows. In section I, I give a summary of Berti's position, as set out in two articles: the 1997 article just mentioned and another that appeared in 2002.[3] In section II, I discuss Aristotle's

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could also refer to Aristotle's plural heavens (the celestial spheres), which present distinct philosophical issues having to do with their relationship with the first heaven and its unmoved mover. In the present essay, therefore, the word "heaven" can mean, depending on the context, either the first heaven or what we call "the heavens." The word "heavens" refers to the various celestial spheres.

[2] κινεῖ δὲ ὧδε τὸ ὀρεκτὸν καὶ τὸ νοητόν· κινεῖ οὐ κινούμενα—*Metaph*. XII 7, 1072a26–27; κινεῖ δὲ ὡς ἐρώμενον, κινουμένῳ δὲ τἆλλα κινεῖ—*Metaph*. XII 7, 1072b3–4. Ross (see cite just below), with no manuscript support, gives instead: κινεῖ δὴ ὡς ἐρώμενον, κινούμενα δὲ τἆλλα κινεῖ. These "other things" are presumably the other celestial spheres, which in turn influence events farther below, so that the traditional interpretation (if not the early Berti) usually recognizes a teleological ordering of the natural world with respect, ultimately, to the first unmoved mover.

In my English translations of Aristotle, where (as here) Berti has provided an Italian translation, I render that into English. For the Greek text of 1072b3–4, Berti follows Jaeger [Werner Jaeger, ed., *Aristotelis Metaphysica*, Oxford Classical Texts (Oxford: Clarendon, 1957)] rather than Ross [W. D. Ross, *Aristotle's* Metaphysics: *A Revised Text with Introduction and Commentary*, 2nd ed. (Oxford: Clarendon, 1953)].

[3] The two articles are (in order) Berti, "Da chi?" and Berti, "Causalità" (see above, note 1). The second reprises many of the arguments of the first, but also adds arguments. My synthesis here of Berti's position takes into consideration primarily these two articles, and not the 2007 article (Berti, "Ancora sulla causalità del motore immobile") because this more recent piece presupposes the argumentation of the earlier two. If the earlier arguments fall (or are weakened), the later argument falls (or is weakened) as well. The reading of *Metaph*. XII 7 found in the 2007 article is basically a radicalization and extension of the idea that, when at 1072b3 Aristotle speaks apparently of the first unmoved mover as an object of love, he is speaking figuratively. The section in which he presents "a new interpretation of

understanding of circular motion, as set out in two passages in the *Physics*. In Berti's view, the movement of the first sphere creates difficulties for our understanding of its relationship with the first unmoved mover. In my view, these passages in the *Physics* suggest that we ought to be very cautious in attributing movement to the first celestial sphere. In section III, I consider a passage in *Eudemian Ethics* I 8, where Aristotle says that nothing immobile can be practical [1218b5–6]—a passage that is important for Berti's argument that the first unmoved mover is independent of all movement. In section IV, I consider Aristotle's remark in *Metaphysics* XII 7 (1072a30–b1) regarding parallel series (or columns), arguing that Berti has overlooked a passage in *De sensu et sensibilibus* that helps us to interpret this remark. In section V, I argue that *De caelo* II 12, which Berti maintains supports his position that final ends are internal to the natures to which they pertain, goes quite contrary to his position. Finally, in section VI, I put forward some ideas regarding the connection between the first unmoved mover's final and efficient causality.

In *De caelo* II 12, as he prepares to confront the problem of the disparate complexity of the various motions of the celestial bodies, Aristotle says that "on these questions it is well that we should seek to increase our understanding, though we have but little to go upon, and are placed at so great a distance from the facts in question."[4] The same attitude recommends itself in the present study of the Aristotle's understanding of the causality of the first unmoved mover, especially as it is expressed in *Metaphysics* XII. It is well worth our while studying the relevant texts, for whether or not we get Aristotle right, we will learn something about how natural theology works (or ought to work); but, because of the recalcitrant character of the material we have to work with—in particular, the corrupt state of the text of *Metaphysics* XII and the mind-numbing conciseness of its argumentation—we ought all also to acknowledge that various interpretations of the data are possible. As Aristotle says of the stars, we have but little to go upon and we stand at a great distance from the facts in question.

Metaph. XII 7, 1072a26–b4" finishes with the remark: "Therefore, I would totally exclude the idea that the unmoved mover of the heaven should be, besides efficient cause, also final cause, thereby eliminating the ambiguity that remained in my earlier writings" [Berti, "Ancora sulla causalità del motore immobile," 21]. As mentioned in note 1, Berti discusses our theme also elsewhere.

[4] 292a14–17; Revised Oxford Translation [*The Complete Works of Aristotle: The Revised Oxford Translation*, ed. Jonathan Barnes (Princeton, NJ: Princeton UP, 1984)].

I. Professor Berti's Position

The traditional interpretation of *Metaphysics* XII 7, according to which the first unmoved mover is final cause of the first sphere, is, says Berti, "in contrast with that which is found in *Metaphysics* XII 6, that is, that the unmoved mover is essentially efficient and not only final cause."[5] *Metaphysics* XII 6 contains a criticism of Plato's Forms, which cannot serve as the first principle (or first principles) of all, says Aristotle, because, even if they could be said to be "capable of moving and doing" [κινητικόν ἢ ποιητικὸν—

[5] Berti, "Da chi?" 59. The Italian of the last phrase is ". . . il Motore immobile è essenzialmente causa efficiente e non solo causa finale." The contrast between the traditional interpretation and the non-traditional is, perhaps, not as clear as one might wish. Berti includes among the traditional interpreters both Thomas Aquinas and W. D. Ross [Berti, "Da chi?" 68–71], even though, while insisting that the first unmoved mover is final cause, neither denies that it is also efficient cause—and, indeed, Thomas Aquinas is quite insistent that God is efficient cause. [See Ross, *Aristotle's* Metaphysics, vol. 1, cxxxiv]. In Thomas, see: *ScG* I, c. 13, par. 33 (§113) ("Ergo oportet ponere primam causam efficientem esse: quae Deus est"), also *ScG* II, c. 6, par. 2 (§879) ("Ostensum est enim supra [apud I, c. 13, par. 33 (§113)], per demonstrationem Aristotelis [*Metaph*. II 1, 993b23–31], esse aliquam primam causam efficientem, quam Deum dicimus"). See also *ST* I, q. 3, a. 4c ("Deum dicimus esse primam causam efficientem").]

On the other hand, Giacon and Fonseca—two Jesuits whom Berti associates with the rejection of the traditional position—while downplaying, as Berti notes, the first unmoved mover's final causality, do not go so far as to say that its final causality has only to do with itself. For Fr. Giacon, the first unmoved mover's final causality is not isolated from its efficient causality; Aristotle's characterization in *Metaph*. XII 7 as final cause of what was described in *Metaph*. XII 6 as the first efficient cause is just his way of explaining how "the first efficient cause, which moves without being moved, is, formally speaking, an absolutely immobile mover" [Carlo Giacon, *La causalità del motore immobile* (Padua: Antenore, 1969), 86]. And Giacon adds: "The moving, however, qua final cause does not exclude, nor does it substitute for, the moving of the efficient cause: it is in order that the efficient cause might complete its proper causation that the final cause completes its" [Giacon, 87]. For Petrus Fonseca, the first mover is the "primum movens quod ipsum est primum appetibile"; it is the "finis . . . propter quem participatione quadam similitudinis imititivae obtinendum, inferiores intelligentiae orbes coelestes movent" [Petrus Fonseca, *Commentariorum in Metaphysicorum Aristotelis Stagiritae libros* (Hildesheim: G. Olms, 1964), IV 106aD–E (Cologne, 1615–29)]. Berti praises Fonseca for not putting forward the traditional interpretation: "According to [Fonseca] the unmoved mover does not move the heaven in as much as it is desired by it because such desire would not explain the movement of the heaven but would indicate only what it is similar to, that is, it would make of the first mover solely a final cause and not truly efficient" [Berti, "Da chi?" 69]. Berti attributes such a theory to Alexander of Aphrodisias—and criticizes him for it [Berti, "Da chi?" 67]. See also Giacon, *La causalità del motore immobile*, 134–36.

1071b12], they would have to be that way always, as is his first unmoved mover, who is pure act. For this reason, neither does Plato's "world soul" do the trick, since a soul involves potency as well as act. By definition, potency might not be in act, but the activity of the principle of all is (and must be) eternal.[6] Berti acknowledges that in book one of the *Metaphysics* Aristotle recognizes that Plato holds that the Forms are the active cause of both being and becoming; but, as Berti also argues, Aristotle maintains that Plato's claim is false: "the things that participate in them do not come into being unless there is a moving cause."[7] Clearly, the Form of the Good, which—presuming it exists—is "pursued and loved for itself," would not suffice as the first principle of all, "because it is not activity" [Berti, "Da chi?" 61].

Another problem in reconciling *Metaphysics* XII 6 and XII 7 if one holds to the traditional interpretation is that the first sphere does not move toward the first unmoved mover as *toward* an object of desire but rather rotates and (as it is said) thereby imitates the first unmoved mover inasmuch as circular motion is the type of local motion that comes closest to stillness. Moreover, if the Platonic Form of the Good as loved for itself does not supply the activity demanded by *Metaphysics* XII 6, neither would it as "imitated"—another Platonic concept connoting static *receiving* of attention and no more. Following this line of reasoning, the highest principle would be an exemplary and not a final cause, notes Berti, but Aristotle says clearly in *Metaphysics* XII 7 that it is a final cause.

According to Aristotle, there are two types of final cause: that for the benefit of which something acts and that with a view to which something acts. Since it is impossible for God to benefit from anything (otherwise he would not be unmoved), he cannot be final cause in the first sense [Berti, "Da chi?" 64–65; Berti, "Causalità," 644–45]. But there are also two ways in which something can be an end "with a view to which something acts," suggests Aristotle in *Metaphysics* IX 7: it can either come at the end of a movement or it can be present throughout the movement—or, rather, throughout the πρᾶξις (which, strictly speaking, is not a movement).[8] The first unmoved mover (as end of itself) is certainly an end in this latter sense, that is, an end in itself, since it moves toward nothing. Although, however, in this sense, an end, the first unmoved mover is not a *practical* end, since, as

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[6] Berti connects this argument with *Metaph*. XII 6, 1071b17–20 [Berti, "Da chi?" 61].

[7] These are Berti's words [Berti, "Da chi?" 60], although he makes reference to *Metaph*. I 7, 991b3–5: ἐν δὲ τῷ Φαίδωνι οὕτω λέγεται, ὡς καὶ τοῦ εἶναι καὶ τοῦ γίγνεσθαι αἴτια τὰ εἴδη ἐστίν· καίτοι τῶν εἰδῶν ὄντων ὅμως οὐ γίγνεται τὰ μετέχοντα ἂν μὴ ᾖ τὸ κινῆσον . . .

[8] *Metaph*. XII 7, 1072b2–3; but see below, note 12.

Aristotle says in *Eudemian Ethics* I 8, nothing immobile can be practical: πρακτὸν δὲ τὸ τοιοῦτον ἀγαθόν, τὸ οὗ ἕνεκα. οὐκ ἔστι δὲ τὸ ἐν τοῖς ἀκινήτοις [1218b5–6]. This thesis of Aristotle's is difficult to reconcile, argues Berti, with the idea that the first unmoved mover is the final cause of the movement of first sphere, for that would make it a practical end or the good toward which such movement proceeds [Berti, "Da chi?" 65]. It also suggests, he says, that Aristotle's comparison [*Metaphysics* XII 7, 1072a26–27] of the causality of the first unmoved mover to that of an object of desire or thought is just a "comparison," since the passage in the *De anima* from which the idea is drawn [III 10, 433b16] says clearly that such an immobile object as it has in mind must be practical (a πρακτὸν ἀγαθόν—433b17), exactly that which is excluded (according to Berti) for the first unmoved mover.[9]

Berti finds support for his approach also in a very obscure remark in *Metaphysics* XII 7, a remark that follows upon Aristotle's serial assertions that (1) the motion of the first sphere is circular [1072a22], that (2) it is moved by something which moves but is not moved [1072a25], that (3) this is the way in which the objects of desire and intellect move [1072a26], and that (4), at the highest level, the object of desire and the object of intellect coincide [1072a27] since at that level desire for the apparent good is not an issue [1072a27–28]. That is, having made all these assertions, Aristotle remarks: "And the intellect is moved by the intelligible, and one of the two series is per se [καθ' αὑτήν] intelligible" [1072a30–31].[10] Aristotle speaks often of such parallel series or columns, which are sometimes associated with Pythagorean series of opposites;[11] but Berti sees in this remark a shift on the part of Aristotle to consideration of "objects intelligible for themselves" as distinct from "objects intelligible for us" [Berti, "Causalità," 643]. This would be a confirmation of his thesis that, when Aristotle speaks in *Metaphysics* XII 7 about the first unmoved mover, he is speaking about something that stands outside of the practical altogether; that is, it would confirm his thesis that Aristotle's talk (within a few lines) of the first unmoved mover's moving "as loved" [*Metaphysics* XII 7, 1072b3] is "just an analogy, that is, a comparison" [Berti, "Causalità," 644]. The first unmoved mover is not a practical end—that is to say, not an end completing a movement—but rather an end for itself and in itself [Berti, "Causalità," 645].

Berti connects all this with the distinctions made above regarding ways of being a final cause:

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[9] Berti, "Causalità," 641–42; see also Berti, "Ancora sulla causalità del motore immobile," 17–20.

[10] See Berti, "Causalità," 642.

[11] Hermannus Bonitz, *Index Aristotelicus* (Berlin: De Gruyter, 1961), vol. 5 of *Aristotelis Opera* 736b33–737a19. See also Ross, *Aristotle's* Metaphysics, vol. 2, 376.

> So then, the traditional interpretation, according to which the unmoved mover would be the end of the heaven and would move it as object of desire on the part of the heaven, not only does not find in this passage any foundation but is explicitly excluded by the affirmation that the unmoved mover is not an end "for something" (τινὶ) [Berti, "Causalità," 645].[12]

The first unmoved mover's activity is not for its own advantage (that is, the end for someone: τινὶ τὸ οὗ ἕνεκα), since there is no such thing as its "advantage"; but the first unmoved mover (or its activity) is also not for the advantage of the first sphere [Berti, "Causalità," 645; Berti, "Da chi?" 65].

Berti finds support for his approach also in *De caelo* II 12. The argument of this chapter is curious—even amusing. Aristotle is puzzled by the fact that the motion of the first sphere, most distant from us and therefore of the "fixed stars," is simple, consisting of a single movement; the motion of the lower "astronomical bodies" is more complicated, consisting of many movements, arising from the many spheres that effect their motion; but as we get closer to earth the motion of the celestial bodies becomes again simple [291b28–292a9]: the motion of the moon and the motion of the sun are uniform and the earth itself is utterly static [292b20].[13] Aristotle's explanation (which, as we have noted, he acknowledges to be based on minimal information [292a15–16]) is that the heavenly bodies are like men who require varying amounts of physical exercise with a view to remaining fit:

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[12] The word τινὶ comes from 1072b2. According to Jaeger and Ross, the text (of 1072b1–3) is as follows: ὅτι δ' ἔστι τὸ οὗ ἕνεκα ἐν τοῖς ἀκινήτοις, ἡ διαίρεσις δηλοῖ· ἔστι γὰρ τινὶ τὸ οὗ ἕνεκα καὶ τινός, ὧν τὸ μὲν ἔστι τὸ δ' οὐκ ἔστι [*Metaph*. XII 7, 1072b2–3]. But preferable is the reading found in MSS E and J: ὅτι δ' ἔστι τὸ οὗ ἕνεκα ἐν τοῖς ἀκινήτοις, ἡ διαίρεσις δηλοῖ· ἔστι γὰρ τινὶ τὸ οὗ ἕνεκα, ὧν τὸ μὲν ἔστι τὸ δ' οὐκ ἔστι (that is, eliminating the καὶ τινός). (This reading of *Metaph*. XII 7, 1072 b1–3 is maintained also by Berti [Berti, "Causalità," 645; Berti, "Ancora sulla causalità del motore immobile," 20; Berti, "Il movimento del cielo in Alessandro di Afrodisia," 229–30].) The text, however, does not deny that the first unmoved mover can be end "for something," as Berti suggests. In the passage Aristotle is saying that there is no difficulty saying that immobile things are ends because there are two ways in which an end can be end for something (τινὶ—1072b2): it can be something at which the other thing must arrive (and which therefore does not yet exist for it) or it can already exist for it. In the second case, from the point of view of the thing which is not immobile, the relationship is not one of "seeking to get to x" but one of contemplating something that is already present. See below, note 24.

[13] I call these "astronomical bodies" because earth would not be, according to Aristotle, a celestial body (i.e., a body found in the heaven). Etymologically the word "astronomical" also suggests bodies found in the heaven (ἄστρον = star); but, because it is hidden in the linguistic roots of the word, perhaps the anomaly is less strident.

> . . . one is in good condition without exercise at all, another after a short walk, while another requires running and wrestling and hard training, and there are yet others who however hard they worked themselves could never secure this good, but only some substitute for it [ἕτερόν τι].[14]

So, says Aristotle, "that which stands in the best condition has no need of action: it is itself the end (ἔστι γὰρ αὐτὸ τὸ οὗ ἕνεκα), whereas the action always requires two things, that is, both the end and that which looks to the end."[15]

All this has consequences not only for our understanding of the first unmoved mover but also for our understanding of the celestial entities, especially the first sphere. As to the first unmoved mover, it means, says Berti, that "also in *Metaphysics* XII 7, when it is said that the unmoved mover is an end, the idea is not that it is the end 'for something' different from itself, for in such a case it would have to be realized by means of an action, but it is end for itself, as befits the supreme good" [Berti, "Causalità," 647]. At the other end of the scheme, the sun and the moon do move but their movements are minimal, "for they do not ever reach the final goal but attain to the 'most divine principle' (θειοτάτη ἀρχὴ) to the extent that they are able" [Berti, "Causalità," 647]. This shows, says Berti, that "the 'most divine principle' has nothing to do with the unmoved mover but is the best for each of the celestial bodies, that is, its end, the good reachable by it, as the example of health eloquently demonstrates. Also the first heaven, therefore, has as its end not the unmoved mover but its proper end . . . " [Berti, "Causalità," 647].

II. Circular Motion

Obviously, there is a great deal going on in this, Berti's theory of the causality of the first unmoved mover. We should be grateful to him for opening for us a whole gamut of issues that have been neglected in recent years.[16]

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[14] *De caelo* II 12, 292a25–28 [Revised Oxford Translation].

[15] Τῷ δ' ὡς ἄριστα ἔχοντι οὐθὲν δεῖ πράξεως· ἔστι γὰρ αὐτὸ τὸ οὗ ἕνεκα, ἡ δὲ πρᾶξις ἀεί ἐστιν ἐν δυσίν, ὅταν καὶ οὗ ἕνεκα ᾖ καὶ τὸ τούτου ἕνεκα [*De caelo* II 12, 292b4–7]. The translation is my translation of what Berti gives: "colui che sta nel modo migliore non ha bisogno di nessuna azione: è lui stesso infatti il fine (ἔστι γὰρ αὐτὸ τὸ οὗ ἕνεκα), mentre l'azione richiede sempre due cose, cioè sia il fine sia ciò che è in vista di questo" [Berti, "Causalità," 647].

[16] Berti's interest in these issues is shared now by a number of other scholars: see, for instance, Mary Louise Gill, "Aristotle on self-motion," *Aristotle's Physics: a collection of essays*, ed. Lindsay Judson (New York: Clarendon Press, 1995), 243–65 Thomas De Koninck, "La 'pensée de la pensée' chez Aristote," *La question de Dieu selon Aristote et Hegel*, ed. Thomas De Koninck and Guy Planty-Bonjour (Paris: PUF, 1991), 69–151; Mary Louise Gill, "Aristotle on self-motion," *Self-motion:*

In order to achieve a proper understanding of the first unmoved mover's final causality, it is necessary to understand how Aristotle understands the circular movement of the first heaven or the first sphere. There are two factors to bear in mind here: first, the non-linearity of circular motion in general; secondly, the first sphere's peculiar status as the outermost of the 49 celestial spheres posited by Aristotle.[17] Regarding the first factor, Aristotle's core concept of a movement (or κίνησις) is of something's beginning at point A, going through point B, and finishing at point C, so that (as he says) any movement has a beginning, a middle, and an end. As Aristotle explains in *Physics* VIII 9, circular motion does not quite correspond to this model, since its point of departure and point of arrival are indefinite [ἀόριστα—265a32]:

> For why should any one point on the line be the limit rather than any other? For each of them is alike beginning, middle, and end, so that each is both always and never at a beginning and at an end. Therefore, in a way the sphere is both in motion and at rest, for each occupies the same place.[18]

Since every point on the periphery of the sphere (or, for that matter, on any spherical surface within the sphere) is "beginning, middle, and end," there is no favored point that would count as the completion of the sphere's movement, so that it is always moving; and yet it is also still since it (the sphere itself) always occupies the same place. Aristotle goes on to attribute all this, but especially the stillness, to the center of the sphere, which is at once the beginning, middle, and end of the distance traversed [τοῦ μεγέθους—265b4]—which, in fact, is no distance at all since the center *goes* nowhere. Since the center is on no theoretical spherical surface that is part of the sphere [διὰ τὸ ἔξω εἶναι τοῦτο τῆς περιφερείας—265b4–5] and yet the

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From Aristotle to Newton, ed. Mary Louise Gill and James G. Lennox (Princeton: Princeton UP, 1994), 15–34 (also in *Aristotle's Physics: A Collection of Essays*, ed. Lindsay Judson [New York: Clarendon Press, 1995] 243–65); Lindsay Judson, "Heavenly motion and the unmoved mover," *Self-motion: From Aristotle to Newton*, ed. Gill and Lennox, 155–71; Carlo Natali, "Cause motrice et cause finale dans le livre *Lambda de la Métaphysique d'Aristote*," *Essais sur la theologie d'Aristote: Actes du colloque de Dijon*, ed. M. Bastit and J. Follon (Louvain-la-Neuve: Éditions Peeters, 1998), 29–50.

[17] *Metaph.* XII 8, 1074a13–14 (accepting the emendation of ἑπτά to ἐννέα suggested by Sosigenes).

[18] τί γὰρ μᾶλλον ὁποιονοῦν πέρας τῶν ἐπὶ τῆς γραμμῆς; ὁμοίως γὰρ ἕκαστον καὶ ἀρχὴ καὶ μέσον καὶ τέλος, ὥστ' ἀεί τε εἶναι ἐν ἀρχῇ καὶ ἐν τέλει καὶ μηδέποτε. διὸ κινεῖταί τε καὶ ἠρεμεῖ πως ἡ σφαῖρα· τὸν αὐτὸν γὰρ κατέχει τόπον [*Physics* VIII 9, 265a32–b2].

motion of the sphere occurs with respect to it, any point outside the center will move *around* it as middle [περὶ τὸ μέσον] without ever going *toward* the "extreme" (the end) of a movement [πρὸς τὸ ἔσχατον], since the extremes (beginning and end) *are* the middle around—but not toward—which any point moves.[19] And so, Aristotle repeats, in a way, the whole sphere "both remains always at rest and moves continually."[20]

If this argument to the effect that any rotating sphere must be considered both at rest and in motion is open to dismissal as merely linguistic (such a dismissal being, however, less than convincing, since the issue *is* the meaning of the language Aristotle uses in referring to the activity of the first sphere), a related argument in the fourth book of the *Physics* (chapter five) and pertaining just (or primarily) to the first sphere's status as the outermost sphere is more concretely compelling—at least, if one puts oneself into the mindset of ancient Greek astronomy, recognizing the existence of celestial spheres, etc. In order for something to be said to move, there has to be a larger set of coordinates *against* which it is said to move. Given that beyond the universe there are no spatial coordinates (indeed, there is no "beyond" "there"—for the word 'beyond' itself implies the presence of coordinates), it makes no sense to speak, for instance, of moving the universe to the left or to the right. But, similarly, it makes no sense to speak of the universe "spinning," since spin presupposes a set of coordinates with respect to which any point on the surface of a sphere changes position (in a continuous manner).

This is not to say, however, that, in another sense, we cannot attribute "spin" to the universe. When a person standing inside the universe looks at the heaven and, in particular, at the stars embedded in the first sphere, he does see power there: the power of locomotion. Aristotle speaks of the movement of the universe as going from right to left (presumably since

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[19] The idea appears to be this. Presume that the end of the movement is on *some* theoretical spherical surface within the sphere; since the movement is around the center, it would be on a surface toward the center rather than toward the outer surface. As one searches for the appropriate theoretical spherical surface—that is, the one containing the end or extreme of the movement—the candidate spherical surfaces become smaller and smaller. None qualifies until one gets to the very center of the sphere, at which point there can be no real or definitive end point, since the center is at once beginning, middle, and end [265b3–4].

[20] αἴτιον δ' ὅτι πάντα συμβέβηκε ταῦτα τῷ κέντρῳ· καὶ γὰρ ἀρχὴ καὶ μέσον τοῦ μεγέθους καὶ τέλος ἐστίν, ὥστε διὰ τὸ ἔξω εἶναι τοῦτο τῆς περιφερείας οὐκ ἔστιν ὅπου τὸ φερόμενον ἠρεμήσει ὡς διεληλυθός (ἀεὶ γὰρ φέρεται περὶ τὸ μέσον, ἀλλ' οὐ πρὸς τὸ ἔσχατον), διὰ δὲ τὸ τοῦτο μένειν ἀεί τε ἠρεμεῖ πως τὸ ὅλον καὶ κινεῖται συνεχῶς [*Physics* VIII 9, 265b2–8].

the power of initiating action in human beings is usually on the right).[21] But this movement of the fixed stars from right to left—that is, from east to west—would not be perceived by someone standing outside the universe. Indeed, since no one *could* be standing outside the universe (in the sense of occupying a space not included in it, for the universe by definition includes all space), such movement does not exist.

We find this approach in the aforementioned chapter 5 of *Physics* IV. There Aristotle compares the universe as a whole to a mass of water that is not within any container whatsoever: there may be various movements of water within the larger mass, but the mass of water itself (which is presumably spherical) does not move:

> That body, outside of which there is some body that surrounds it, is in a place; when this is not the case, it is not. So, even if there should exist water that was not thus [i.e., surrounded], its parts will be moved (for the parts are surrounded by one another); the whole, however [τὸ δὲ πᾶν], will in a sense be moved, in a sense not.[22]

A few lines later he remarks that some things are per se "in a place," for instance, any body that is moved either locally or with respect to size. "But," he says,

> the heaven, as was said, as a whole [ὅλος] is nowhere nor is it in some particular place since no body surrounds it. But that with respect to which it is moved—with respect to *that* place there is also a place for the parts; for the parts are contiguous with one another.[23]

This conception of the first sphere as both moving and not moving—an idea that appears in so many words twice in *Physics* VIII 9 and once here in *Physics* IV 5—itself provides us with a way of dealing with many of the issues identified by Berti and presented above. Unlike the Platonic Ideas, the first sphere, under the influence of the first unmoved mover, is genuinely active and forceful, even though (as Aristotle requires) strictly

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[21] See *De caelo* II 2 (especially 285b17–19: τοῦ δ' οὐρανοῦ ἀρχὴ τῆς περιφορᾶς, ὅθεν αἱ ἀνατολαὶ τῶν ἄστρων, ὥστε τοῦτ' ἂν εἴη δεξιόν, οὗ δ' αἱ δύσεις, ἀριστερόν); *Physics* III 5, 205b34; *History of Animals* I 15, 494a27–494b1; *Progression of Animals* 4, 705b33–706a1 [κινεῖν γὰρ πέφυκε τὸ δεξιόν, κινεῖσθαι δὲ τὸ ἀριστερόν].

[22] Ὧι μὲν οὖν σώματι ἔστι τι ἐκτὸς σῶμα περιέχον αὐτό, τοῦτο ἔστιν ἐν τόπῳ, ᾧ δὲ μή, οὔ. διὸ κἂν ὕδωρ γένηται τοιοῦτο, τὰ μὲν μόρια κινήσεται αὐτοῦ (περιέχεται γὰρ ὑπ' ἀλλήλων), τὸ δὲ πᾶν ἔστι μὲν ὡς κινήσεται, ἔστι δ' ὡς οὔ [*Physics* IV 5, 212a31–34].

[23] ὁ δ' οὐρανός, ὥσπερ εἴρηται, οὔ που ὅλος οὐδ' ἔν τινι τόπῳ ἐστίν, εἴ γε μηδὲν αὐτὸν περιέχει σῶμα· ἐφ' ᾧ δὲ κινεῖται, ταύτῃ καὶ τόπος ἔστι τοῖς μορίοις· ἕτερον γὰρ ἑτέρου ἐχόμενον τῶν μορίων ἐστίν [*Physics* IV 5, 212b8–11].

speaking it involves no movement. The circular motion of the celestial spheres, and especially of the first sphere, is not movement (κίνησις) from one extreme to another but rather a πρᾶξις, such as has its end in every moment of itself [*Metaphysics* IX 6, 1048b18–35]. This approach also solves the problem of imitation—that is, the objection that imitation is a static relationship which, in any case, cannot explain *movement* on the part of the first sphere—by showing how the first sphere, in all its power, can be understood as (in a sense) not moving and therefore as doing the *same thing* as the unmoved mover that governs it.[24]

[24] In a series of lectures published in 2006, Berti considers an argument that makes use of the physical analysis of circular movement; the argument that Berti rejects maintains that the relationship between the first sphere and the first unmoved mover is a relationship of imitation. Says Berti: "That circular movement resembles immobility is true, for the rotation of a sphere with respect to itself is a movement but there is no change of place, because the sphere remains always in the same place; so, if there must be a movement that more than any other resembles immobility, one can say that it is rotary movement. It remains true, however, one does not see how the heaven can arrive at its end: realize its end" [Berti, *Struttura e significato della Metafisica di Aristotele*, 148]. The arguments in the present essay, however, do not exploit the idea that in circular movement there is no change of place (from left to right, for example), but rather the idea that in a certain sense it does not involve movement. It is true that "movement" so conceived does not attain its end, but that is a point in favor of the present interpretation. According to both arguments (that of *Physics* VIII 9 and that of *Physics* IV 5), there is no attempt on the part of the first sphere to "attain" to the first unmoved mover—for, in a certain sense, it does not move. In this sense, the first sphere imitates the first unmoved mover—or, more precisely, does the same thing that the first unmoved mover does: it remains immobile.

[In the final note of his contribution to the present volume, Berti takes issue with my understanding of the word ὁμοία at *Physics* VIII 10, 267b6, used in a context where Aristotle is speaking about the relationship between the first heavenly sphere and the first unmoved mover. I had taken the word in its usual sense of "similar" and thought that the similarity, attributed to the movement of the first sphere, must be *with* something else, that is, with that of the first unmoved mover. (I understood Aristotle as saying, however, that the movement of the first sphere was similar to that of the first unmoved mover in so far as it was not movement at all!) Berti says that all interpreters agree that the word must mean there "similar to itself" or "identical." I am very happy to accept this interpretation, for it removes from Aristotle's theory—and the present interpretation—any suggestion that the relevant "movement" of the first sphere *approximates* something else (with which it is not identical). On Berti's (and now my) interpretation, the word ὁμοία at *Physics* VIII 10, 267b6 has reference simply to the sphere: its movement (as seen by us) is continuous (as we might put it, "always like unto itself"), and yet, as Aristotle says in the phrase immediately preceding that in which the word ὁμοία appears, "it is necessary that the moved thing [the first sphere] be subject to no change with respect to it [the first unmoved mover] (267b5–6)." So, the first

III. Practical Stillness: *Eudemian Ethics* I 8, *De anima* III 10, and *Metaphysics* XII 7

But invoking Aristotle's conception of circular motion leaves untouched the various more textual arguments put forward by Berti, so we must address also those. As we have seen, Berti argues that the first sphere cannot have the first unmoved mover as its final cause because that would make it a practical end, such as would be excluded by Aristotle's remark in *Eudemian Ethics* I 8 that nothing immobile can be practical [1218b5–6]. Berti's thesis would be that movement by the first sphere toward the first unmoved mover is excluded by the *Eudemian Ethics* I 8 dictum. We can deal with this latter in the manner already set out, that is, by pointing out that the first sphere both moves and does not move—and, indeed, is probably best said *not* to move, since movement presupposes a set of larger coordinates against which it might be measured. This response would be more than a merely verbal way of avoiding Berti's conclusions, for the first sphere really *is* immobile with respect to its mover; and yet it still leaves standing an argument that might appear to interfere with a non-metaphorical interpretation of the remark in *Metaphysics* XII 7 that the first unmoved mover moves "as object of love" [1072b3]. One will recall that the remark in *Eudemian Ethics* I 8 is used by Berti to diminish the force also of the related remark in *Metaphysics* XII 7, that the first unmoved mover moves in the way that any object of desire or of thought [τὸ ὀρεκτὸν καὶ τὸ νοητόν—1072a26] moves. This appears to be a reference to the *De anima* III 10, 433b13–18, where any unmoved mover, understood as object of desire or thought, is described as a practical good [τὸ πρακτὸν ἀγαθόν—433b16]; but, as Berti argues, since Aristotle says in *Eudemian Ethics* I 8 that immobile things cannot be practical, the comparison in *Metaphysics* XII 7 to everyday objects of desire or thought is just that: a comparison, like the comparison to an object of love.

Regarding this line of argumentation, then, the first thing that needs to be said is that Aristotle's saying in *De anima* III 10 that an object of desire or thought, although an unmoved mover, is a practical good is problematic in its own right, for a few lines earlier Aristotle says that the practical is that which can be otherwise than it is: πρακτὸν δ' ἐστὶ τὸ ἐνδεχόμενον καὶ ἄλλως ἔχειν [433a29–30]. Trendelenburg's solution to this problem is reasonable. He says that the definition of the practical at 433a29–30 does not contradict the idea that the mover here is unmoved:

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sphere both moves continuously and (in a distinct sense) does not move. I discuss *Physics* VIII 10, 267b4–6 below, in section VI.]

"For, in so far as it moves desire, the unmoved thing is itself placed beyond the vicissitudes of the soul; in so far as appetite tends toward it, it admits of alterations."[25] Trendelenburg then quotes *Metaphysics* XII 7, 1072a26–30, that is, the passage where Aristotle speaks of the first unmoved mover as τὸ ὀρεκτὸν καὶ τὸ νοητόν.

It is entirely appropriate that Trendelenburg should cite this latter passage, for his solution to the problem of the unmoved but practical good demonstrates that the concept of an object of desire and thought does not involve *essentially* that object's being practical. The object's characterization depends upon the effect that it has upon the thing that is inclined toward it. In the *De anima* passage, the unmoved movers clearly include human goods such as food or drink—things toward which men move. In as much as these unmoved movers find themselves in variable relations with men, they can be called practical. In *Metaphysics* XII 7, 1072a26–30, by contrast, the object of desire and thought moves not the appetites of the human soul but rather the love and admiration of the first sphere.[26] The rapport between the first sphere and its unmoved mover does not involve movement; therefore, we need not—and cannot—call the first unmoved mover practical. But the reason for this is not that it is not final cause like the objects of *De anima* III 10 but that the thing that loves it does not move toward it.

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[25] "Si τὸ πρακτὸν ita supra definiebatur, ut id esset, quod etiam aliter se habere posset: quod nunc immotum dicitur, noli repugnat. Quatenus enim cupidinem movet, ipsum immotum est extra animi vicissitudines positum; quatenus appetitus ad id ipsum tendit, mutationes admittit" [Friedrich Adolf Trendelenburg, ed., *Aristotelis de anima libri tres* (Jena: Sumptibus Walzii, 1833), 534]. Trendelenburg goes on to quote not just *Metaph*. XII 7, 1072a26–30 but also *Movement of Animals* 6, 700b35–701a2.

It is interesting that the same problem of a mover that "suffers" (that is, undergoes something) and does not suffer turns up in *De anima* III 5. At 430a12–13, Aristotle says that a craft "suffers" with respect to the material upon which it operates: ἡ τέχνη πρὸς τὴν ὕλην πέπονθεν. (Here the craft, and not the craftsman, is the efficient cause [see *Physics* II 3, 195a6]—and a craft does not move.) But, within a few lines, Aristotle will say that the analogue of the craft, the active intellect, is ἀπαθὴς [430a18] (impassible). In his commentary, Trendelenburg counsels us not to put too much emphasis on the word πέπονθεν: "ne premas πέπονθεν; perverteres enim rationem, quum ars agat, arti materia subiecta sit. πέπονθεν, nihil aliud quam ἔχει" [Trendelenburg, 488]. Similar to what is seen in *De anima* III 10, the cause "suffers" only to the extent to which the subject changes.

[26] Aristotle suggests—but by no means apodictically—that the spheres have souls: see *De caelo* II 2, 285a29–30 (ὁ δ' οὐρανὸς ἔμψυχος καὶ ἔχει κινήσεως ἀρχήν), II 12, 292a20–22 (δεῖ δ' ὡς μετεχόντων ὑπολαμβάνειν πράξεως καὶ ζωῆς· οὕτω γὰρ οὐθὲν δόξει παράλογον εἶναι τὸ συμβαῖνον), 292b1–2 (Διὸ δεῖ νομίζειν καὶ τὴν τῶν ἄστρων πρᾶξιν εἶναι τοιαύτην οἵα περ ἡ τῶν ζῴων καὶ φυτῶν) (emphasis, of course, added). Whatever his hesitation, it is apparent in these passages that Aristotle regards the

In *Metaphysics* XII 7, Aristotle says not that the first unmoved mover is good but that it is beautiful [καλόν—1072a28]. The relationship between something beautiful and that which loves it is not a relationship of movement, but this does not make things such that it is not a relationship of final causality. Aristotle says in *Metaphysics* XIII 3 (that is, in his philosophy of mathematics) that "the good and the beautiful are different: for the former is always within action, but the beautiful is also in immobile things."[27] (In the remark in *Eudemian Ethics* I 8, where Aristotle says that the practical is not found among immobile things [οὐκ ἔστι δὲ τὸ ἐν τοῖς ἀκινήτοις—1218b5–6], he also speaks of the beautiful, distinguishing it from the good.)[28] His point in *Metaphysics* XIII 3 is that it is quite possible to love numbers, even though no one "goes after" them as one goes after food or drink. Similarly, the first sphere's attitude toward the first unmoved mover is not that of a human soul toward a practical good, but there is no reason why we have to assimilate all desire to that model since desire [ὄρεξις] for Aristotle includes not just the lower cravings (such as longing [ἐπιθυμία]) but also βούλησις or will.[29] Aristotle speaks of the

celestial spheres as capable of initiating movement [κίνησις] and action [πρᾶξις]. Part of Berti's argument that the first unmoved mover is not the object (the final cause) of the first sphere's motion is the claim that in *Metaph*. XII Aristotle never *says* that the celestial spheres are animated. But that is a *petitio principii*: he is using the conclusion of his argument as a premise. As Berti acknowledges, according to most accounts, Aristotle does presume in *Metaph*. XII 7 that the first sphere is animated in some way or another (as it would have to be if it has an ὀρεκτὸν/νοητόν). There is certainly more evidence in Aristotle for the thesis that the celestial spheres are animated in some way than for its denial. See Carlo Natali, *Cosmo e divinità: la struttura logica della teologia aristotelica* (L'Aquila: Japadre, 1974), 83; see also Ross, *Aristotle's* Metaphysics, vol. 1, cxxxvi.

[27] τὸ ἀγαθὸν καὶ τὸ καλὸν ἕτερον (τὸ μὲν γὰρ ἀεὶ ἐν πράξει, τὸ δὲ καλὸν καὶ ἐν τοῖς ἀκινήτοις) . . . [1078a31–32].

[28] ἀλλὰ πολλαχῶς τὸ ἀγαθόν, καὶ ἔστι τι αὐτοῦ καλόν, καὶ τὸ μὲν πρακτὸν τὸ δ' οὐ πρακτόν. πρακτὸν δὲ τὸ τοιοῦτον ἀγαθόν, τὸ οὗ ἕνεκα. οὐκ ἔστι δὲ τὸ ἐν τοῖς ἀκινήτοις [*Eudemian Ethics* I 8, 1218b4–6].

[29] See *De anima* II 3, 414b2: "For tendency [ὄρεξις] can be desire [ἐπιθυμία], impulse [θυμὸς] and will [βούλησις]." See also III 10, 10,433a22–36: "Now, while the intellect [νοῦς] appears not to move without tendency (since the will [βούλησις] is a tendency [ὄρεξις] and, when one moves in conformity with reason [κατὰ τὸν λογισμὸν], one moves also in conformity with the will), tendency moves also against reason, for desire [ἐπιθυμία] is a type of tendency. The intellect, therefore, is always correct, while tendency and imagination [φαντασία] can be either correct or incorrect. So, it is always the object of tendency [τὸ ὀρεκτόν] that moves, but this is either the good or that which appears good [τὸ φαινόμενον ἀγαθόν]—not, however, any good but the good that is practicable [τὸ πρακτὸν ἀγαθόν]. The practicable is that which can also be otherwise." This translation has the advantage of not using 'desire' to translate ὄρεξις. This in turn makes it more plausible

unmoved mover not only as beautiful but also as object of the will: βουλητὸν δὲ πρῶτον τὸ ὂν καλόν [*Metaphysics* XII 7, 1072a28].

So, I would agree with Berti that Aristotle's reference in *Metaphysics* XII 7 to *De anima* III 10 cannot be taken as saying that the relationship between the first celestial sphere and the first unmoved mover is *precisely* the relationship that exists between the human soul and (for instance) food or drink;[30] but this does not mean that there can be no relationship of final causality between the sphere and its unmoved mover—or, ultimately, that all the first unmoved mover's final causality must concern itself. Aristotle has good reason to refer in *Metaphysics* XII 7 to the unmoved movers that are practical goods (as in *De anima* III 10), for he wants to identify a relationship between an unmoved mover and something distinct from it. This thing that the first unmoved mover moves is quite different in condition and attitude from the human soul when it desires food and drink; but it is turned toward an object of desire and thought [τὸ ὀρεκτὸν καὶ τὸ νοητόν—1072a26]. The activity of the celestial spheres does not involve movement [κίνησις] in the strict sense; nonetheless, the object of their attention fills them with a certain tranquil and steady power: the power of the love of beauty.

IV. Parallel Series: *Metaphysics* XII 7 and *De sensu et sensibilibus* 7

As we have seen, Berti also argues that Aristotle's remark at *Metaphysics* XII 7, 1072a30–31 that "the intellect is moved by the intelligible, and one of the two series is per se intelligible [νοητὴ. . . καθ' αὑτήν]" (which follows the remarks we have been considering about the first sphere's being moved by an unmoved mover in the way in which objects of desire and intellect move the human soul) is in effect a shifting of the discourse out of the practical realm and into a consideration of the interior life of the first unmoved mover itself, which loves there—and is loved by—no other entity than itself [Berti, "Causalità," 643].

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that the first unmoved mover might be an object of the first sphere's ὄρεξις (that is, an ὀρεκτόν). Aristotle says at *Metaph.* XII 7, 1072a27–30 that, in the case of the first sphere, ὄρεξις (tendency) is not ἐπιθυμία [desire] but βούλησις [will]. In the main text, however, I use "object of desire" as the translation of ὀρεκτόν since Berti uses that translation (*oggetto di desiderio*); I translate ἐπιθυμία as "longing." On the issue whether the celestial spheres are animated, see note 26 above.

[30] The resemblance between the objects of *De anima* III 10 and the first unmoved mover becomes closer when the object of the human soul is beauty. Aristotle associates circular motion with the human soul: *Physics* IV 5, 212b12; cf. *De anima* I 3, 407b5–9. This would not be a going toward practical objects (such as food and drink) but something closer to philosophical contemplation.

It will be worth our while to consider the passage in question, move-by-move, taking note in particular of the way the argument flows. Aristotle begins (at 1072a21) by saying that the motion of the first sphere is circular and eternal but also that, since it moves and is moved, it cannot be the ultimate explanation of its own movement: "there has to be, as a consequence, something that moves without being moved and which is eternal and substance and act" [1072a25–26]. He is obviously referring to the first unmoved mover. Then comes the remark with which we are now familiar: "And in this way the object of desire and the object of intellect move: they move without being moved" [1072a26–27]. Next he interjects an argument to the effect that, in the present case, we need not distinguish the object of desire from the object of intellect, since the first sphere cannot mistake some other object of love for its own unmoved mover, as we can when longing rather than will takes the lead.[31] (As we have seen, the desire [ὄρεξις] of the first sphere is will [βούλησις] and not longing [ἐπιθυμία].)[32]

At this point comes the sentence where Berti descries a shift. Writes Aristotle:

> And the intellect is moved by the intelligible, and one of the two series is per se intelligible. In this series, substance is first and, within substance, first is that which is simple and in act. . . .[33]

What on earth does this mean? The obscurity of the remark itself supports Berti's thesis that we have here a shift of perspective. The commentators speak, notes Berti, of the Pythagorean columns according to which "all reality is divided into two series of opposites, the positive terms and the negative" [Berti, "Causalità," 642]. This clearly does not satisfy, so Berti suggests that Aristotle introduces here a distinction between things known by us humans and things that are known "in themselves" (per se), and is thereby opting for the latter:

> To me it seems likely that Aristotle, having mentioned that which is intelligible for man, alludes to two series of intelligibles: the one intelligible for man, the other intelligible for itself [*per sé*]. In this case, at issue is the distinction, articulated by him often, between the things that are more clear, and more known, for us and the things that are more clear, and more known, for themselves [*per se stesse*]. [Berti, "Causalità," 642]

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[31] ἐπιθυμητὸν μὲν γὰρ τὸ φαινόμενον καλόν, βουλητὸν δὲ πρῶτον τὸ ὂν καλόν [*Metaph.* XII 7, 1072a27–28].

[32] See note 29.

[33] νοῦς δὲ ὑπὸ τοῦ νοητοῦ κινεῖται, νοητὴ δὲ ἡ ἑτέρα συστοιχία καθ' αὑτήν· καὶ ταύτης ἡ οὐσία πρώτη, καὶ ταύτης ἡ ἁπλῆ καὶ κατ' ἐνέργειαν [*Metaph.* XII 7, 1072a30–32].

Berti quite reasonably rejects the notion that Aristotle is speaking at 1072a30–31 of Pythagorean series of positive and negative terms, but there is a more likely alternative than the one he goes for. In *De sensu et sensibilibus*, chapter seven, Aristotle discusses parallel series (or columns), in the first of which is mentioned a faculty, in the second its object. The passage reads as follows:

> What I mean, for example, is this; the same sense no doubt discerns white and black, though they are specifically different from one another, and so, too, a faculty of sense self-identical, but different from the former, discerns sweet and bitter; but while both these faculties differ from one another in their modes of discerning either of their respective contraries, yet in perceiving the coordinates in each province they proceed in manners analogous to one another; for instance, as taste perceives sweet, so sight perceives white; and as the latter perceives black, so the former perceives bitter.[34]

Aristotle clearly has in mind here two columns, one of which contains faculties, the other their objects. His general point is that, although the various faculties have, of course, their own operations (sight sees and taste tastes), their relationships toward their proper objects are analogous: as sight stands with respect to the visible, so taste stands with respect to the tastable. It is not at all difficult to imagine Aristotle fitting the mind-like faculty of the first sphere and its object, the first unmoved mover, into the same scheme.

The one thing in *Metaphysics* XII 7, 1072a30–31 that *De sensu et sensibilibus* 7 does not provide an explicit explanation of is the idea that "one of the two series is per se intelligible." One possible explanation is, however, derivable from *De sensu et sensibilibus* 7 itself. Earlier in the chapter, Aristotle has been discussing the perception of mixed objects: the perception, for instance, by the sense of taste of something that is somewhere between sweet and bitter. The opposing elements entering into the mix are not *themselves* perceived, he argues, for then the sense would itself have to be divided; what is perceived is rather a unity: the mixture. But, he says, "it is easier to perceive each object of sense when in its simple form than when an ingredient in a mixture; easier, for example, to

[34] λέγω δὲ τοῦτο, ὅτι ἴσως τὸ λευκὸν καὶ τὸ μέλαν, ἕτερον τῷ εἴδει ὄν, ἡ αὐτὴ κρίνει, καὶ τὸ γλυκὺ καὶ τὸ πικρὸν ἡ αὐτὴ μὲν ἑαυτῇ, ἐκείνης δ' ἄλλη, ἀλλ' ἑτέρως ἑκάτερον τῶν ἐναντίων, ὡς δ' αὕτως ἑαυταῖς τὰ σύστοιχα, οἷον ὡς ἡ γεῦσις τὸ γλυκύ, οὕτως ἡ ὄψις τὸ λευκόν, ὡς δ' αὕτη τὸ μέλαν, οὕτως ἐκείνη τὸ πικρόν [*Sens.* 7, 447b26–448a1] (translation from the Revised Oxford Translation).

perceive wine when neat than when blended."[35] He does not use the expression here, but it seems not unlikely that, had he expanded his description of the two columns presented later in the chapter, Aristotle might have specified that in the second column are found objects that are simple and therefore per se perceptible by their respective senses: not as part of a mixture but in themselves (per se). One notes that, at *Metaphysics* XII 7, 1072a32, Aristotle does speak of the object in the second column as "simple" [ἁπλῆ].

An alternative explanation—we recall what was stated at the beginning of this essay: that our information in this field of enquiry is sparse and we stand at a great distance from the facts in question—would be that Aristotle does have in mind in 1072a31 a second column containing only objects that are known per se in the sense employed at, for instance, *Posterior Analytics* I 2, 72a1–4. Says Aristotle there, "I call prior and more familiar in relation to us items which are nearer to our perception, prior and more familiar *simpliciter* items which are further away."[36] The things that are "more familiar" not merely "in relation to us" [πρὸς ἡμᾶς] but "*simpliciter*" [ἁπλῶς] are not, after all, inaccessible to us humans; it is just that *we* have to work harder to achieve such knowledge: we must become scientists, in the Aristotelian sense. But, just as the first sphere (as, presumably, any celestial sphere) is not troubled by mistakes due to the perception of apparent goods, so it need not go through the process of becoming scientific: its proper object, like the proper object (or objects) of any true scientist, is per se intelligible. There is no reason to say that, in mentioning a second column (*Metaphysics* XII 7, 1072a31), Aristotle is implying that, from that point on, he is interested in just the things that are objects for themselves and known per se. The proper objects of any genuine knower are things that are per se intelligible.

It makes perfect sense, therefore, that Aristotle, having drawn the parallel in *Metaphysics* XII 7 with the way we stand opposite objects of desire and thought [τὸ ὀρεκτὸν καὶ τὸ νοητόν], should say that "the intellect is moved by the intelligible, and one of the two series is per se intelligible."

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[35] *Sens.* 7, 447a17–19 [Revised Oxford Translation]. At *On Generation and Corruption* I 3, 319a14–17, Aristotle also speaks of one column including powers or faculties, the other their objects: Οὐ μὴν ἀλλ' ὁμοίως ἐν πᾶσι γένεσις μὲν κατὰ τὰ ἐν τῇ ἑτέρᾳ συστοιχίᾳ λέγεται, οἷον ἐν μὲν οὐσίᾳ ἐὰν πῦρ ἀλλ' οὐκ ἐὰν γῆ, ἐν δὲ τῷ ποιῷ ἐὰν ἐπιστῆμον ἀλλ' οὐχ ὅταν ἀνεπιστῆμον. Here it is apparent that the proper object of the intellect would be (as stated at *Metaph.* XII 7, 1072a30) the intelligible and not the unintelligible.

[36] Translation from Jonathan Barnes, translator & commentator, *Aristotle: Posterior Analytics*, Oxford Aristotle Series (Oxford: Clarendon, 1994).

In one column is the intellect, in the other the intelligible. That which is understood (*intellectum*, τὸ νοητόν) is not just any intelligible but that which is per se intelligible. Such an understanding in no way interrupts the flow of the argument of *Metaphysics* XII 7; Aristotle would simply be continuing his analysis of the relationship between the first sphere and the first unmoved mover, using the same general scheme he uses to analyze ὄρεξις and νόησις as understood in *De anima* III 10. The discourse has not shifted to a consideration solely of that which is per se intelligible, leaving behind the "comparison" of souls or intellects facing objects, but continues rather to be about the relationship between the first sphere's soul (or something like a soul) and its final cause: the first unmoved mover.

It is worth mentioning also that, at *Metaphysics* XII 7, 1072b1, Aristotle refers to the object of (what I believe must be) the first sphere as an analogue [ἀνάλογον]. This would be consistent with his remarks in *De sensu et sensibilibus* 7 about faculties and their objects. As we have seen, each faculty has its own character, but, when faculty and object are placed in their respective columns, it is apparent that one faculty is the analogue of any other, as are their objects.[37]

De caelo II 12

As we have seen, Berti calls to the stand in his own support *De caelo* II 12, the chapter in which Aristotle compares the activity of the heaven to men who engage in more or less exercise. Some men seem to be healthy always with no effort in that direction at all; some merely need to control their weight; some need not only to control their weight but also to run. And finally, some have no hope of ever achieving perfect health but are satisfied if they can get into sufficient shape *to* run and thereby perhaps to achieve some level of health. For these latter, running comes to substitute for being perfectly healthy—that is, for being in the best state: τὸ ἄριστον [*De caelo* II 12, 292b10, 12, 18, 19]. These individuals who have

[37] Siwek's commentary on the *De sensu et sensibilibus* 7 passage is as follows: "Modus, quo visus discernit colores contrarios (e.g. album et nigrum) utique differt a modo, quo gustatus distinguit contrarios sapores (dulce et amarum). At exsistit certissime—ait Aristoteles—inter duos hoc modos similitudo proportionis seu *analogia*: colorem album sentit visus simili modo, quo saporem dulcem sentit gustatus. Colorem nigrum simili modo, quo saporem amarum" [Paulus Siwek, ed. and trans., *Aristotelis Parva Naturalia graece et latine* (Rome: Desclée & C.ⁱ Editori Pontifici, 1963), 120, n. 308]. Siwek's translation of 447b29–448a1 also speaks of analogy: "Certe aliter [ambo sensus discernunt] utrumque contrariorum, attamen eodem analogice modo ambo procedunt in discernendis rebus ad se pertinentibus: puta, sicut gustatus discernit dulce, ita visus album; et e contra, sicut visus nigrum ita gustatus amarum."

no hope of achieving health are like the earth, the moon, and the sun, which move (or run) not at all (as in the case of the earth) or very little (as in the case of the moon and the sun). Those men who both control their weight and run (and achieve perfect health) are like the planets, whose movements are more numerous and more complicated than the movements of the earth, the moon, or the sun. Those men who need simply to control their weight (presumably, by walking) are like the fixed stars. Finally, those who need not worry about their weight at all and who (a fortiori) need not exercise are like the first unmoved mover: the first unmoved mover exerts no effort (which would be to be in motion) but is simply always in the best state. This parallel between men and the motion of the celestial and sub-celestial bodies explains, according Aristotle, the curious fact that both at the center of the universe and at its extremes there is relatively little movement—for we would expect complexity to increase progressively in one direction or the other.[38]

From this chapter in *De caelo*, Berti picks out two remarks which he regards as supporting his interpretation of *Metaphysics* XII 7. The first is Aristotle's explication of the analogy between hopelessly unhealthy men and the lower astronomical bodies: "It is for this reason that the earth simply does not move and the things close to it have few movements. For these bodies do not reach the ultimate end but they can arrive at something of the divine principle."[39] He interprets this as implying that *no* creature's seeking of a remote end is a seeking of the ultimate end; a fortiori, therefore, the first sphere has no such end but seeks its own internal end, as does the first unmoved mover itself. The second remark comes a bit earlier in *De caelo* II 12, where Aristotle says that an entity that has no need of movement of any sort is "itself an end, whereas an action requires always two things, that is, the end and that which is for the end."[40] Berti understands this as referring, at least by analogy, to the first unmoved mover, which again would be separated from any practical activity and an end only to itself.[41]

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[38] See the appendix.

[39] Καὶ διὰ τοῦτο ἡ μὲν γῆ ὅλως οὐ κινεῖται, τὰ δ' ἐγγὺς ὀλίγας κινήσεις· οὐ γὰρ ἀφικνεῖται πρὸς τὸ ἔσχατον, ἀλλὰ μέχρι ὅτου δύναται τυχεῖν τῆς θειοτάτης ἀρχῆς [*De caelo* II 12, 292b19–22].

[40] ἔστι . . . αὐτὸ τὸ οὗ ἕνεκα, ἡ δὲ πρᾶξις ἀεί ἐστιν ἐν δυσίν, ὅταν καὶ οὗ ἕνεκα ᾖ καὶ τὸ τούτου ἕνεκα [*De caelo* II 12,292b5–7] (see Berti, "Causalità," 647, upon whose Italian translation the English translation in the text is based).

[41] Since Berti now holds that the first unmoved mover is not a final cause at all (see Berti, "Ancora sulla causalità del motore immobile"), it is possible that his view of this passage has changed. The passage is well worth considering on its own merits, however, since it does provide some insight into Aristotle's understanding of the relation between the first sphere and its unmoved mover.

I start with the first-mentioned remark. As demonstrated in the appendix to this essay, *De caelo* II 12 is made up of a series of five parallel lists, two of them speaking of astronomical bodies, the other three of more mundane things (or, at least, of things tied to more mundane things): human bodies, animals, human souls, and their parts. In general, the lists contains four items, which I call "divisions," since each marks out a sector or division of the domain represented by the list to which it belongs. Occasionally Aristotle strays from the four-division model, but in such a way that it remains clear that he has that general model in mind. (Once he neglects to specify the fourth division, once he subdivides a fourth division into two.) In each list, the bottom division (where specified) contains things that do not seek the ultimate good ("the best: τὸ ἄριστον") but some substitute for it, as in the case of the men who will never achieve perfect health but do a small number of things in order to *run* rather than in order to be perfectly healthy. The third division contains things that do arrive at the ultimate good, but by means of many movements; the second division contains things that arrive at the ultimate good by means of few movements (in effect, just one movement); the top division contains things that require or involve no movement at all.

Now, even if it is true that the members of the various fourth divisions of the lists "do not reach the ultimate end," these can hardly be compared to the members of the higher divisions in the various lists. In particular, the supposed fact that the sun, the moon, and the earth are like relatively inactive non-athletes by no means implies that the first celestial sphere—which has a simple motion and, therefore, belongs to division 2 of its respective list[42]—is similarly handicapped, for the whole point of the lists (and the chapter) is to show that the members of the various fourth divisions are *different* from the members of the higher divisions. The simplicity of the second divisions and the simplicity of the fourth divisions are due to quite different causes.[43]

It is also worth noting that the members of one of the fourth divisions are said by Aristotle to be "on their way" to "the best": πρὸ ὁδοῦ . . . πρὸς τὸ ἄριστον [292b9–10].[44] Since the lists of *De caelo* II 12 are parallel lists, Aristotle's reference to "the divine principle" [τῆς θειοτάτης ἀρχῆς] in the final list ("these bodies do not reach the ultimate end but they can arrive at something of the divine principle" [292b21–22]) must refer not to the internal and proper end of the members of this fourth division, as Berti

[42] Or, actually, *lists*: (a) and (d). See the appendix.
[43] See the appendix, especially the comment on 292a28–30.
[44] This is said with reference to the fourth division in list (c); see appendix.

maintains, but to the highest principle or the first unmoved mover (τὸ ἄριστον)—which they can, however, never reach.

The second remark that Berti picks out of *De caelo* II 12 is part of Aristotle's discussion of animals and plants. The discussion involves, of course, a list (the third in *De caelo* II 12) and the remark in question—"[it is] itself an end, whereas an action requires always two things, that is, the end and that which is for the end"—pertains to the list's first and second divisions.[45] This remark does not support the idea that the first unmoved mover does not serve as final cause of the first sphere, but quite the opposite. Aristotle's point is that, although the active intellect involves no action (οὐθὲν δεῖ πράξεως: 292b5), any member of the second division (that is to say, any passive intellect) *will* involve action (ἡ δὲ πρᾶξις ἀεί ἐστιν ἐν δυσίν: 292b6), that is, action that has two poles: one the passive intellect itself, the second a member of the first division (or an active intellect). Since the lists in *De caelo* II 12 are parallel lists, we must conclude that there is a similar relationship between any celestial sphere and its unmoved mover; there is, therefore, such a relationship between the first sphere and the first unmoved mover.

VI. Efficient Causality

For most of this essay, we have been concerned with the final causality of the first unmoved mover; but, since Berti's thesis is that the first mover is primarily—or even solely—efficient cause, it is appropriate to conclude with a few words about the first mover's efficient causality and its connection, according to Aristotle, with its final causality. Indeed, this topic allows us to reprise the major thesis of the present essay, that is, that the first sphere can be said in some sense to be both in movement and independent of movement.

Let us recall Aristotle's definition of efficient cause in *Physics* II 3 as: "whence [ὅθεν] the first principle of change or rest; for example, he who deliberated is a cause, the father is cause of the child, and in general what makes of that which is made and what changes of that which is changed."[46] The word ὅθεν ("whence") does signify a spatial point of origin of the change or stillness, although the relationship between the efficient cause and its effect is not necessarily a physical one. The relationship between "he who deliberated" (ὁ βουλεύσας), *in so far as* he deliberated, and that which he brought about, is not a physical one:

[45] In the appendix, (c) 1 and 2.

[46] ὅθεν ἡ ἀρχὴ τῆς μεταβολῆς ἡ πρώτη ἢ τῆς ἠρεμήσεως, οἷον ὁ βουλεύσας αἴτιος, καὶ ὁ πατὴρ τοῦ τέκνου, καὶ ὅλως τὸ ποιοῦν τοῦ ποιουμένου καὶ τὸ μεταβάλλον τοῦ μεταβαλλομένου [194b29–33].

something intellectual such as a deliberation can have no physical contact with anything. In that sense the relationship is not physical. But the efficient causality of one who deliberates is not wholly independent of the physical: it produces its effect at a certain spatio-temporal point—or, in any case, it can do this, when the deliberation is about a physical action. How this occurs is a mystery: the mystery of animate bodies, that is, the way in which the non-physical moves the physical. But of the fact that it occurs there is no doubt.[47] This straddling by intentional action of the two spheres—the physical and the non-physical—is what allows Aristotle to conceive of the first celestial sphere as both in movement and independent of movement. The intention to do something is not a physical change: it is simply a looking toward an end. But neither is it separate from the physical action it makes to be intentional.

As we affirmed in section II, the final causality between the first sphere and the first unmoved mover can be described as motionless; on the other hand, the efficient causality between these does involve movement. That Aristotle wants to associate the two—the final and the efficient causality—becomes apparent at the very end of the *Physics*. Just before the passage that interests us, Aristotle has argued, in typical fashion, that any

[47] As to what we might call "intentional causality," Giacon complains that Thomas Aquinas's understanding of the first mover's causality is based on an erroneous and Platonic reading of *Metaphysics* II 1 [Giacon, *La causalità del motore immobile*, 113–25]; but Thomas's analysis is not based solely upon that passage. In *In I Sent*. d. 37, q. 1, a. 1c, Thomas explains how he understands the relationship between natural and divine efficient causality. He commends Avicenna's understanding of the difference and similarity between the two: "... agens naturale est tantum causa motus, et agens divinum est causa esse. Unde, secundum [Avicennam], qualibet causa efficiente remota, removetur effectus suus, sed non esse rei; et ideo remoto aedificatore, non tollitur esse domus, cujus causa est gravitas lapidum quae manet, sed fieri domus cujus causa erat; et similiter remota causa essendi, tollitur esse." A bit earlier, Thomas notes that efficient causality differs in material and immaterial entities. Since material entities can not be in the same place, efficient causality requires contact; but spiritual entities have no such restriction: "ubi est quod movetur, ibi est ipsum movens; sicut anima est in corpore, et sicut virtus movens caelum dicitur esse in dextra parte orbis quem movet, unde incipit motus, ut habetur in *Phys*. VIII" [*In I Sent*. d. 37, q. 1, a. 1c] (cp. Giacon, 7). The reference is apparently to *Physics* VIII 5, 258a21–22 (see Thomas's *In Phys*. VIII, lect. 11, par. 3 [§1064]), although Thomas clearly also has in mind *De caelo* II 2 (285a27–286a2, especially 285b16–19). In the latter passage, Aristotle is speaking of efficient causality; as Thomas suggests in *In I Sent*. d. 37, q. 1, a. 1c, he is also conceiving of the sphere in question as animated: ὁ δ' οὐρανὸς ἔμψυχος καὶ ἔχει κινήσεως ἀρχήν [*De caelo* II 2, 285a29–30; see also Thomas Aquinas, "In Aristotelis libros de caelo et mundo expositio," ed. Raimondo M. Spiazzi, *In Aristotelis libros de caelo et mundo, de generatione et corruptione, meteorologicorum expositio* (Turin: Marietti, 1952) II, lect. 3 (§§313–29)].

series of things moved and moving will come to a halt [στήσεται—267b1] at something immobile. This latter, he says, experiences no change [μεταβολὴν—267b4–5]. And then he says:

> It is necessary that the moved thing be subject to no change with respect to it, so that the motion may be uniform. It is therefore necessary that it be either at the center or on the circumference, since these are the principles [ἀρχαί]. But the things nearest the mover are the things whose motion is quickest—and such is the motion of the circumference. The mover, therefore, is there.[48]

There is a paradox in this remark, particularly when Aristotle says that the thing moved experiences *no* change "so that the *motion* may be uniform" [ἵνα ὁμοία ᾖ ἡ κίνησις—267b6]. Aristotle is speaking of precisely the problem that will torment his followers in successive years (and centuries): how can a movement, even a very regular movement, be an imitation of the absence of movement?[49] In the passage just quoted, he provides a solution to this problem. Given that at issue is a combination of non-change and change (or movement), it is "therefore necessary" that the unmoved mover "be either at the center or on the circumference" [267b6–7]. (This remark calls to mind, of course, the two passages in the *Physics* we examined above: *Physics* VIII 9, 265a32–b2 and IV 5, 212a31–b11.) Putting the mover either at the center or on the circumference resolves the problem because either is at rest: the center, in a fairly obvious way; the circumference (or the periphery), for the reasons we saw at *Physics* IV 5, 212a31–34. That Aristotle chooses to "locate" the first unmoved mover at the periphery shows that he wants a clear explanation of the *efficient* causality of that mover: it is there, and not at the center, that one sees movement, the movement of the fixed stars from east to west.[50] But Aristotle also wants this efficient causality to have its origin

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[48] δεῖ δὲ οὐδὲ τὸ κινούμενον πρὸς ἐκεῖνο ἔχειν μεταβολήν, ἵνα ὁμοία ᾖ ἡ κίνησις. ἀνάγκη δὴ ἢ ἐν μέσῳ ἢ ἐν κύκλῳ εἶναι· αὗται γὰρ αἱ ἀρχαί. ἀλλὰ τάχιστα κινεῖται τὰ ἐγγύτατα τοῦ κινοῦντος. τοιαύτη δ' ἡ τοῦ κύκλου κίνησις· ἐκεῖ ἄρα τὸ κινοῦν [*Physics* VIII 10, 267b5–9].

[49] See Theophrastus, *Metaphysics*, chapter 2, but especially 5a23–27; see also the commentary of van Raalte (Marlein van Raalte, ed., *Theophrastus: Metaphysics, with an introduction, translation, and commentary* [Leiden: E. J. Brill, 1993], 179–83). See also Berti, "Teofrasto e gli Accademici sul moto dei cieli," *Gigantomachia: Convergenze e divergenze tra Platone e Aristotele*, ed. Mario Migliori (Brescia: Morcelliana, 2002), 339–56 and also Berti, "Il movimento del cielo in Alessandro di Afrodisia."

[50] I do not wish to say that the first unmoved mover is literally "located" at the periphery of the universe since—like the human intellect—not being a physical

in stillness, that is, in independence from every spatial coordinate that would permit one to speak of movement.

The paradox that we have identified in *Physics* VIII 10, 267b5–6—saying, that is, that it is necessary that the thing moved experience no change in order that its movement might have a certain characteristic—is not evidence of a contradiction in Aristotle's position, because in the sentence itself (the first sentence of the above quotation) he specifies the aspect that resolves the apparent contradiction: "It is necessary that the moved thing be subject to no change *with respect to it*, so that the motion may be uniform." The first sphere is in movement—indeed, this movement is faster than any other movement in the heaven;[51] but, *with respect to* the unmoved mover [πρὸς ἐκεῖνο—267b5], it does not move. This ensures that it is the *movement* of the first sphere that is "similar" [ὁμοία] to that of the first unmoved mover; it is not the first sphere's *regularity* that is similar, as (perhaps) suggests Alexander of Aphrodisias.[52] The movement is similar because with respect to the first unmoved mover it involves no movement; on the other hand, and to borrow a phrase from Galileo, "eppure si muove" with respect to the rest of the universe.

We see here, then, the intersection of the two types of causality. In its gazing at the first unmoved mover (its "object of desire" and "object of intellect": τὸ ὀρεκτὸν καὶ τὸ νοητόν [*Metaphysics* XII 7, 1072a26]), the first sphere is still and in love. Its relationship with the first mover is a movement, in a sense, although we cannot call it that and speak sensibly, since there are no outer coordinates permitting such talk to make sense. But its love of the first mover is its movement with respect to the coordinates within the universe, below itself. In other words, this latter movement is the *same thing*, viewed now from a different perspective, a perspective from which we can now speak sensibly of movement.

entity, it cannot be in a place; but it is "there" in the sense that it is there that it has its effect, just as the human intellect has its effect there where the body to which it belongs is found.

[51] There is no contradiction between this idea and the idea we have already considered: that the first sphere has just one movement, the lower astronomical bodies many. The one movement of the first sphere (and therefore of the fixed stars) is faster than the other (multiple) movements.

[52] Berti, "Il movimento del cielo in Alessandro di Afrodisia," 231–33; Alexander of Aphrodisias, *Quaestiones*, ed. Ivo Bruns and I. Bruns (Berlin: Reimer, 1892), vol. 2.2 supplement of *Commentaria in Aristotelem Graeca* 62.15–63.7. [Since the Cagliari conference at which the original version of this essay was read, my understanding of the meaning of the word ὁμοία at *Physics* VIII 267b6 has changed somewhat, largely on account of a comment made by Prof. Berti in the latest version of his essay (included in this volume). For my changed position see above, note 24.]

At the very end of *Nicomachean Ethics* VII, just before going on in Book VIII to speak of φιλία (friendship or love), Aristotle notes that God's pleasure is single and simple—and yet it is powerful: "for there is an activity [ἐνέργεια] not only of movement but also of immobility, and there is more pleasure in rest than in movement."[53] The first sphere participates in this power and passes it on to the lower parts of the universe.

Appendix: The Parallel Lists of *De caelo* II 12

In *De caelo* II 12, Aristotle gives us five lists, three of them containing four divisions, the other two—(a) and (c)—reflecting the four divisions of the other three. The divisions in each list have analogues—or implicit analogues—in the others. The lists break down as follows:

a. astronomical bodies [292a22–24]
   1. No need of movement [ὑπάρχειν τὸ εὖ ἄνευ πράξεως];
   2. require(s) little, i.e., just one, movement [διὰ ὀλίγης καὶ μιᾶς];
   3. require more movements [διὰ πλειόνων];
   4. [not specified].

b. human bodies [292a25–28]
   1. No need of exercise [οὐδὲ γυμναζόμενον εὖ ἔχει];
   2. require a brief walk [μικρὰ περιπατῆσαν];
   3. need to run, box, etc. [καὶ δρόμου δεῖ καὶ πάλης καὶ κονίσεως];
   4. will never achieve health but only some substitute [ἕτερόν τι].

c. animals and plants [292b2–10]
   1. Requires no action [οὐθὲν δεῖ πράξεως] (the human active intellect);
   2. involves one action, i.e., of the passive intellect with respect to the active [ἡ δὲ πρᾶξις ἀεί ἐστιν ἐν δυσίν, ὅταν καὶ οὗ ἕνεκα ᾖ καὶ τὸ τούτου ἕνεκα];
   3. men, as capable of many actions [πλεῖσται πράξεις];
   4. other things: (a) mere animals, as capable of few actions [τῶν ἄλλων ζῴων ἐλάττους], and (b) plants, as capable of perhaps one action [τῶν φυτῶν μικρὰ τις καὶ μία ἴσως].

d. astronomical bodies [292b10–13]

[53] οὐ γὰρ μόνον κινήσεώς ἐστιν ἐνέργεια ἀλλὰ καὶ ἀκινησίας, καὶ ἡδονὴ μᾶλλον ἐν ἠρεμίᾳ ἐστὶν ἢ ἐν κινήσει [*Nicomachean Ethics* VII 14, 1154b26–28].

1. Already have or participate in the best [ἔχει καὶ μετέχει τοῦ ἀρίστου];
2. achieve the best state with few actions [εὐθὺς δι' ὀλίγων];
3. achieve the best state with many actions [διὰ πολλῶν];
4. can *approach* the ultimate state [ἱκανὸν εἰς τὸ ἐγγὺς τοῦ ἐσχάτου ἐλθεῖν].

e. health seekers [292b13–17]
1. Always healthy [ἀεί ὑγιαίνει];
2. thin down (and are therefore healthy) [ἰσχνανθέν];
3. thin down and run (and are therefore healthy) [δραμὸν καὶ ἰσχνανθέν];
4. do something else in order to run [ἄλλο τι πρᾶξαν τοῦ δραμεῖν ἕνεκα].

In list (a) the fourth division is not specified, probably because Aristotle has yet to explain why its members (the sun, the moon, and the earth) involve fewer movements; that explanation begins just afterwards, in the extended analogy beginning with list (b). Immediately after giving list (b), Aristotle says [292a28–30] that it is quite easy at dice to throw "snake's eyes" once or twice, but very hard to do so thousands of times. Thus, the reason for the simplicity characteristic of division 4 is quite different from that for the simplicity of division 1: the activity of the members of division 4 is simple because of the *lack* of effort and intelligent control involved; the one member of division 1 is simple because only a unified and simple principle can comprehend and control all the movements that depend upon it.

List (c) is the most difficult—but also the most interesting—of the five. The divisions are not presented in the same order as in the other lists; the distinctions between divisions are not as clearly marked; the fourth division has two parts. Aristotle also appends an explanatory remark (292b8–10) to this list which has led to interpretive difficulties. Division 3 is presented first, at 292b3–4; divisions 1 and 2 are then given as a parenthesis (at least in the Allan edition, though not in Bekker): 1 at 292b4–6, 2 at 292b6–7. In these lines, Aristotle does not speak of the intellect—or its "parts"—in so many words, but it is apparent that this is what he has in mind.[54]

[54] Simplicius speaks of intellect in this general context, although with specific reference to 292b10 [τὸ μὲν οὖν ἔχει καὶ μετέχει τοῦ ἀρίστου]; see *in Cael.* 485.16–22. This passage includes a fragment from Aristotle's Περὶ εὐχῆς in which God is said to be intellect or something above intellect [νοῦς ἐστιν ἢ επέκεινά τι τοῦ νοῦ; Valentinus Rose, ed., *Aristotelis qui ferebantur librorum fragmenta* (Leipzig: Teubner, 1886), fr. 49].

Although he speaks of the action [πρᾶξις] of division 2 as involving two factors (ἐν δυσίν: 292b6), the action itself is single.[55]

Division 4 is set out at 292b7–8 and is subdivided into animals [ζῴων] and plants [φυτῶν]. The subsequent explanatory remark [292b8–10] is as much a summary of the whole previous section (that is, 292b2–8) as of the immediately preceding remark about animals and plants (division 4). In it, Aristotle acknowledges that he has in effect recognized a distinction between men and other things (mere animals and plants). (Note the ἢ . . . ἢ construction: ἢ γὰρ ἕν τί ἐστιν οὗ τύχοι ἄν, ὥσπερ καὶ ἄνθρωπος, ἢ καὶ τὰ πολλὰ πάντα πρὸ ὁδοῦ ἐστι πρὸς τὸ ἄριστον.) Man does manage to achieve the single best state [ἕν τί ἐστιν οὗ τύχοι] the other things are only *on the way* to the best state; that is, as in the fourth divisions of (b), (d), and (e), they must be satisfied with a substitute for the best.

That the distinction here is between men and all other living things (that is, both mere animals and plants) is more clear if we follow either manuscript M, F, or H, each of which includes the word ἄλλα in one form or another; ἄλλα would then echo the ἄλλων in line 292b7 (although the ἄλλων seems to refer just to the animals, that is, the animals other than man). N V

[55] I am inclined to see a connection between this remark at *De caelo* II 12, 292b4–7 [τῷ δ' ὡς ἄριστα ἔχοντι οὐθὲν δεῖ πράξεως· ἔστι γὰρ αὐτὸ τὸ οὗ ἕνεκα, ἡ δὲ πρᾶξις ἀεί ἐστιν ἐν δυσίν, ὅταν καὶ οὗ ἕνεκα ᾖ καὶ τὸ τούτου ἕνεκα] and that at *Metaph*. XII 7, 1072b1–3, in which Aristotle discusses the final causality to be associated with the first unmoved mover. For the latter, see above, note 12. The idea in both passages would be that there can be a final cause where there is no motion since to be the final cause *for* something (τινὶ: *Metaph*. XII 7, 1072b2) sets up a relation, in which the one party is immobile, the other not.