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ARTICLE

Aristotle on μετὰ λόγου capacities and voluntary animal locomotion. Part one: the psychic arguments

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Abstract: According to the dominant interpretation of the distinction between capacities that are "without-λόγος" (ἄλογοι) and capacities that are "with-λόγος" (μετὰ λόγου, *Metaph.* 9.2 1046a34-b2), the latter would be unique to human beings. We can find four arguments in defense of that thesis in the secondary bibliography. This article begins to mount a defense of an alternative reading of Aristotle's

theory that deals with two of these arguments. It will be succeeded by a second article that will deal with the other two arguments and present a positive argument for the alternative reading that tries to make it seem plausible - although not unassailable - in light of its own merits. According to this alternative reading, it is with the framework provided by Aristotle to explain the functioning of bidirectional capacities that we must explain the functioning of the capacity responsible for producing voluntary locomotion in *all* animals.

Keywords: Aristotle, Voluntary, Locomotion, Capacities.

I. Introduction

This article is concerned with Aristotle's theory about an animal's capacity to initiate a certain type of change, namely, voluntary locomotion. Since he thought that every change is the result of the actualization of some capacity (*Ph.* 3.1 201a10-19), in order for us to understand his theory of voluntary locomotion we must understand how he conceived the capacities that gave rise to them and the conditions under which they were actualized. Aristotle's most extensive explanation of his theory about these capacities is contained in the first five chapters of book 9 of *Metaph*.

In *Metaph.* 9.1 Aristotle presents the structure of his discussion about the capacities (1045b32–1046a4); justifies the exclusion of homonymous cases from the discussion (1046a4–9); divides capacities into three types - active, passive and resistance – while stating that active capacities are primary (1046a9–19); explains the relationship between the first two types of capacity (1046a19–29); and delimits in how many ways one can speak of incapacity and privation (1046a29-36).

After doing this, he introduces the difference between capacities that are "without-λόγος" (ἄλογοι) and capacities that are "with-λόγος" (μετὰ λόγου, *Metaph.* 9.2 1046a34-b2). According to what

we are told there, capacities "with-λόγος", such as medicine, can produce two opposites, like heal or kill. In what follows, I will call such capacities bidirectional. On the other hand, capacities "without-λόγος", such as fire, can have only one effect, like heating. In what follows, I will call such capacities unidirectional.

In *Metaph.* 9.5 Aristotle will add that these capacities have different conditions for their activation. Unidirectional capacities are activated whenever an entity that has a given active capacity approaches an entity that has the corresponding passive capacity - f. ex. when fire, which has the passive capacity to heat, approaches iron, which has the passive capacity to be heated (1048a1-7). This is not the case of bidirectional capacities, says Aristotle, because, if it was, they would produce their two opposites, which is impossible. Therefore, it is necessary for another factor to intervene in order to determine in which way the capacity will be exercised (1048a7-10). According to Aristotle this factor is desire (ὄρεξις), and one who has a bidirectional capacity will only accomplish the opposite that he desires when the conditions for activating his capacity are met (1048a10-24).

According to the dominant interpretation of the distinction between bidirectional and unidirectional capacities, the former would exist only in human beings. This is hardly surprising, since in some passages of his works we see Aristotle denying that other animals have λόγος or some cognate word (f. ex. *de An.* 3.10 433a9-10; *EN.* 7.7 1149b34-35; *Pol.* 1.2 1253a10-11; and 7.13 1332b2-6). Nevertheless, this position has a significant consequence for Aristotle's theory of animal locomotion, namely, that all locomotion performed by non-human animals would be due to the exercise of unidirectional capacities. A survey of the secondary bibliography reveals the following arguments in favor of this thesis:

1) Bidirectional capacities are only possessed by humans because only humans have reason (Makin, 2006, p. 42-43). 2) Bidirectional capacities are present only in the part of the soul that has reason, and non-human animals simply lack that part (Beere, 2009, p. 70). 3) Bidirectional capacities are "free capacities", and Aristotle did not

believe that non-human animals had any capacity of this type (Suárez, 1960, p. 333).[1] 4) Bidirectional capacities are forms of scientific or technical knowledge, and non-human animals are incapable of scientific and technical knowledge (Alex.Aphr. *in Metaph.* 569 14-19).

In this article, I intend to show that the first two arguments - which I shall call the psychic arguments - are problematic and to open the way for a new defense of an alternative reading of Aristotle's theory according to which it is with the framework provided by Aristotle to explain the functioning of bidirectional capacities that we must explain the functioning of the capacity responsible for producing voluntary locomotion in *all* animals.[2] The reading takes no position as to whether voluntary locomotion in all animals is to be explained with reference *to the same kind* of bidirectional capacities or if we ought to say instead that the bidirectional capacities present in non-human animals are analogous to the bidirectional capacities present in human beings.

This defense relies on several different passages of Aristotle's works, all of which are admittedly controversial. My goal here is not to present an argument that can end these controversies, nor do I think that the alternative reading defended here is the only possible interpretation of Aristotle's theory that can make good sense of it. In the end, all I hope to do is present a defense that, after careful consideration, will make the alternate reading of Aristotle's theory as defended here seem plausible in light of its own merits and of some of the best recent contributions that are available to us in the secondary bibliography.

The rest of this paper is divided in three sections. In section II I deal with the first psychic argument. In section III I deal with the

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[1] I think this argument is implied by what is said in (Aquinas, 1961, p. 359), but it is not explicitly formulated there.

[2] As far as I can tell the only author to defend that thesis was Labarrière (2004, p. 143-145, 165), but the version of this thesis that is defended in these two articles will diverge from his own in a manner that will become clear by the end of the second paper.

second psychic argument. In section IV, I present a brief recapitulation of the arguments presented in sections II and III.

II. The First Psychic Argument

According to the first psychic argument, bidirectional capacities are rational capacities and irrational animals only have irrational capacities because they lack reason. Indeed, it is true that in several different parts of his work we see Aristotle denying that animals have λόγος, λογισμός, διάνοια, νοῦς and even δόξα (for a list of passages, see Sorabji, 1993, p. 12, n.3). Although I can't go over these passages in detail here, I'd like to say a few words about my strategy for dealing with them.

I take it that the passages that speak more directly to the problem at hand are the ones where he denies λόγος to non-human animals, since that is the word that is used by him in *Metaph.* 9.2. As we know, the word λόγος has many different meanings both in ancient Greek and in Aristotle's works. As Moss (2014, p. 185) has recently highlighted, λόγος enters the Greek language as the verbal noun from λέγειν: to say, speak, or tell.

Insofar as λόγος has a literal or original meaning, then, that is *thing said*, and it is clearly with this verbal sense that the word plays its role in the works of Homer and Hesiod: a λόγος is a speech, story, account, or argument. But its dictionary entries have many headings and translations, among which are word, statement, assertion, opinion, expectation, resolution, command, report, story, conversation, speech, language, reason – taken both as a faculty and as a ground for something –, account – both in the sense of regard for and of giving account of a thing –, and relation. As Moss noted, Aristotle himself uses the word in more than one sense, and he is often cited in dictionaries as a source for some of these meanings (2014, p. 182).

Now, the argument we are dealing with supposes that the λόγος in μετὰ λόγου should be translated as reason, which is a faculty that

Aristotle seems to consistently attribute only to human beings.[3] It is not my wish here to present, let alone defend, an alternative translation for the word λόγος as it is used in this expression. All I wish to point out is that, even if we accept the translation, there are passages of Aristotle's works which could lead us to qualify his denial of reason to non-human animals and to question whether or not this denial should be enough for us to conclude that he did not think they had bidirectional capacities.

The first one comes right at the opening of book 8 of the HA, where Aristotle tells us the following:

> [A] For even the other animals mostly possess traces of the characteristics to do with the soul, such as present differences most obviously in the case of humans. For tameness and wildness, gentleness and roughness, courage and cowardice, fears and boldness, temper and mischievouness are present in many of them together with resemblances of intelligent understanding. [B] For some of these traits differ by the more and the less in relation to man, as does man in relation to many of the animals (for certain of them are more present in man, some more in the other animals), while others differ by analogy; for as art, wisdom and understanding are present in man, so in some of the animals there is some other such natural capacity. [C] Just such a thing is most apparent when we look at children when they are young; for in them it is possible to see 'traces' and 'seeds' of the states that will be present later in life, though at that time their soul hardly differs at all from that of the beasts,

[3] For a defense of this translation, see Owen (1984, p. 52-54). Whatever meaning we choose to give to the word λόγος in μετὰ λόγου, it is clear that it is of no help to us to introduce here what Zatta recently called "the λόγος of life itself" (2022) and to say, following the author, that there is a certain λόγος that is embodied in animals themselves when considered from the perspective of their completion, in the sense that for Aristotle there is a rationality that is immanent in their bodies composite nature, visible and operative in all aspects of their existence, which is derived from the fact that they have an end for the sake of which they exist as they do, namely, their ways of life, and, according to Aristotle, this end for the sake of which is a λόγος (Zatta, 2022, p. 28). As Zatta herself notes, λόγος, so understood, is not a capacity of the soul that all animals possess (Zatta, 2022, p. 30).

> so there is nothing unreasonable if some traits are the same in the other animals, some similar, and some analogous. (*HA*. 8.1 588a18-b3)

As we can see, in this passage Aristotle claims that, even though διάνοιᾶ, τέχνη, σοφία and σύνεσις can only be found in man, animals have some cognitive capacity which is, or some cognitive capacities which are,[4] either similar, as in varying according to the more and the less, or analogous to them. This has been the source of some embarrassment to modern commentators both because there is no consensus as to whether Aristotle is claiming that these other capacities are analogous or similar to mankind's cognitive capacities[5] and because many feel that it is "in a certain contradiction", to use Schnieders' words, with the theory of the soul we find in the *de An.* 2.2 413b11ff. and 2.3 414a29b19, according to which the ability to think is restricted to mankind (Schnieders, 2019b, p. 319). But, as Schnieders himself remarks, in the biological writings there is often a different perspective on cognitive abilities that allows for a looser conception of them, even though in these same writings we sometimes find Aristotle marking once again the superiority of man's cognitive capacities in relation to the other animals (Schniede, 2019a, p. 175), and this different perspective can be explained by the fact that in these treaties we find passages that are directed at explaining

[4] In a24 Aristotle speakes of ὁμοιότης, in the plural, and the first part of section [B] seems to confirm he is referring to a variety of capacities, but his use of "τις ἑτέρα τοιαύτη φυσικὴ δύναμις" seems to point to just one capacity as standing for τέχνη, σοφία and σύνεσις. Since διάνοιᾶ appears in a23 in the expression "διάνοιαν συνέσεως", it seems difficult to sustain there one be one capacity standing for τέχνη, σοφία and σύνεσις and another for διάνοιᾶ.

[5] In [A] it is said that "τῆς περὶ τὴν διάνοιαν συνέσεως ἔνεισιν ἐν πολλοῖς αὐτῶν ὁμοιότητες", which would seems to point towards similarity, but in [B] the examples of τέχνη, σοφία and σύνεσις are mentioned right after the difference by analogy is mentioned, and so they can plausibly be taken as examples of this kind of difference. This is how Louis (1969, p. 177 n.5) took the relationship to be, and so did Lennox (1991, p. 59) - at one time. But later Lennox (2015, p. 207) himself, apparently influenced by Labarrière (1990, p. 411-412), argued that the passage "is more naturally taken to be leaving the sort of likeness dependent on which trait is being compared in which animals", and Schnieders (2019a, p. 176-180; 2019b, p. 323) has recently argued against analogy and, therefore, for similarity *tout court*.

these other animals behavior - something that is not the case outside of the zoological writings, where the behavior and capacities of human beings are the target of the explanations that are offered (Schnieders, 2019a, p. 176).

What is important to stress here is that, as already observed by Connell, although Aristotle never names the capacity, or capacities, which he has in mind in this passage, it becomes clear through the reading not only of books 7 and 8 of the *HA*, but also of passages from other books, that he does take several non-human animals to be capable of performing activities that are very much akin to activities that are performed by reason in human beings (2021 and 2024).

Take, for example, Aristotle's theory about the communication skills of non-human animals. He recognizes that several animals are capable of not only feeling pleasure and pain, but also of communicating these feelings to each other through their voice (*Pol*. 1.2 1253a10-14), that what differentiates a voice from the mere sound is the fact that those who have a voice are endowed with a soul and with the capacity for φαντασία (*de An.* 2.8 420b29-34), and that the sounds emitted through a voice are symbols of affections that reside in the soul of the emitter, but which are the same for all other individuals of the same species (*Int.* 1 16a3-8).[6]

Although the philosopher did not describe many examples of this type of process to us, he observed one that seems very instructive in book VIII of the *HA*. According to what is said there, these animals display (something akin to) φρόνησῐς in two cases - when they are flying, by having signalers who stay behind the flock and whose voice they all obey, and when they settle somewhere, by having the leader awake while the others sleep so that he can signal the others with a cry whenever he perceives something (*HA*. 8.10 614b19-27).

One can find yet a different set of passages that is pertinent to this point when Aristotle discusses the educative capacities of non-human animals. Indeed, according to Aristotle all animals that have

[6] For a detailed account of Aristotle's theory of animal communication and a more in-depth analysis of the passages quoted here, see Labarrière (2004, p. 17-59).

memory and hearing are able to learn (*Metaph.* 1.1 980a28-b26), whether from each other or from men (*HA.* VIII 1, 608a18-21), and several species of animals are able to use their vocal apparatus to teach, namely, those that their vocal abilities are more developed (*PA.* 2.17 660a17-b2). He described some examples of teaching and learning processes that take place among non-human animals in the description of their ways of life in books VIII and IX of *HA*, the most famous of which are the birds that are raised by birds of another species and learn the songs of this other species (*HA.* 4.12 526b11-16).

Last but not least, let's not forget the long section devoted by him in book IX of *HA*, which goes all the way from chapter 7 to chapter 43, where Aristotle deals in detail with the craftsmanship capacities of several non-human animals. For our present purposes, it will be enough to recall his description of how the swallow builds its nest. According to what is said there, swallows mix mud with straws in order to build their nests but, if mud is not to be found, they dive in water and roll themselves in dust in order to produce mud, and they build their nests in the same way as men do insofar as they put the most resistant material at the base and make it proportional with their own size (*HA.* 9.7 612b19-27).

As we can see, Aristotle does attribute to non-human animals' capacities that are able to produce behavior that is remarkably similar to rational human behavior. Although I won't go as far saying this is evidence enough to say that he attributes bidirectional capacities to them, I think it is enough to make us question whether or not the denial of reason to these animals is enough for us to say they don't have capacities of this type.

That being said, it must be pointed out that the discussion of the passage from the *HA.* 8.1 left open whether the cognitive capacity that Aristotle attributed to the other animals is to be distinguished from man's cognitive capacity according to the more and the less or by analogy and, therefore, that, for all that was said here, it is still possible to say that the other animals' bidirectional capacities are merely analogous to human being's bidirectional capacities. Since

what the interpretation developed in the following pages intends to show is that it is with the framework provided by Aristotle to explain the functioning of bidirectional capacities that we must explain the functioning of the capacity responsible for producing voluntary locomotion in *all* animals, and I see no reason to say this is not compatible, at least in principle, with the claim that the capacity for this kind of movement we find in the other animals is analogous to the capacity for this kind of movement we find in human beings, the interpretation presented here will remain neutral on that point.

III. The Second Psychic Argument

According to the second argument, bidirectional capacities are present only in the part of the soul that has reason, and non-human animals simply lack that part. Once again, it should be immediately noted that it is the word λόγος that is being here translated as reason and that Aristotle does indeed speak of a division of the soul into a part that has λόγος and one that doesn't in some of his writings. Nevertheless, this argument is problematic precisely because Aristotle himself discards the division of the soul into a part that has λόγος and one that doesn't in the *de An.*, and one of his reasons seems to be that he recognized the presence of λόγος in some sense in a part of the soul which all animals have, namely, the perceptive part.

As we know, Aristotle sometimes criticizes the idea of there being parts of the soul – at least on some conception of "part" – in the very places where he makes positive use of the notion.[7] This is why some interpreters have posited that Aristotle's considered view does not endorse a division of the soul into parts (Hicks, 1907, xxxix, p. 299, 550-552). Indeed, it is noteworthy that in *de An*. 3.9 432a22-b7 he specifically criticizes the bipartitie division of the soul into a part that has λόγος (λόγον ἔχον) and a part that doesn't (ἄλογον). If one accepts the arguments offered by him, the second psychic argument should either be discarded or modified. Nevertheless, since

[7] f. ex. *de An.* 1.5 411a26–b27, 432a22–b7; Juv. 467b16–18; *NE.* 1.13 1102a28–32, *EE*. 2.1 1219b32–36. On this point, see Corcilius and Perler (2014, p. 8).

Aristotle himself often speaks of parts of the soul in putting forward his own views - f. ex. *de An.* 2.2 413b7, 27; 2.4 439a10 and *PA.* 1.1 641a32-b10 - others have tried to give some positive meaning to Aristotle talk of parts. So, before discarding this argument we should take a look at the best explanation available today of Aristotle's talk of dividing soul into parts to see if it can somehow salvage it.

According to one interpretation, the soul can be divided only conceptually, by distinguishing various capacities of the soul, and any capacity of the soul can be called a 'part of the soul' because it is conceptually distinct from every other capacity of the soul (Gregoric, 2007, p. 19-27). In support of this interpretation, one could quote the discussion about the parts of the soul and their supposed separability in *de An.* II 2, which does seem to end with the collapse of the concept of a part of the soul into the concept of a capacity of the soul (Corcilius and Gregoric, 2010, p. 98).

The problem with this reading, as has already been remarked by Woods (1992, p. 94), is that Aristotle talk of different parts of the soul seems to be frequently aimed at explaining the different capacities that are possessed by the different animals who have these different parts. This, coupled with Aristotle's frequent use of the talk of parts of the soul to present his own views, the fact that the question of whether or not the soul has parts is reopened in *de An.* 3.9 and the fact that Aristotle explicitly criticizes the idea that every capacity should count as a part of the soul in *de An.* 3.10 433b1-4, seems to be evidence enough against the view that to be a part of the soul and to be a capacity of the soul are one and the same thing.

To refine this view, some interpreters have built a second interpretation according to which a capacity counts as a part of the soul if it is somehow separable from all the other parts. Whiting (2002, p. 152), for example, has argued that a capacity counts as a part of the soul if it is separable in magnitude or place from every other capacity, i.e., if it is embodied in different portions of matter located in different places.

But, as Corcilius and Gregoric (2010, p. 116) have argued, the pertinent notion of separability employed by Aristotle here cannot be this one, and so a third interpretation appeared. Although they advance several arguments against Whiting's interpretation of Aristotle, the two most important ones seem to be that (1) on Aristotle's account the physiological systems in which different parts of the soul are embodied happen to be largely overlapping and that (2) the idea that the soul is divided into locally separable parts was advocated by Plato in *Ti.*, as Whiting herself agrees (140, n. 11), and Aristotle finds this idea fundamentally objectionable, not least because it undermines the soul's unity (*de An.* 1.5 411b5-14).

Although one could assume that was Aristotle was discarding here is Plato's division of the soul into a part that has λόγος (λόγον ἔχον) and a part that doesn't (ἄλογον), there is reason to suppose Aristotle's own division of the soul into parts could not accommodate such a distinction either. Indeed, as Corcilius and Gregoric (2010, p. 98) have shown, for Aristotle a capacity of the soul counts as a part of the soul if, and only if, it is one of the fundamental capacities of the soul, i.e. a capacity the definition of which make no reference to any other capacity of the soul and whose existence we minimally have to assume in order to be able to provide a satisfactory account of the soul on which the science of living beings will be based (2010, p. 113). In the end, Corcilius and Gregoric (2010, p. 109) have persuasively argued that there are three capacities which are actually part of the soul: the nutritive capacity (θρεπτικόν), the perceptual capacity (αἰσθητικόν) and the thinking capacity (διανοητικόν). This is the same answer that we find in Johansen (2012, p. 6, 47-72), and I take it to be the best answer available today.

Having establish that, we may now see why the second psychic argument cannot be salvaged in light of this explanation. As we know, in *de An.* 3.9 432a22-b7, when Aristotle criticizes the bipartite division of the soul into a part that has λόγος and a part that doesn't, he mentions as a reason for us not to adopt that division the fact that the perceptual faculty (τὸ αἰσθητικόν) does not fit comfortably within any of these two parts (432a26-31). As we know, according to

Aristotle every animal possesses that capacity and, as it is conceived by him, it surely seems to have λόγος in some sense and, therefore, could be a part of the soul that has μετὰ λόγου capacities in some sense.

Indeed, in *de An.* 2.2 Aristotle famously postulates a *scala naturae* of the soul which characterizes it by the faculties of nutrition, perception, thought and movement (κινήσει, 413b14-14). It starts with plants, which would only possess the nutritive faculty (413a21-b1, 413b8-9), divides animals into those which possess only the sense of touch, but already share in perception, pain, pleasure, imagination and appetite, and those who possess the other forms of sensation (413b1-8, 23-25), and states that the thinking faculty seems to exist apart from all others (θεωρητικῆς, 413b25-28). And in *de An.* 3.12 he will state that to have only the senses of touch and taste is peculiar to stationary animals, for they are the only ones that may survive on these, while animals who are capable of locomotion need the other senses in order to survive (434b16-29). The overall picture, then, is one that starts with plants, moves on to simple stationary animals, complex locomotive animals and then puts human beings at the top. In this picture every animal has the desiderative and perceptive capacities, and animals capable of locomotion are endowed with a particularly complex sensitive capacity, i.e., one which possesses not only the sense of touch, but also at least the so called "common sense" (*Juv*. 2 467b27-468a2) [8] and the imaginative capacity (τὸ φανταστικόν).

According to Aristotle, φαντασία is a movement that is engendered by the perceptive capacity operating actively (*de An.* 3.3 428b30-429a2), and the imaginative capacity and the perceptual capacity are one in number, but two in essence (*Insomn*. 1 459a16-21). Besides, as Scheiter (2012, p. 257-259) has already pointed out, everything indicates that in Aristotle's philosophy φαντασία and perception have the same content, namely, the properties that can be

[8] On this point, see Block (1964, 1988), Kahn (1966), Kosman (1975) and Gregoric (2007).

perceived through the senses, and, as Corcilius and Gregoric (2010, 110) have already highlighted, in *de An.* 3.3 Aristotle does define imagination as a 'change which comes about as a result of actual perception' (*de An.* 3.3, 429a1-2), which suggests that the imaginative capacity is inseparable in account from the perceptive capacity.

If what is said above is correct, we are bound to conclude that (1) Aristotle explicitly rejected the division of the soul into a part that has λόγος and a part that doesn't and that (2) one of his arguments for this rejection is that the perceptual capacity, which is shared by all animals, does not fit into this division. Aristotle's point, or so I take it, is that this capacity cannot be said to be simply without λόγος. In order to see exactly why that is so, we need to take a quick look at his explanation of that capacity. As far as I can see, there are currently two main interpretations of Aristotle's theory regarding how perception comes about in animals.

According to what I still take to be the dominant interpretation, Aristotle maintains that animals perceive through their senses the properties whose perception is specific to each sense (proper sensibles) and the properties that are perceived by more than one sense (common sensibles). On this interpretation the common sense is responsible for unifying and organizing the data provided by the different senses in a simultaneous perception, discriminate two or more proper sensibles perceived by the same sense, control the other senses in order to "turn them on" on awakening and "turn them off" during sleep, and monitor the senses so that the individual perceives that he is or is not perceiving (Gregoric, 2007, p. 187, 207-210). It is only after this capacity has performed its job that the animals perceive both the objects themselves to which the proper and common sensibles belong and that the respective properties belong to them, i.e., the object that is red and that it is a red object. This perception, or so it is argued, is what Aristotle calls incidental perception in *de An.* 2.6 418a7-26.

According to the alternative interpretation, which has been recently defended by Corcilius (2022), perception is always and

immediately of 3-D objects which we always and immediately perceive by their special perceptible properties (Corcilius , 2022, 131) and as the bearers of these properties (Corcilius, 2022, 123). So explained, there is no need for any sort of synthesis performed by the common sense in order for an animal to perceive an external object as the bearer of a sensible property (Corcilius, 2022, p. 131). What is called incidental perception in *de An.* II 6, 418a7-26, or so it is argued, is not the perception of an external object as the bearer of a given property, but "the concatenation of two separate items in the mind of the perceiver (either as an identification, qualification, looser association, perceiving-as, etc.)" (Corcilius, 2022, p. 136).

As we can see, the alternative interpretation does not differ from the dominant interpretation in how it explains the content of perception, but in the way it explains the division of labor within the perceptual apparatus. Since the discussion in the next pages will revolve around the content of perception, it can stay neutral regarding this controversy. For our present purposes, the crucial passage of *de An.* is the following:

> [A] (1) To perceive then is like bare saying or thinking; but (2) whenever it is pleasant or painful, the soul as if it were affirming or denying pursues or avoids, and [B] to feel pleasure and pain is to act with the perceptual mean in relation to what is good or bad insofar as they are such. (*de An.* 3.7 431a8–11).

Commentators seem to unanimously agree on Aristotle's meaning in [B]. Although Aristotle repeatedly suggests and affirms that every end is desired or pursued because it seems good to those who desire or pursue it (*de An.* 3.10 433b16; *Metaph.* 12.7 1072a27-30; *Top*. 6.8 146b36-147a4), he also maintains that animals have cognition of pleasure and pain, but not of good and evil – these last being proper to human beings (*Pol*. 1.2 1253a7-18). For this reason, it is now generally accepted among specialists that, according to Aristotle's theory, in the case of irrational animals the cognition of an object as pleasant takes the place of the object's cognition as good.

Aristotle calls appetite (ἐπιθυμία) the desire for pleasure that all animals have – a kind of desire that has been commonly referred to in the secondary bibliography as irrational desire,[9] and the definition of which seems to be found in the passage we just quoted.[10] Since animals have no notion of the good and the bad, they can't perceive the pleasant as good and the painful as bad, but Aristotle holds that what they perceive as pleasant is what is in fact good for them, and what they perceive as painful is in fact bad for them, so that the things that are good or bad are actually perceived by them.[11]

If we look at the commentaries on [A], on the other hand, we'll see that, although they generally recognize that Aristotle is using the analogy with saying to compare and differentiate the kind of cognition involved in perceiving and in thinking, there are still some difficulties when it comes to finding out just how these things are and are not alike.

In what concerns [A1], the clearest lesson we find in the commentaries is that perceiving is *like*, but not identical to, bare saying insofar as bare saying consists in the enunciation of simple terms,[12] which, contrary to affirmations and negations, which are kinds of statement (ἀπόφανσις), are not truth apt (*Int*. 4, 6; *Metaph.* 9.10 1051b24).[13] Now, we know that Aristotle's theory of

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[9] As already noted by Corcilius (2011, p. 128 n. 18), Aristotle states several times that wherever there is the capacity of perception, there is also the capacity of pleasure, pain and desire (*de An*. 2.2 413b23; 414b1–16; III.11 434a2f.; *Somn.Vig.* 454b29–31; *PA*. 2.17 661a6–8).

[10] On why this passage ought to be read as defining just this type of desire, see Corcilius (2011), especially p. 127-128.

[11] The point is clearly made by Philoponus (*in de An*. 559 11-13), Simplicius (*in de An.* 266 1-5), Themistius (*in de An.* 1990 126), Aquinas (1999, 382), Rodier (1900, p. 492-494) and Corcilius (2020, p. 200-201), but it seems highly plausible to say that all commentators take this interpretation for granted.

[12] See Philoponus (*in de An*. 558,34-559,8), Simplicius (*in de An.* 265 22-27), Aquinas (1999, p. 381), Rodier (1900, p. 492), (Hicks 1907, p. 527), Reeve (2017, p. 165-166, 171) and Corcilius (2020, p. 200).

[13] This point is most clearly highlighted by Rodier (1900, p. 492), Hicks (1907, p. 527), Reeve (2017, p. 165-166, 171) and Corcilius (2020, p. 200).

perceptions postulates that our senses gather sensory data in a simple, incomposite way, by perceiving the proper sensible property of objects, so it is natural for us to take him here to be saying that seeing "red" is like (bare) saying "red".

In what concerns [A2], the dominant interpretation we find in the commentaries is that Aristotle would be recognizing that, although perceiving can be like bare saying, it is not always like bare saying, and it is certainly not like bare saying when our sensory apparatus discerns the object as pleasant or painful - in this case, what we would have is something that indeed is *like*, but not identical to, affirmation or negation, and, more precisely, with affirming it as either good or bad.[14] But there is a second interpretation that goes even further, holding that all perceiving is the making of quasi-judgments (Polansky, 2007, p. 483 n.4 and 484) or even that the perception of objects, insofar as it is cross-modal, co-predicates different properties of one object (Charles, 2020, p. 31-32).

Shield's commentary, on the other hand, states that perception may be said to be similar to affirmation and denial only insofar as it issues in pursuit or avoidance when faced with pleasure or pain, but stresses that, in his opinion, Aristotle is not saying that perception has an internal linguistic syntax, but rather that its motions are characterizable in ways paralleling the linguistic output of creatures with reason (2016, p. 336-337). One could try to add to Shield's critique by remarking that there is even something troubling about all this talk of "perceiving as pleasant" since being pleasant is not a property that, according to Aristotle, could even be perceived through an animal's perceptive apparatus.[15] That being said, I believe that, if we look at Aristotle's theory of perception, we'll see that this objection fails to hold much weight in the present context.

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[14] See f. ex. Philoponus (*in de An*. 558,34-559,8), Simplicius, (*in de An.* 265,27-266,5), Themistius (*in de An.* 126), Aquinas (1999, p. 381-382), Rodier (1900, p. 492), who goes so far as to claim that pursuit and avoidance are discursive operations, Hicks (1907, p. 527-528), and Shields (2016, p. 336-337).

[15] On this point, see Corcilius (2011, p. 123-124) and Nascimento (2017).

As we saw above, it is common ground among commentators that Aristotle holds that our perception is of objects as the bearers of properties, and in the passage we just quoted he can very well be taken to compare perceiving tout court with affirmation and denial, and not only the so called perception of things as pleasant or painful. This conclusion seems to be strengthened by the fact that Aristotle does hold that our perceptions are truth-apt, being concerned only with making the difference between the apprehension of proper sensibles, which are always true, and the other forms of apprehension of which an animal's perceptive apparatus is capable of, which can be true or false (*de An.* 2.6 418a11-16).

If what is said above is correct, we should be wary both of dividing the soul into parts that have λόγος and parts that do not have λόγος, and of positing that non-human animals have only the parts that do not have λόγος. But, from what we have seen so far, there is still no reason to see any attribution of bidirectional capacities to non-human animals based on the parts of the soul that Aristotle does attributes to them, and it could still be true that Aristotle didn't attribute any such capacities to them.

Now, in *Somn.Vig.* Aristotle does state that sleep and waking are exercises of the perceptive capacity, being awake consisting in the state where the capacity is active and sleeping consisting of the state where the capacity is inactive (454a4-8). From this, one could try to argue that Aristotle did indeed think of the animal's capacity for sensation as a bidirectional capacity. The problem with this view, of course, is that sleep and waking are listed in *MA.* 11 as non-voluntary animal movements because φαντασία and desire do not completely control them (703b8-18) and, as we have seen, according to him desire does control the activation of bidirectional capacities.[16]

Therefore, by arguing against the idea that bidirectional capacities are present only in the part of the soul that has reason, and non-human animals simply lack that part, all we've done is continue

[16] For a summary of how, exactly, Aristotle thinks that awakening and sleep alternate in animals, see Gregoric (2007, p. 163-164).

to clear the way for a positive argument that establishes that animals actually have bidirectional capacities or some other sort capacity that is analogous to it.

Now, someone might object that what the second psychic argument is actually proposing when translating λόγος as reason in the passage about parts of the soul in *Metaph.* 9.2 is to make reference to the thinking part of the soul (διανοητικόν). So understood, the argument would assume Aristotle to be using the word λόγος in this passage of *Metaph.* 9.2 in a more restrictive sense than the one which is being considered in the passage of the *de An.* we just considered. But even though this interpretation might seem possible at a first glance, in the next article I'll present an argument that, if accepted, should be enough for us to reject it.

IV. Conclusion

In section II I showed that there are passages of Aristotle's works which could lead us to qualify his denial of reason to non-human animals and to question whether or not this denial should be enough for us to conclude that he did not think they had bidirectional capacities. In these passages, Aristotle does take several non-human animals to be capable of performing activities that are very much akin to activities that are performed by reason in human beings and this has led many to recognize at least that they would have a capacity that would be at least analogous to reason.

Although I did not go as far saying this is evidence enough to say that he attributes bidirectional capacities to them, I held that it is enough to make us question whether or not the denial of reason to these animals is enough for us to say they don't have capacities of this type and left it open whether these capacities of non-human animals where bidirectional capacities of the same kind human beings possess or if they were bidirectional capacities by analogy. For the purposes of my argument this is indifferent. What matters is that it is with the framework provided by Aristotle to explain the functioning of bidirectional capacities that we must explain the

functioning of the capacity responsible for producing voluntary locomotion in *all* animals, and that could be the case if they were only bidirectional capacities by analogy.

Section III I argued that Aristotle himself discards the division of the soul into a part that has λόγος and one that doesn't, that one of his reasons for that was that, according to his own conception of the soul, it was hard to determine whether the perceptive part of the soul - which is a part all animals possess - should be said to have λόγος. Aristotle's point, or so I take it, is that this capacity cannot be said to be simply without λόγος. I then proceeded to a quick review of our current understanding of Aristotle's theory of perception in order to show that one could say that, for Aristotle, our perceptive faculty organizes the content of what is perceived into something like affirmation or negation.

As I've stated before, the work that was done here was meant only to clear the way for a positive argument that establishes that animals actually have bidirectional capacities or some other sort capacity that is analogous to it. This is what I'll do in the end of my next paper, after I've dealt with the other two arguments against the idea that it is with the framework provided by Aristotle to explain the functioning of bidirectional capacities that we must explain the functioning of the capacity responsible for producing voluntary locomotion in *all* animals.[17]

Data availability

Not applicable.

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