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A Note on Aristotle's *De Anima* A 1, 403a10-16

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In this paper I discuss passage 403a10-16 from Aristotle's *De Anima*. In this passage Aristotle deals with whether the soul could be separate from the body and presents an analogy with geometrical entities. This passage is highly obscure and it presents many textual difficulties. The interpretation I offer resolves the textual problems without requiring emendations to the text as many commentators suggest.

In this paper I am going to present an interpretation of passage 403a10-16 from Aristotle's *De Anima* A 1. This passage is highly obscure as it presents many difficulties and so far none of the commentators has been able to offer a generally acceptable and satisfactory interpretation of it. I am going to show that the passage not only can be satisfactorily interpreted, but also without emendating the ancient text as some commentators suggest.[1]

At first, let me make a brief remark. Ian Mueller in his paper "Aristotle on Geometrical Objects" argues that geometrical objects are composed of intelligible matter[2] (which according to Mueller, is the quantitative and continuous in one, two or three dimensions, which are the line, the surface and the solid respectively) as well as certain properties (like for example the property of being straight). Thus, a straight line, for example, consists of intelligible matter (the quantitative and continuous in one dimension, i.e. the line) as well as the property of being straight. Therefore, geometrical objects have to be understood as form-matter compounds, where form is the defining property and matter is, as mentioned above, intelligible matter.[3] In this paper I am going to adopt Mueller's interpretation about the ontological status of geometrical objects. Let us first quote and translate the passage.

[1] See Bostock, David, "Aristotle's Philosophy of Mathematics", in Shields, Christopher (ed.), *The Oxford Handbook of Aristotle,* Oxford University Press, Oxford, 2012, p. 486, McKay, Robert, "Touching the bronze sphere at a point: a note on *De Anima* I. 1, 403a10 – 16, *Apeiron,* Vol. XIII, 1979, p. 89, Ross, W. H., *Aristotle De Anima,* Oxford University Press, Oxford, 1961, p. 168

[2] Intelligible matter is mentioned by Aristotle as the matter of mathematical objects (see *Metaphysics* Z 10, 1036a9-12).

[3] See Mueller, Ian, "Aristotle on Geometrical Objects" (*Archiv für Geschichte der Philosophie* 52, 1970, pp. 165-169 / "Aristotle on Geometrical Objects" repr. in J. Barnes et al., (eds.), *Articles on Aristotle vol.3*, Duckworth, London, 1979, pp. 103-105.

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> εἰ μὲν οὖν ἔστι τι τῶν τῆς ψυχῆς ἔργων ἢ παθημάτων ἴδιον, ἐνδέχοιτ' ἂν αὐτὴν χωρίζεσθαι· εἰ δὲ μηθέν ἐστιν ἴδιον αὐτῆς, οὐκ ἂν εἴη χωριστή, ἀλλὰ καθάπερ τῷ εὐθεῖ, ᾗ εὐθύ, πολλὰ συμβαίνει, οἷον ἅπτεσθαι τῆς χαλκῆς σφαίρας κατὰ στιγμήν, οὐ μέντοι γ' ἅψεται οὕτως χωρισθέν τὸ εὐθύ· ἀχώριστον γάρ, εἴπερ ἀεὶ μετὰ σώματός τινος ἐστιν.
>
> If some of the functions and affections of the soul are peculiar to it, it would be possible that it can be separated. But if none of these are peculiar to it, then it would not be possible to be separable, but it would rather be like the case of the straight *qua* straight which has many properties belonging to it, like, for example, to touch the bronze sphere at a point. But if the property of being straight is separated, then it will not touch [the bronze sphere]. Actually, it is inseparable, since it always belongs to some body.

Aristotle, in this section of *De Anima* A 1, deals with the question whether it would be possible for the soul to exist separately from the body. What we understand from the text, is that if some of the properties of the soul were peculiar to it, then it would be possible for it to be separated. This is because if the soul had properties peculiar to it, it would still have those properties even if it was separable. But on the other hand, if none of its properties are peculiar to it, then it would be inseparable. Now, a main problem of the passage is that it is rather unclear which the analogy Aristotle offers is. What appears to be the case is that the soul is analogous to the "straight. But then again what is this "straight"? Is it a straight magnitude (e.g. a straight line)? Is it the property of being straight? Or is it something rather different? What most of the commentators believe is that what Aristotle in this passage analogizes the soul to the straight line[4], but as we subsequently going to show, this cannot be the case. Puzzling as well, are lines 403a14-16 where Aristotle discusses the inseparability of the "straight" from the body where it belongs. What is not entirely clear in those lines is whether the "straight" in line 403a15 has the same meaning with the one it has in line 403a12. Finally, another problem has to do with the claim that something straight *qua* straight is touching a sensible (bronze) sphere at a point. This appears to be rather problematic since sensible objects of the sublunar area do not fulfill ideal geometrical attributes and thus something straight *qua* straight cannot touch a bronze sphere at a point.[5] Based on this last remark, we can distinguish between two main lines

[4] See e.g. Aquinas, Thomas, *Sentencia libri de anima* 1.2.82-101, Hamlyn, D. W., *Aristotle De Anima, Books I and II (with passages from book I),* Clarendon Press, Oxford, 1968, pp. 78-79 , Hicks, R. D., *Aristotle De Anima: With Translation, Introduction and Notes,* Cambridge University Press, 1907, p. 196, McKay op. cit. 89.

[5] It can be seen in certain passages in the Corpus that the sensible objects of the sublunar area do not fulfill ideal geometrical properties being perfectly straight or perfectly curved. The first passage is *De Caelo* B 7, 287b14-21. In this passage Aristotle addresses that the elements of the sublunar area do not

of interpretation. According to the first one, Aristotle indeed refers to sensible objects, while according to the second one, this cannot be the case due to the imperfection of sensible objects of the sublunar area.

As we mentioned, according to the first line of interpretation, Aristotle indeed refers to sensible objects, namely that a straight sensible object is touching the bronze sphere at a point. This is because what Aristotle is actually interested in this passage is the separability of the soul, so it is of no importance for him whether a sensible straight object can actually touch a bronze sphere at a point or not. Accordingly, we may understand the text in two different ways. The first one would be the reading proposed by Polansky, namely that a sensible straight object, by being straight, touches the bronze sphere at a point, but, as Polansky says, "apart from sensible matter, lines are merely formal (the essence or definition of line) or mathematical, and therefore they cannot touch a perceptible sphere at all".[6] The second one would be Philoponus' reading[7] namely that a sensible straight object touches the bronze sphere at a point but "straightness", if separated, will not touch.

Although it is true that Aristotle's primary concern in this passage is the separability of the soul, I believe that both the above ways of understanding the text are rather problematic. Regarding the first reading, it could easily work (and even better as well) without the phrases "*qua* straight" and "at a point". Still Aristotle mentions those phrases which makes us think that what he is speaking about is mathematical entities and not sensible objects. As for the second reading, the analogy between the soul and the "straight" could work equally well if Aristotle had presented a pure geometrical example where a geometrical straight line touches a geometrical sphere at a point, without making a false claim, namely that a straight sensible

have the smoothness and the accuracy of aether which the heavenly bodies are constituted of. The second passage is *Metaphysics* B 2, 997b35-998a4, where Aristotle mentions that the ruler does not touch the sensible circle at a point. There is, however, Jonathan Lear, who believes that there are sensible objects fulfilling ideal geometrical properties (see Lear, Jonathan, "Mathematics in Aristotle" *Philosophical Review*, XCI, 1982, pp. 175-181) and that in passage 403a10-16 what we have is a perfectly straight sensible object that touches a perfectly round bronze sphere (ibid. 180-181). As for passage 997b35-998a4 Lear argues that there is a supposed Platonist speaking and the thesis presented is one that is not accepted by Aristotle himself (ibid. 175-176). However, whether a view of a platonist expressed in this passage or not, the most natural reading of it suggests us that this thesis is one that Aristotle agrees with, hence this what most of the scholars argue to be the case (see e.g. Pettigrew, R., 'Aristotle on the Subject Matter of Geometry', Phronesis, 54 (3), 2009,, pp. 245-246, Katz, Emily, "Geometrical Objects as Properties of Sensibles: Aristotle's Philosophy of Geometry", *Phronesis*, 64, 2019, p. 467). Moreover, passage 287b14-21 is very explicit. Therefore, I believe it is safe to argue that there the sensible objects do not fulfill ideal geometrical properties being perfectly straight or perfectly curved and so a sensible straight line cannot touch a bronze sphere at a point.

[6] See Polansky 2007 pp. 52-53.

[7] See Philoponus, Johanes, *Philoponi in Aristotelis De Anima* 49,18 – 50,3

object touches the bronze sphere at a point. So there is no reason for Aristotle to purposely present a mistaken example since he could easily have avoided it. For the above reasons I believe it is preferable to choose a different path from the aforementioned one in order to interpret the passage.

As for the second line of interpretation, one of its supporters is Robert McKay. McKay[8], in his interpretation, supports the view that what is analogous to the soul is the straight line and he argues that the textual difficulties can be overcome, if we a) omit the word "χαλκῆς" from the text and b) understand the phrase "μετὰ σώματός τινος" to mean "μετὰ μεγέθους τινος", since, as he says: "For while many attributes belong to the straight line many attributes (like touching the sphere at a point) belong *qua* straight line – as a consequence of its οὐσία and in separation from anything incidental to it – nevertheless they don't belong to it in separation from magnitude and length: they clearly could belong to nothing but a geometrical magnitude".

Regarding McKay's first suggestion, even though by omitting the word "χαλκῆς" we have a straight line and a geometrical sphere which indeed touch one another at a point, the textual difficulties cannot be fully overcome. This is because a straight line is itself a magnitude. We can say that a straight line belongs to a two or a three-dimensional magnitude, but it would be absurd to say that it belongs to a one-dimensional magnitude, since it is itself a one dimensional magnitude. As we see then, McKay's interpretation fails to deal with the problems satisfactorily enough. Furthermore, it requires emendations to the text.

Another supporter of the same line of interpretation is David Bostock. Bostock argues that the passage as it is, contains errors. The reason is because in lines 403b17-19 Aristotle says that "We were saying that the affections of the soul, insofar as they are such as anger and fear, are inseparable in this way from the physical matter of the animals and not in the way the line and the plane are". Bostock argues that the two passages contradict one another and it is passage 403a10-16 that is more likely to be wrong. Indeed, if what is analogous to the properties of the soul in passage 403a10-16 is the straight line and/ or the plane, it, in fact, contradicts what is being said in lines 403a17-18. What Bostock suggests is that the meaning required is quite the opposite of the one that it appears to be. The correct meaning, according to Bostock, is that if the soul is as envisaged then it would be analogous to a physical embodied straight edge which does not touch the bronze sphere at a point, since a physical embodied straight edge (being physical) cannot be perfectly straight.[9] However, his interpretation involves a series of

[8] op. cit. 89
[9] op. cit. 485-486.

emendations to the ancient text and this makes it rather weak.[10] Still, as aforementioned, if what is analogous to the properties of the soul in passage 403a10-16 is the straight line and/or the plane, then its meaning contradicts what Aristotle says in lines 403b17-19 and this definitely constitutes a problem. However, as I am going to show, the properties of the soul, in passage 403a10-16, are not analogous to the straight line and/or the plane and the two passages do not contradict one another.

Contrary to what most of the commentators believe, I maintain that the analogy Aristotle offers, is, as Philoponus (op. cit. 50, 3-4) suggests, between the soul and the property of being straight. This, I believe, is the most reasonable reading, since the soul according to Aristotle is the form of animals and, similarly, the property of being straight is the form of a straight geometrical object (like a straight line or a plane). Accordingly, the animal would be analogous to the straight line.

We subsequently have to understand the example Aristotle presents in lines 403a12-13 about the "straight *qua* straight" and the bronze sphere. As I have already argued the phrase "τῷ εὐθεῖ, ᾗ εὐθύ" cannot mean an enmattered straight (sensible) object, which, by being straight, touches a bronze sphere at a point, since there are no sensible objects fulfilling ideal geometrical properties. Also, the "straight *qua* straight" cannot refer to the property of being straight, since the property of being straight itself cannot touch a magnitude. The most reasonable thing would be to assume that the straight *qua* straight refers to some straight geometrical magnitude. However, if this is the case, then what we would expect to see in the text is that what this geometrical straight magnitude touches at a point is a geometrical sphere. In contrast, what Aristotle mentions, is not a geometrical sphere but rather a bronze sphere something which is indeed very problematic.

I believe that the way for the problem to be overcome lies on the notion of "*qua*". In *Metaphysics* M 3, a chapter where Aristotle exposes his theory of mathematical objects, he uses the notion of "*qua*" in order to address what objects are the ones mathematicians deal with. As he says what a geometer studies is the sensible objects in a given way, namely *qua* solids, or *qua* planes, or *qua* lines.[11] Emily Katz argues that although there are no sensible objects having ideal geometrical properties, such as being perfectly straight or perfectly curved, there are sensible objects *qua* geometrical that fulfil such ideal properties. These sensible

[10] As Bostock himself admits: "I cannot pretend that this set of emendations looks very plausible from a paleographic point of view, but I do think that something among these lines is needed". (op. cit. 486)
[11] See 1077b23-34.

objects, as Katz argues, are the constructive drawings which are used in geometry in order to investigate the properties of a geometrical object and are very precise. According to Katz, even though such a drawn figure as it is, is not going to have such ideal geometrical properties because of its matter, the drawn figure *qua* geometrical (after the sensible properties are abstracted from it)[12] will have such ideal geometrical properties.[13] I believe that perhaps Katz's interpretation can be extended, as well, to solid objects that have been precisely constructed. If so, then what Aristotle says in lines 403a13-14, namely that something straight *qua* straight touches the bronze sphere at a point, it can be understood as that what touches the sphere is a sensible straight object *qua* (perfectly) straight. Similarly, when Aristotle talks about the bronze sphere what he probably intends to mean is the bronze sphere *qua* geometrical sphere, and thus perfectly spherical. After all, the bronze sphere has been constructed in the model of geometrical sphere.

Finally, a further problem we have to deal has to do with the closing phrase of the passage in lines 403a15-16 ("εἴπερ ἀεὶ μετὰ σώματός τινος"). First of all let us say that the ancient Greek word "σῶμα" can refer either to a physical body or to a geometrical solid. Since, as we have seen, sensible objects do not fulfil ideal geometrical properties such as straight lines, we have to eliminate the possibility that the word "σῶμα" in this passage refers to a physical solid. However, even if we accept the other alternative, namely that the word "σώμα" refers to a geometrical solid the text still remains problematic. Geometrical solids are three-dimensional whist the property of being straight can belong either to one-dimensional objects (lines), or to two-dimensional objects (planes), or, else, to three-dimensional objects (solids). Therefore, it would be more plausible for the text to have the word "μέγεθος" (magnitude) instead of the word "σῶμα". Certainly then, what is being said in the closing phrase of the passage is mistaken. As we have seen, McKay suggests that we have to understand the phrase "μετὰ σώματός τινος" to mean "μετὰ μεγέθους τινος". However, McKay's suggestion requires at best an emendation to the text, and at worst to understand the word "σώμα", which is something always three-dimensional, to mean "μέγεθος", which is either one-dimensional, either two-dimensional, or three-dimensional. None of the above options seems to be attractive.

[12] "Abstraction" which is often mentioned in Corpus in relation to the objects of mathematics (see e.g. *De Caelo* Γ 1 299a15-17, *De Anima* Γ 8, 403a5-6, *Metaphysics* K 3 1068a28-29, *Nicomahean Ethics* Z 8, 1142a16-20) it appears to be procedure by which we disregard in thought certain properties from a given object (see *Metaphysics* K 3 1068a28-b3). Many scholars, as Katz in particular (op. cit. 483-492) argue that "abstraction" is related to Aristotle's "*qua* theory", with "abstraction" being the procedure, while an object x *qua* z the outcome.
[13] op. cit. 492-495.

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I think that there is a less painful way to overcome this difficulty. What I believe to be the most probable solution is to assume that what Aristotle has in mind here is a stereometrical case where what touches the sphere at a point is some plane or a straight edge of a solid. It is reasonable then to suppose that this is what perhaps leads him to mistakenly mention the word "σῶμα" instead of the word "μέγεθος" which would be the proper one.[14]

According to the above remarks, it is evident that the soul is analogous to the property of being straight, the animal is analogous to a straight magnitude and finally the properties of the soul are analogous to the properties a straight magnitude has by being straight.[15] Thus, the meaning of passage 403a10-16 would be the following one: If the soul has some properties that are peculiar to it then it would be possible for it to exist separately from the body. In contrast, if the soul has no properties peculiar to it, then it would be inseparable. In that case we are going to have a case analogous to that of a straight magnitude. A straight magnitude, being straight, has many properties, like touching a bronze sphere *qua* geometrical sphere at a point. However, the property of being straight if separated from the magnitude it belongs to, will not keep the property of touching the sphere at a point anymore. The property of being straight is in fact inseparable from the magnitude it belongs to.

Undoubtedly, passage 403a10-16 is very puzzling due to its textual difficulties. No wonder, then, that the already existing interpretations are rather problematic. In this paper, my task was to overcome those textual difficulties offering a coherent interpretation of the passage without needing to emendate the text. I believe I have managed to do so satisfactorily enough and this shows it is possible that we make good sense of the text as it stands and we do not need to entertain the idea that it contain errors.

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[14] Adopting the above reading, it would be misleading to see the phrase "ἀλλὰ καθάπερ τῷ εὐθεῖ" to refer to what the soul is analogous to. The meaning of the opening lines would rather be the following one: If the soul is does not have properties peculiar to it, it would be inseparable and this case would be analogous to the one of a straight line which, *qua* straight has many properties belonging to it like touching the bronze sphere *qua* geometrical sphere at a point.

[15] Therefore, since the properties of the soul are analogous to the properties of a straight magnitude and not to the straight line and/or the plane, it becomes evident that passage 403a10-16 does not contradict to what is said in lines 403b17-19.

Bibliography

Aquinas, Thomas. *Opera Omnia iussu Leonis XIII P.M. edita, 45/1: Sentencia libri de anima,* ed. Dominicans. Rome: Comissio Leonina; Paris: J. Vrin, 1984.

Bostock, David. "Aristotle's Philosophy of Mathematics", in Shields, Christopher (ed.), *The Oxford Handbook of Aristotle,* Oxford University Press, Oxford, 2012 (465-491).

Hamlyn. *Aristotle De Anima, Books I and II (with passages from book I),* Clarendon Press, Oxford, 1968.

Hicks, R. D. *Aristotle De Anima: With Translation, Introduction and Notes,* Cambridge University Press, 1907.

Katz, Emily. "Geometrical Objects as Properties of Sensibles: Aristotle's Philosophy of Geometry", *Phronesis,* 64, 2019 (465-513).

Lear, Jonathan. "Mathematics in Aristotle" *Philosophical Review,* XCI, 1982 (161-192).

McKay, Robert. "Touching the bronze sphere at a point: a note on *De Anima* I. 1, 403a10 – 16, *Apeiron,* Vol. XIII, 1979 (86-90).

Mueller, Ian. "Aristotle on Geometrical Objects" (*Archiv für Geschichte der Philosophie* 52, 1970 (156-171), repr. in J. Barnes et al., (eds.), *Articles on Aristotle vol.3,* Duckworth, London, 1979 (96-107).

Pettigrew, R. 'Aristotle on the Subject Matter of Geometry', Phronesis, 54 (3), 2009, (239-260).

Philoponus, Johanes. *Commentaria in Aristoteliam Greca, vol. XV, Philoponi in Aristotelis De Anima,* Typis et Impensis Georgii Reimeri, Berlin, 1908.

Polansky, Roland. *Aristotle's De Anima,* Cambridge University Press, Cambridge, 2007.

Ross, W. H. *Aristotle De Anima,* Oxford University Press, Oxford, 1961.