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The Pupil Mastering the Master Part II?

Aristotle and Theophrastus on reasoning in animals

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1. Introduction

The relation between humans and non-human animals, especially the ethical side of it, has been of interest to me for some years and I have read a few books on the topic. While reading about ancient views and treatises on the conception of animals and our relation to them last summer, I was intrigued by what appeared to be yet another interesting divergence between master and pupil in ancient Greece. While Aristotle, famously, is said to have stated that "Plato is dear to me, but dearer still is truth" before launching an attack on one of the doctrines of Plato¹, who had been Aristotle's teacher, I thought I had stumbled across another occurrence where this statement could more or less be applied. Interestingly enough, Aristotle was now the master who may have been mastered by his own pupil and successor as the head of Aristotle's school, Theophrastus.

In Richard Sorabji's interesting book, *Animal Minds and Human Morals: The Origins of the Western Debate*, he claims that Aristotle denies the faculty of reason to animals and that this gave birth to an intellectual crisis:

If animals are to be denied reason (*logos*), and with it belief (*doxa*), then their perceptual content must be compensatingly expanded, to enable them to find their way around in the world. On the other hand, it must not be expanded in such a way that perception becomes tantamount to belief. The distinction between these was as much debated then as it is now. It is not only perception that will need to be distinguished from belief, but the possession of concepts, memory, intention, emotion and speech, if these too can be found in animals that lack belief. (Sorabji, 2001, p.7)

Granted that this is correct, it surely seems troublesome to have one model of explaining these mental abilities for humans and another, different, for animals. For although Ockham's razor² was not invented by then, the rationale of it should be valid regardless of time. Therefore it was interesting to later in the book find out that Aristotle's perhaps most prominent student, Theophrastus, might have ascribed to animals further intellectual capacities than Aristotle did. The exact extent might not be very clear but Sorabji wrote that:

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- 1 Though Aristotle perhaps never expressed himself in this way, thereby making this "quotation" reasonably disputable, it is clear that this is the meaning of the passage in the *Nicomachean Ethics* (NE 1.6, 1096a11-17).
 - 2 Devised by William of Ockham in the 14th-century, Ockham's razor is a principle used in problem solving and for deciding between competing hypotheses which stresses that *ceteris paribus* (all other things being equal), the hypothesis or solution with the fewest assumptions should be preferred.

Theophrastus is recorded by Porphyry as saying that animals engage in reasonings (*logismoi*). This claim, which is not qualified with an “as if”, appears to be Theophrastus', not Porphyry's. (Sorabji, 2001, p.45)

How can one engage in reasonings without having reason? Theophrastus here appeared to me to enable himself to use the same model for both humans and animals. He would thereby set himself in a great position to stress differences of degree in reason for different species (as many do today) as an explanation for the differing abilities. This could then shred Aristotle's animal model to pieces with the aid of the razor supplied, posthumously to Theophrastus, by Ockham.

Is this a reasonable interpretation? Do Theophrastus actually diverge from his master as suggested? If so, was Theophrastus' account superior to Aristotle's?

1.1 Aims and method

After introducing the Aristotelian concept of what a soul is and thereby setting the framework for my topic, I will start by explaining and giving an account of Aristotle's view on how humans and animals manage to experience and navigate in the world and whether he actually denies non-human animals of reason.

Then I will examine Theophrastus' view. Does it diverge from Aristotle's and did he attribute reason to animals or not? Is there perhaps even ground for judging Theophrastus' view as more “Aristotelian” than Aristotle's own?

I will also try to assess which is the most plausible view from different perspectives. The perspectives will be: (1) Are they coherent and plausible within each philosopher's system as a whole? (2) Which is the most reasonable view from a contemporary (that is ancient) naturalistic/scientific perspective?

1.2 Problems and limitations of the material at hand

As with many of ancient writers, time has taken its toll and there are many of Theophrastus' works that have been lost. The perhaps most important passages for the topic at hand are believed to have been written by Theophrastus in his now lost work *On piety*. Fortunately there are fragments of this work preserved in Porphyry's *On abstinence from animal food* (referred to below by its Latin title

De abstinentia) where Porphyry reports what Theophrastus wrote. Quotes and reports from ancient sources are however often a little tricky to interpret as they are not seldom blended with the reporters' own view and terminology. Porphyry is no exception here and this will also be evident below. Despite this it seems plausible enough to accept that the general points of the passages that are said to come from Theophrastus actually originate from him.

With Aristotle it is different. Although it is said that most of his works are lost, there is still an extraordinary corpus preserved and it is rather hard to find something that there is not a preserved Aristotelian text that treat. For the topic at hand there are several works that are relevant and they are all available, in multiple languages, as well. The authenticity of the book is solid and they are all thought to actually come from the mind and hands of Aristotle. There is however one exception and that is *History of Animals*. That work's authenticity is contested and therefore I do not put a lot of weight on it.

1.3 Abbreviations

The Aristotelian titles will be written with their common abbreviations in the text and below is a list of them.

DA – On the Soul (De anima)

EE – Eudemian Ethics

HA – History of Animals

GA – Generation of Animals

Metaph. – Metaphysics

NE – Nichomachean Ethics

PA – On the Parts of Animals

Pol. – Politics

2. Aristotle

In his influential work *On the Soul* (more often referred to by its Latin title, *De anima*), Aristotle sets out to explain the soul (ψυχή). For Aristotle, a soul is like a blueprint or a principle of what a being is and souls in general can be equated to different principles of life, which can pretty accurately be compared to DNA, where every species (and individual) has a fixed development or potential upon creation. All living things have souls and every individual has a specific soul that makes it unique. Socrates had a soul which was unique in the way that no other man had the same set of abilities and memories, but at the same time his soul had quite a lot of features that were shared by other living creatures and that creates the opportunity for classification. What is it that constitutes the soul of an animal? What features are required to qualify a creature as a human?

The Aristotelian soul can be seen as a collection of potentialities. Souls that have some crucial shared potentialities can be said to be of the same species. This makes it possible to talk of entities like for example the human soul. Although no one has the exact human soul there should be plenty of individuals that have exactly those qualifying potentialities that constitute a human soul and then has quite a few more along with that. It might be a shared human potential to have the potential of acquiring and using a language. However which language will differ among individuals and there might even be a few that do not learn any languages at all (though they have the potential) due to unfortunate circumstances but that would not make them less human.

According to Aristotle there are three types of souls: plant souls, animal souls and human souls. All types of souls have nutritive potency (i.e. being able to take in nutriment and to grow) and that is where it stops for plant souls. In addition to nutritive potency one can also find potency in all animals for perception (at least one sense, often more) and for desiring (includes appetite, spiritedness and wishing. Most animals also have the ability to move from place to place and some (humans) have the power of thought or reason (διανοητικόν) and intellect (νοῦς).

2.1 Non-human animals lack reason and intellect

After having concluded that taking in nutriment and being able to grow is shared among plants, animals and humans alike, Aristotle the *Nichomachean Ethics* clearly stated that:

ἐπομένη δὲ αἰσθητικὴ τις ἂν εἴη, φαίνεται δὲ καὶ αὐτὴ κοινὴ καὶ ἵππῳ καὶ βοῖ καὶ παντὶ ζῴῳ. λείπεται δὲ πρακτικὴ τις τοῦ λόγον ἔχοντος (NE, 1098a3-4)

Next to consider would be some sort of perception, but this too is evidently shared, by horses, oxen and every other animal. There remains a practical sort of life of what possesses reason (Trans. Rowe, 2002)

The word for reason, λόγον, is here distinguished as what separates man from animal. The same word (λόγος) is central in a passage in Aristotle's *Politics* where the power of speech (also λόγον) paired with the ability to make value judgments is the foundation for the community of man. It is here written that:

οὐθὲν γάρ, ὡς φαμέν, μάτην ἢ φύσις ποιεῖ: λόγον δὲ μόνον ἄνθρωπος ἔχει τῶν ζώων (*Pol.* 1253a9-10)

Nature, as we often say, makes nothing in vain, and man is the only animal whom she has endowed with the gift of speech. (Trans. Jowett, 1885)

While this might seem like clear evidence that Aristotle denied reason to animals, it can be tempting to explain the denial of reason to animals as serving a practical purpose rather than actually denying them reason. After all, ethics and politics are about practical matters for humans and how we ought to act, so there could be room for accepting lesser accuracy on what animals *really* are like. Interestingly enough, one can find hints of this being more than a practical, and somewhat inaccurate, notion in his naturalistic and psychological treatises. Thought and intellect are also mentioned as uniquely human features in the *De anima*, where Aristotle, after a few sentences in which common animal features (shared by both animals and man) are listed, states the following:

ἐνίοις δὲ πρὸς τούτοις ὑπάρχει καὶ τὸ κατὰ τόπον κινητικόν, ἑτέροις δὲ καὶ τὸ διανοητικόν τε καὶ νοῦς, οἷον ἄνθρωποις καὶ εἴ τι τοιοῦτον ἕτερόν ἐστιν ἢ τιμώτερον. (*DA* 2.3, 414b16-19)

In addition to these things, mobility with respect to place also belongs to some animals, and to others the power of thought and an intellect as well, namely to human beings (and anything else there may be that is similar or more worthy of honor). (Trans. Shiffman, 2011)

Again, intellectual capacity is highlighted as the differentia³ for being human rather than any other

3 Aristotle famously strove toward classifying everything properly and, perhaps somewhat naively, seemed to believe that classification could be done properly by finding the correct branches between one class of things/beings and another. These branches consist of some feature that one species has whereas another lacks, and it is these features that are referred to as *differentia*, i.e. the difference between one class of things/beings and another.

animal species (although gods perhaps share these intellectual capacities as well). This time though, the intellectual capacities mentioned is thought (διανοητικόν) and intellect (νοῦς). These passages are by no means the only ones that deny intellectual capacities to animals. For example, reason (λόγος) is denied to animals in multiple works⁴, reasoning (λογισμός)⁵, thought (διάνοια)⁶ and intellect (νοῦς)⁷ elsewhere too. With respect to the teleological worldview of Aristotle, where everything has a purpose and an end to strive for, which, when reached, results in the individual's full blossoming, should come as no surprise. This blossoming is, for humans, the state that is explained as happiness (εὐδαιμονία) in his ethics. And to reach this extraordinary state will require of us that we reach and practice the full potential of our distinctively human abilities – the intellectual ones.

A striking fact about those passages is that there seems to be many different words for more or less the same thing. What is the difference between reason and intellect for example? It is not very obvious and is worth some explanation. Actually we cannot really make much sense in the discussion below without clarifying some terms.

According to Aristotle, animals (at least some) are sensible (φρονεῖν) (*DA* 3.3, 427b8) and have the ability to get impressions/perceive (αἴσθησις) and to move. In addition to these all animals have the ability for imagination (φαντασία). Some animals also have the ability to store impressions, i.e. memory (μνήμη), which is why they are capable of having experience to guide their actions. These mental capacities are what animals are said to have. In addition to these, humans have reason (λόγος), which can be explained as a sort of calculating device, and intellect (νοῦς) which is the ability to grasp abstract concepts and forms, i.e. the intelligibles (νοητά).

Aristotle distinguished four types of intellectual virtues, all of whom animals are unable to have because of being denied reason:

- 1.) σοφία = Abstract reasoning about universal truths where intellect and reason is required.
- 2.) ἐπιστήμη = Scientific knowledge.
- 3.) τέχνη = Best translated as craftsmanship.
- 4.) φρόνησις = Practical (ethical) wisdom, where reason is required to judge and guide the individual about and what to do (*praxis*).

⁴ *DA* 3.3, 428a24; *EE* 2.8, 1224a27; *Pol.* 7.13, 1332b5; *NE* 1098a3-4.

⁵ *DA* 3.10, 433a12

⁶ *PA* 1.1, 641b8-9

⁷ *DA* 1.2, 404b4-6

It is not obvious why animals cannot have at least some of these intellectual virtues. What about a skilled predator who has surely mastered the way of catching its prey? Why should the hunting animal not count as having the τέχνη of hunting when a human hunter will not be denied this? And what about animals living in packs, why should their understanding and subordination to the pack's customs (its *praxis*) not be regarded as φρόνησις, of some degree? Humans doing the same thing surely qualify as having, at least some degree of, φρόνησις for doing so. The rationale for this, which Aristotle presents, is that they lack the required extra account of reason that makes those beliefs or actions as signs of knowledge and that might be plausible.

This would not have to be a big issue for, of course, one can have the correct view of the world, or some particulars, without actually having knowledge. Believing what is actually the case without having it qualify as knowledge would not be of any practical significance at all. But what is troubling here is that animals are, as a consequence of Aristotle's model, denied the ability for having beliefs. For having a belief about something requires conviction, which in turn requires reason as well (*DA* 3.3, 428a19-24).

2.2 The extent of perceptual content

How is it even possible to manage without beliefs about the world? How can, for example, a running cat avoid an obstacle if one does not believe that one is in front of it? The Aristotelian solution to this problem is found in its model of perception. In contrast to Plato, who thought that every sense had its *proper* (ἴδιον) sensibles in the world and that no features of a thing can be perceived by more senses than one, Aristotle presented a model where he added *common* (κοινά) qualities. Aristotle's perceptual model's ability to grasp multiple sensibles is evident from the following:

ἀλλὰ μὴν οὐδὲ τῶν κοινῶν οἷόν τ' εἶναι αἰσθητήριόν τι ἴδιον, ὧν ἐκάστη αἰσθήσει αἰσθανόμεθα κατὰ συμβεβηκός, οἷον κινήσεως, στάσεως, σχήματος, μεγέθους, ἀριθμοῦ· (*DA* 3.1, 425a14-6)

Neither, however, is there some special sense organ for the common things we perceive incidentally by each sense, such as motion, rest, figure, magnitude, number and unity. (Trans. Shiffman, 2011)

Clearly, this extension of the sensibles does enable a creature to perceive *that* something is the case, which is a sort of propositional account.⁸ To be able to perceive movement and that something is ahead of oneself and is not moving do, for sure, solve the problem with the cat running towards an obstacle. This also seems to remove the need for reason, as animals can navigate with such rich perceptive abilities, which provide them with all needed information. Aristotle though, recognizes that at least some animals have the ability of having post perceptual appearances like memories (μνήμη) (*Metaph.* 1.1, 980a29) and imagination⁹ (φαντασία). Regarding the ascription of imagination and its role the following passages make it all clear:

πολλοὶ γὰρ παρὰ τὴν ἐπιστήμην ἀκολουθοῦσι ταῖς φαντασίαις, καὶ ἐν τοῖς ἄλλοις ζῴοις οὐ νόησις οὐδὲ λογισμὸς ἔστιν, ἀλλὰ φαντασία. ἄμφω ἄρα ταῦτα κινητικὰ κατὰ τόπον (*DA* 3.10, 433a10-3)

In many cases humans follow their imaginations in spite of their knowledge; and in the other animals there is no thought or reasoning, but there is imagination. Both these, then, are productive of motion with respect to place (Trans. Shiffman, 2011)

ὄλως μὲν οὖν, ὥσπερ εἴρηται, ἢ ὀρεκτικὸν τὸ ζῶον, ταύτη αὐτοῦ κινητικόν· ὀρεκτικὸν δὲ οὐκ ἄνευ φαντασίας· φαντασία δὲ πᾶσα ἢ λογιστικὴ ἢ αἰσθητικὴ. ταύτης μὲν οὖν καὶ τὰ ἄλλα ζῶα μετέχει. (*DA* 3.10, 433b27-30)

In general, then, as has been said, in the way in which the animal is desiderative, in just such a way is it able to move itself; and it is not desiderative without imagination. All imagination is either sensory or involves reasoning. The other animals thus have a share in this as well. (Trans. Shiffman, 2011)

Non-human animals thus have imagination (φαντασία) and that is what, together with appetite/inclination (ὄρεξις), causes them to act. The imagination is, as the above text makes clear, divided into two types: a sensory imagination, which has nothing to do with reason; and deliberative imagination, where reasoning serves a vital purpose. To illustrate the difference between the two sorts of imagination it is worth having a look at Michael Frede's explanation:

8 This is also noted and stressed by Sorabji (2001, p.17)

9 This is a tricky term to translate but I will use the most common translation "imagination". This is a sort of internal perception, which can not only be created by the perception of external objects but also from memory, and could very well also be translated as "perceptual appearance" for example.

It obviously is the case, and Aristotle obviously assumes, that animals can perceptually discriminate particular objects and kinds of objects, for instance by their characteristic look. But, obviously having the look of a tree or the look of a lion is not the same thing as being a tree or being a lion. We do not even have to assume that looking like a lion always has to coincide with being a lion. Animals still would be able to discriminate lions by their look to the extent that looking like a lion and being a lion do coincide. But even when they coincide it is one thing to look like a lion and another to be a lion. And the claim is that animals can discriminate lions by perceptually discriminating their look, something perceptible, whereas human beings can discriminate lions by intellectually discriminating whatever it is such that being that is to be a lion, something imperceptible and only accessible to reason and intellect, hence intelligible as opposed to perceptible. (Frede, 2008, pp.295-6)

Regarding memory (μνήμη), its connection to perceptions – memory is created out of perceptions – gives birth to the interesting result that animals, who many times have a greater perceptive ability than humans, might have greater content of memory as well. A somewhat puzzling feature of the Aristotelian model is that animals are more or less denied (it seems to be very restricted) the ability to create experiences (ἐμπειρία) out of their memories:

τὰ μὲν οὖν ἄλλα ταῖς φαντασίαις ζῆ καὶ ταῖς μνήμαις, ἐμπειρίας δὲ μετέχει μικρόν· τὸ δὲ τῶν ἀνθρώπων γένος καὶ τέχνη καὶ λογισμοῖς· γίγνεται δ' ἐκ τῆς μνήμης ἐμπειρία τοῖς ἀνθρώποις· αἱ γὰρ πολλαὶ μνήμαι τοῦ αὐτοῦ πράγματος μιᾶς ἐμπειρίας δύναμιν ἀποτελοῦσιν.
(*Metaph.* 1.1, 980b25-981a1)

The animals other than man live by appearances and memories, and have but little of connected experience; but the human race lives also by art and reasonings. Now from memory experience is produced in men; for the several memories of the same thing produce finally the capacity for a single experience. (Trans. W. D. Ross, 1953)

That animals are only allowed a small extent of experience is rather strange and it is not clear why this should be the case as their memories do not seem to be limited at all. Indeed, in the *Posterior Analytics* (2.19, 100a5-6), the process of transforming multiple memories to experiences seem to be an automatic one. If reason would be required for the formation of experience from memories, that would rule out the whole possibility for animals to have experience, but they actually seem to be allowed some experience. How can experience, which is a simplification or summation of numerous memories, even be created without some sort of reasoning faculty? There must be a sort

of computing device to help out with this sort of operation and what would that be in a creature lacking just such a device? Furthermore, when reason is added to post perceptual content, it is when experiences are transformed into knowledge/art (τέχνη).

2.3 Signs of animal intelligence in Aristotle's corpus

It is worth noting that there are passages in Aristotle's works where animals seem to be ascribed a more favorable amount of intellectual capacities than what is stated above. Earlier in the *Metaphysics* passage quoted above, it is clearly implied that some animals, those with memory, have intelligence (φρονιμώτερα) as they have more intelligence than those without memory. Animals without the ability to hear sounds are also called intelligent (φρόνιμα) even though they lack the ability to learn, as a result from not being able to hear.¹⁰

There are other passages where animals are granted intellect by Aristotle. In *On the Parts of Animals*, there is a discussion of what the differing characters of blood in different species implicates for the individual. Those with thin and cold blood are claimed to be better off intellectually (νοερώτερον) and perceptually even though the best blood for promoting intelligence (φρόνησιν) and courage is hot, thin and pure (*PA*. 2.2, 648a3-11). In *Generation of Animals*, Aristotle even grants animals knowledge (γνώσις):

ἀλλὰ περὶ μὲν τούτων ἐν ἑτέροις ἐπέσκεπται, τοῦ δὲ ζώου οὐ μόνον τὸ γεννηῆσαι ἔργον (τοῦτο μὲν γὰρ κοῖνον τῶν ζώντων πάντων), ἀλλὰ καὶ γνώσεώς τινος πάντα μετέχουσι, τὰ μὲν πλείονος τὰ δ' ἐλάττονος τὰ δὲ πάμπαν μικρᾶς. αἴσθησιν γὰρ ἔχουσιν, ἢ δ' αἴσθησις γνώσις τις. ταύτης δὲ τὸ τίμιον καὶ ἄτιμον πολὺ διαφέρει σκοποῦσι πρὸς φρόνησιν καὶ πρὸς τὸ τῶν ἀνύχων γένος. πρὸς μὲν γὰρ τὸ φρονεῖν ὥσπερ οὐδὲν εἶναι δοκεῖ τὸ κοινωνεῖν ἀφῆς καὶ γεύσεως μόνον, πρὸς δὲ φυτὸν ἢ λίθον θαυμάσιον· ἀγαπητὸν γὰρ ἂν δόξειε καὶ ταύτης τυχεῖν τῆς γνώσεως ἀλλάμη κείσθαι τεθνεὸς καὶ μὴ ὄν. (*GA* 1.23, 731a29-b4)

All animals have, in addition, some measure of knowledge [γνώσεώς] of a sort (some have more, some less, some very little indeed), because they have sense-perception,* and sense-perception is, of course, a sort of knowledge [γνώσις]. The value we attach to this knowledge varies greatly according as we judge it by the standard of human intelligence [φρόνησιν] or the class of lifeless objects. Compared with the intelligence [φρονεῖν] possessed by man, it seems as nothing to possess the two senses of touch and taste only ; but compared with entire absence

¹⁰ *Metaph.* 1.1, 980a27-980b24

of sensibility it seems a very fine thing indeed. (Trans. A.L Peck, 1902)

Though perception is clearly an inferior and lower type of knowledge than φρόνησις, it is interesting to see that Aristotle makes a point about the necessity of being aware of what one compares a thing to. Browning Cole writes that:

“This may provide us with the interpretative key to the apparent inconsistency in Aristotle's views on animal intelligence and character” (1992, p.51)

Although I like the idea, I am not as convinced as she seems to be that there really are troubling inconsistencies in Aristotle on this point. Sure, I find it implausible to deny animals that great amount of intellect and reason as Aristotle seems to have done, but I do not find his model inconsistent. There are some troublesome passages as noted above but considering the fact that animals are said to be φρονεῖν, as in the *Metaphysics* passage above, this does not imply that they do have reason. Rather they are acknowledged as having perception and imagination. As for the lesser knowledge, perception, it is clear in the text itself that it is a minor ability which is nowhere near as good as φρόνησις, so it is not clear what significance that has for the topic at hand. Now, animals are surely described, by Aristotle, as inferior to humans with regard to intellectual abilities, but as Browning Cole notes:

to fail to reach the highest level is not the same as never to be placed on the scale at all; animals clearly here are holding a place on the scale of intellectual abilities (not merely perceptive or sensitive abilities). (Browning Cole, 1992, p.49)

Even though Aristotle very well might ascribe some minor intellectual abilities to animals, it is very clear that they are considered to be nowhere near to those granted to humans and while insisting that this differing grade has to do with different types of reasoning, Aristotle's theory holds. What would really make for an inconsistent Aristotle would be to take into account some of the passages of his *History of Animals*. In books 8-9, animals are granted technical knowledge (τεχνικός) and thought (διάνοια and νοῦς) but as that work is spurious I have left it out here. More certainty of its being of Aristotle's hand would certainly turn the tide into the hands of Browning Cole's interpretation.

2.4 Strengths and weaknesses of the Aristotelian model

When looking at Aristotle's model as a whole it is actually quite simple. All animals (including humans) partake in sense-perception and formation of perceptual images (φαντασία), some are also being able to enhance their perceptual images with post perceptual images from memory. This enhancement is furthermore able to create experience (ἐμπειρία), which is a summation and a sort of rationalization of many particular memories, and this may well be characterized as a kind of knowledge. The ἐμπειρία, however, is not classified by Aristotle as knowledge for it lacks a sort of rational account, a knowledge of the universal facts that are the actual causes of *why* the particular memories can be unified. As already mentioned above (p.10), though, mere experiences can very much be sufficient for being successful in life and that is exactly what Aristotle seems to allow animals to reach intellectually. And, as Frede accurately notes:

Aristotle does say that animals cannot think. But by this he does not mean that animals cannot have a string of impressions like 'it is pretty cold', 'the light has a certain quality', 'it is about time to fly south'. In fact this is what Aristotle is attributing to animals when he attributes sense (φρόνησις) to them and says (980b26) that they live by their impressions and their memories. Aristotle is not denying to animals the bit of what we might call 'thinking' which the empiricist doctor engages in, because they cannot think. Aristotle has no difficulty whatsoever to accept that animals can display extraordinary ingenuity in getting hold of a banana. What Aristotle is denying to animals is the power of memory and the rich experience human beings have. And what Aristotle is claiming is that this sort of memory and this sort of experience does not yet in itself give you the ability to think. What Aristotle is willing to say (*De Anima* III.10 433a10–12) is that one might think of impression as a sort of thought (ὡς νόησίν τινα), but he is denying that the impressions of animals are thoughts. (Frede, 2008, p.299)

But since Aristotle, in contrast to Plato, denies that we are born with reason (*Posterior Analytics* 2.19), it is legitimate to ask how one can acquire the rational account, that is how can one grasp the form (*Metaph.* 1.1, 981a10) or universal (*Metaph.* 1.1, 981a16;21) needed for transforming experience into τέχνη and ἐπιστήμη. The answer, which is presented in the *Posterior Analytics* (2.19), is that reason evolves from sense-perception at some point, and it is only when one has the right concepts of a specific domain that it is possible to gain knowledge. Frede's comments on this are, once again, enlightening:

this seems to be an enormously strong assumption. For it amounts to the claim that we can only think once we have got all the concepts in terms of which one will know and understand really

right. And this does not leave any room for the assumption that thinking must already be involved in reaching the state in which we have a grasp of the principles or axioms governing a domain, because we have a grasp of the basic items or features constitutive of this domain. (Frede, 2008, p.301)

I am not as inclined to see this as a problem, at least not for Aristotle's model, as Frede seems to be. There might still be room for inferior sorts of reasonings and all that Aristotle is exploring is our potentials. If some humans do not actually think, in Aristotelian terminology, that does not have to be a problem, neither to them or to the model as such, providing that they at least have the potential of doing so as human beings. What is of bigger interest here for the topic at hand is that the Aristotelian definition of "thinking" that animals are being denied the potential to reach seems to be no walk in the park to reach for a human being either.

Resting, as it does, on positing a world of intelligibles, or at least, some possibilities to grasp universals intellectually, it is easy to be quite sceptical about the Aristotelian model. If there are no such intelligible truths or, perhaps, no way of reaching such things for us, then we cannot be said to have the potential of having reason or thinking either. Actually, if that is the case, none of Aristotle's sub-lunar beings can think.

Alas, the whole project might seem corrupt from start, for a non-rationalist or an empiricist minded reader. In addition to the above, it is worth noting that although the model as such is quite coherent within itself, it is a rather implausible method to use for explaining the world when one just posits that there are natural *differentiae* that are also teleological causes and aims. Aristotle, though influential during many years, fell out of fashion and is not regarded as the great natural scientist that he perhaps was once considered, and that is for a good reason. The reason being that his overall teleological worldview is, and has always been, inadequate.

3. Theophrastus

Among the remains of the works of Theophrastus (which by a substantial part are fragmentary), there are quite a few hints as to what Theophrastus might have thought. Several sources indicate that Theophrastus might have considered animals more akin to men than his teacher Aristotle.

3.1 *De abstinentia* 3.25

In *De abstinentia* 3.25, Porphyry reports about Theophrastus' view on kinship (οἰκεῖα) as a ground for morality. Theophrastus starts by stressing kinship based on shared ancestors and men living together in the same land, then he proceeds to stress kinship based on likeness as grounds for moral consideration (this is referred to as an alliance). Theophrastus is then reported to take this line of reasoning even further. Alliance between animals is considered strong as many of them show great resemblance with each other. Finally, the resemblance between animals and us (humans) are recognized and emphasized:

εἰ δὲ ἀληθές ἐστι τὸ λεγόμενον, ὡς ἢ τῶν ἡθῶν γένεσις ἐστι τοιαύτη, φρονοῦσι μὲν ἅπαντα φύλα, διαφέρουσι δὲ ταῖς ἀγωγαῖς τε καὶ ταῖς τῶν πρώτων κράσεσι, παντάπασιν ἄν οἰκεῖον εἶη καὶ συγγενές ἡμῖν τὸ τῶν λοιπῶν ζώων γένος. (*De abstinentia* 3.25, 30-34)

If it is true that the origin of characteristics is like this, then all species have intelligence, but they differ in upbringing and in the mixture of their primary components. The race of other animals would then be related and kin to us in all respects (Trans. Clarke, 2000)

The similarities between humans and animals and the rating of which similarities are important – namely, the features of the soul – is clear from this passage:

οὕτως δὲ καὶ τοὺς πάντας ἀνθρώπους ἀλλήλοις τίθεμεν καὶ συγγενεῖς, καὶ μὴν <καὶ> πᾶσι τοῖς ζώοις· αἱ γὰρ τῶν σωμάτων ἀρχαὶ πεφύκασιν αἱ αὐταί· λέγω δὲ οὐκ ἐπὶ τὰ στοιχεῖα ἀναφέρων τὰ πρώτα· ἐκ τούτων μὲν γὰρ καὶ τὰ φυτά· ἀλλ' οἷον δέρμα, σάρκας καὶ τὸ τῶν ὑγρῶν τοῖς ζώοις σύμφυτον γένος· πολὺ δὲ μᾶλλον τῶ τὰς ἐν αὐτοῖς ψυχὰς ἀδιαφόρους πεφυκέναι, λέγω δὴ ταῖς ἐπιθυμίαις καὶ ταῖς ὀργαῖς, ἔτι δὲ τοῖς λογισμοῖς, καὶ μάλιστα πάντων ταῖς αἰσθήσεσιν. (*De abstinentia* 3.25, 16-25)

Thus also we posit that all human beings are kin to one another, and moreover to all the animals, for the principles of their bodies are naturally the same. I say this not with reference to the

primal elements, for plants too are composed of these: I mean, for instance, skin, flesh and the kind of fluids that are natural to animals. We posit this the more strongly because the souls of animals are no different, I mean in appetite and anger, and also in reasoning and above all in perception. (Trans. Clarke, 2000)

The similarities obviously have a lot to do with mental capacities and this is also what primarily seems to be the most important difference between animals (including humans) and plants. One can note, as Browning Cole does (1992, p.55), a considerable (polemical) divergence from Aristotle who denies that humans and animals have anything morally relevant in common (thus, for Aristotle, animals are not characterized as moral; cf. *NE* 8.11 1161a32-b4).

In the passage from *De abstinentia* 3.25 above it is a striking fact that Theophrastus actually mentions reasoning (λογισμός) as one thing we have in common with animals. As we noted above Aristotle did write that animals engage in reasoning but that was qualified with "as if". Furthermore, Aristotle actually denied animals λογισμός in *DA* (3.10, 433a12) so it is not only possible that Aristotle did not actually think animals had the ability of reasoning, but probable, whereas Theophrastus more likely thought that animals had a reasoning faculty.

The claim, from the introduction, that Theophrastus acknowledges that animals have reason, of at least some degree, is thus strengthened and the chasm between those who have reason and those who have not can even more firmly be said to be situated between animals and plants for Theophrastus and not, as Aristotle seems to have put it, between humans and non-human animals.

Before putting too much weight on this passage, it is necessary to consider the terms used by Aristotle and Theophrastus. Sure, Theophrastus acknowledges that animals have reasonings (λογισμός), whereas Aristotle has denied this. However, even if λογισμός might, like λόγος, be translated as reasoning, it is important to stress the fact that λογισμός cannot be translated as reason (the faculty). Λογισμός is commonly translated and used for calculating and it is quite obvious that this is what the individual need for transforming perceptions into memories and especially turning memories into experience, which can perhaps be described as unified and sorted memories. One must thus be cautious before making too much out of the occurrence of λογισμός here.

While speaking of terminology it is also worth mentioning that animals are characterized as having intelligence (φρονούσι) in the first quotation from *De abstinentia* above. Though Aristotle denies

φρόνησις (practical wisdom) to animals, he surely describes them as φρονεῖν, which simply means that they have sense perception. This is probably what Theophrastus would have meant with φρονοῦσι, rather than ascribing them practical wisdom but it is hard to be completely certain.

3.2 *De abstinentia* book 2

Earlier in *De abstinentia*, Porphyry reports some views from Theophrastus, which are relevant for the discussion of the appropriateness of sacrificing animals to the gods. Following a series of stories about the origins of animal sacrifice – which is said to be due to ignorance and sometimes dire need – Porphyry writes:

εἰκότως ὁ Θεόφραστος ἀπαγορεύει μὴ θύειν τὰ ἔμψυχα τοὺς τῷ ὄντι εὐσεβεῖν ἐθέλοντας (*De abstinentia* 2.11)

Theophrastus was right to forbid the sacrifice of animate creatures by those who wanted to be truly pious (Trans. Clarke, 2000).

The rationale for this prohibition is, apart from the stories of erroneous reasonings leading to the birth of the custom of animal sacrifice, three-fold:

- (i) The fruits of the earth are the most beautiful and honorable things that the gods have given us and thus the most appropriate gifts to sacrifice.
- (ii) “we ought to make only those sacrifices by which we hurt no one, for sacrifice, more than anything else, must be harmless to everyone.”¹¹ (*De abstinentia* 2.12, Trans. Clarke, 2000).
- (iii) The animals that are sacrificed are deprived of their lives against their own will and “sacrifice is, as its name implies, something holy. But no one is holy who requites a benefit from things which are the property of another” (*De abstinentia* 2.12, Trans. Taylor, 1823).

What is clearly implied in the last argument above is that animals own their own body and future. It is not considered appropriate at all to take or dictate over some other individual's life (or death). I share Browning Cole's interpretation:

Why are the animals not fairer and nobler *qua* divine gifts? The answer must be that animals

11 One might question whether this is plausible. Is not the whole point with sacrifice that someone is harmed in a way for a greater benefit of something or someone(s)? Perhaps the religious sacrifices in question during antiquity were different.

are not divine gifts to us at all. They are something else, ensouled in their own right, not potential fuel for sacred flames. Plants, unlike animals, can be owned. (Browning Cole, 1992, p.53)¹²

This is not only an interesting piece of thought to find within an ancient thinker such as Theophrastus, but is something that quite many people probably would consider a fairly modern view of animals – it is simply one of the fundamental components of the animal rights movement that has been on the rise for the last decades.

As for the question of the mental capacities of animals, it should be a requisite to have some sort of agency, conceptions/beliefs and preferences for being able to own something in a meaningful way. Thus one can safely ascribe to Theophrastus that he must have thought animals had some of those capacities, or at least something similar. It should however be noted that maybe these capacities do not necessary require intellect or reason. Perhaps the Aristotelian model, which after all allows memories and some experience to animals, can handle this.

Added to the three arguments above, and this can be viewed as empowering the second argument, is also the statement that

”soul is much more valuable than that which grows from the earth, so it is not fitting (οὐ προσήκεν) to take it away by sacrificing animals.”¹³ (*De abstinentia* 2.12, Trans. Clarke, 2000)

Admittedly, and I mentioned this above, the last statement does seem alien for a Peripatetic to use. It should be obvious for all who know their Aristotle, that the conception of soul used here is not very compatible with Aristotle's soul (and with it of Theophrastus and of the other Peripatetics). Their conception of soul was, as mentioned above (p.6), rather a principle of life and, as such, something that all living beings possess – both plants and animals (including humans).

12 It might be worth noting that this conception of what can be owned, however much I approve of it myself, seems not to be the dominant view in our society today and most probably not during Theophrastus' and Porphyry's days either. On the contrary, non-human animals are widely conceived as property which can be bred and treated pretty much as we please - including being sold, traded and killed for no other reasons than our own preferences.

13 In order to make this argument more plausible, I think one should add that it is valuable *for* someone, most fitting would be the ”owner” herself, and that would indeed result in a harm inflicted on her to have it sacrificed. If the value would be an objective one, that is without it being valuable *for* someone, it is harder to see the harm inflicted if the possessor is not the one that is considered as suffering a loss.

A good part of the use of soul here can probably be explained by the fact that Porphyry was a Neoplatonist, but one can also note that the very same word ψυχή can be translated as both "life" and "soul". It is thus possible that Theophrastus meant life rather than soul and that his words changed meaning when they were used in a Neoplatonic context and with Neoplatonic intentions with the reception of the text.

It is clear that animals differ quite radically from plants and that the main difference which seems relevant here is the capacity to object, or at least have an opposing desire (i.e. not wanting to lose one's life or be sacrificed). Animals must thus have some kind of preferences (by which I simply mean that they do not *only* strive unconsciously toward an end – τέλος). Once again, it is quite possible that this can be achieved within Aristotle's model and thus not having to entail reason or an intellect in the Aristotelian sense. Aristotle granted animal appetite and as that is an important part of their causes of action (movement) they obviously desire to live. Also, Aristotle and Theophrastus recognized animals as being sensible/aware (φρονεῖν) to the world, to which they react in accordance with their desires. So there is at least consciousness of a kind here, which is not found in plants for example.

Even though the Aristotelian model can handle most of the difficulties and challenges raised in the passages about animal sacrifice, it is clear that there is a difference between Aristotle and Theophrastus regarding the moral status of animals. And this difference does rest on their diverging views on animal mental capacities. Whereas Aristotle does not see them as mentally significant enough for moral standing, Theophrastus is different. Theophrastus displays features in his thinking that very much resemble those which are fundamental to the animal rights movement, that is the respect and acknowledgment of the animals' right to not be harmed for no good reason and being deprived of its most precious possession – its life. For sure, Theophrastus does not mention such a thing as animals having rights, but the reasons for moral consideration is the same and they are all relying on seeing animals as living sensitive beings with a mental life resembling, but not being equal to, our own.

3.3 *Historia plantarum*

Another passage that might suggest that animals have broader intellectual capacities for Theophrastus than Aristotle is found in *Historia plantarum*. In the opening lines of the first book, where some general remarks about plants and the inquiry at hand are made, animals are said to

possess characters/conduct and actions (ἔθη and πράξεις) whereas all plants lack this.¹⁴ The weight of that might not be obvious at first glance, but considering the fact that Aristotle explicitly denies actions (πράξεις) to animals (*NE* 6.2 1139a19-20) – a fact that Theophrastus should have been aware of – it is quite plausible that he is here taking a polemical stance towards his teacher.

Granted that Theophrastus shared Aristotle's definition of what an action is or something similar, which should not be a too bold assumption, this actually says quite much of the mental powers ascribed to animals. For Aristotle, an action originates in a decision and a decision requires desire (ὄρεξις) and rational reference to an end (*NE* 6.2 1139a30-3). The word used for rational is the same as for reason – λόγος(!). In the next sentence (*NE* 6.2 1139a34-5) it is further underlined that intellect/mind (νόος) and thought (διάνοια) is required for being able to make a decision.

Thus, given the not at all improbable assumption that Theophrastus shared Aristotle's demand that a requisite for action is that one exercises one's intellect/reason his ascription of actions to animals implies that they have intellect/reason of at least some degree.

3.4 *De causis plantarum*

Before moving on to some difficulties with the presented Theophrastean view, one can mention another passage which is of interest for the understanding of Theophrastus' view on animals. In his *De causis plantarum* (2.17.5), Theophrastus comments on plants living entirely situated upon other plants:

προσφιλή γὰρ δὴ ἀλλήλοις καθάπερ καὶ τὰ ζῷα καὶ τὰ φυτὰ τάχ' ἂν εἴη (*De causis plantarum* 2.17.5)

[Perhaps such plants do this] because they are fond of each other and thus live together, just like animals do (Trans. in Browning Cole, 1992, p.57)

Although this is by no means a good account of how plants function, and it were probably not meant to be that either, it surely displays something about animals. The adjective used in the sentence (προσφιλή) is an emotion-term and we can, with the above mentioned arguments and passages in mind, therefore ascribe to Theophrastus with increased confidence the view that animal associations do have an emotional content. For to be able to have emotions animals must have

14 Credit goes to Browning Cole for finding and discussing this passage before me in her article.

certain mental abilities, namely desire and some sort of agency. Again, the point is not that the Aristotelian model cannot handle this. The point is rather that he perceives, and acknowledges animal associations, and I quote Browning Cole here, "as more than mutual protection societies or merely instinctive huddlings" (Browning Cole, 1992, p.57).

3.5 Inconsistencies in Theophrastus?

As we saw above, there seem to be some problems, especially regarding memory, within the corpus of Aristotle and as it turns out this is also the case with the remaining works of Theophrastus.

In a fragment, found in Photius (Fortenbaugh, 1984, p.18-19), Theophrastus discusses whether envy or grudgingness can be found in animals. Several examples of behavior that is supposed to show animals exhibiting grudgingness toward humans are given and they are refuted as being anthropomorphic. Following this, there are two sentences that both label animals as having no reason (ἄλογοι):

"For from whence could such wisdom come to unreasoning creatures, which reasoning creatures learn by means of long training?"

and

"Many other things are done by unreasoning creatures, of which we do not have it in our power to explain the causes." (Fortenbaugh, 1984, p.18-19. Trans. in Browning Cole, 1992)

How should these sentences be understood? Does Theophrastus deny emotions (and reason) to animals here? This seems unlikely and, as Fortenbaugh has pointed out (Fortenbaugh, 1984, p.161), animals still seem to be able to feel envy and grudgingness toward other members of their own species. What is denied is that they can have such emotions towards humans. It is also quite possible that, as Browning Cole points out (1992, p.58), such emotions as envy may be among the most complex of emotions. If so, the absence of such emotions does not necessarily rule out the possibility of having less complex emotions and with that reason, but of a lesser degree.

No matter the explanation or downplaying of the meaning of those passages, it is still a fact that animals are there referred to as ἄλογοι twice. One way of explaining this choice of words is to ascribe the reason for their occurrence to Photius rather than Theophrastus.¹⁵ It is certainly a possibility that these are the words of Photius rather than Theophrastus but there are several options

15 This is suggested by W K Kraak. (1953, pp.411-14)

of explaining these ἄλογοι that still leaves it open for their origin to be of Theophrastus.

One way is to emphasize the fact that λόγος is also the common word used for speech. That animals lack speech do not entail that they lack reason or intellect. Though not an impossible interpretation of λόγος this seems to me to be a less likely meaning. Take the first sentence – sure, such wisdom can be transferred well in a group of speaking individuals, but how is it that the reasoning creatures can only learn such wisdom through long training if they are able to transfer it by way of speech? Interpreting λόγος as reason seems more likely here.

Another way, which Browning Cole attempts twice (Browning Cole, 1992, p.59), is to limit the scope of λόγος. Firstly, by limiting the ἄλογοι to only deprive animals of being able to be petty. This is done by claiming that they are lacking sufficient reasoning power to be able to be malicious and petty, i.e. they are simply made innocent. Secondly, by having the ἄλογοι mean that they lack just the mental capacities for being able to do the required planning and judgments for an envious and/or malicious behavior. I do however find it strange and unconvincing that ἄλογοι would have been used in this way, and I cannot think of any occurrence where λόγος has been subject for such restricted meanings that are required for the argument to succeed.

Although troublesome, I do not consider those two occurrences of ἄλογοι to undermine the suggestion that Theophrastus actually thought that animals have some reasoning capacities. The suggested passages in favor for such a view of Theophrastus do have the reason and intellect arguments more directly and obviously in favor for such a view, whereas those two mentioned passages against simply are not as strong and convincing.

3.6 Is there a departure from Aristotle in Theophrastus?

With regard to the above mentioned fragments of Theophrastus' view, one can conclude that it is a possibility that Theophrastus diverged from Aristotle's model of cognition. These are by no means any conclusive, knock down arguments for this being the case and that Theophrastus granted reason to animals. On the contrary it seems rather probable that he did not diverge very far, judging by the rather scarce evidence.

However, there are clearly signs of Theophrastus having a far more respectful and generous opinion towards animals regarding their mental abilities. They are recognized as being a lot more like

humans than in Aristotle and they even qualify for having moral relevance on merit from having such close resemblance to us.

It is possible, and probable, that Theophrastus actually shared the general Aristotelian model and that the divergence rather is a result of differing emphasis.¹⁶ I find that this claim to be at least partly strengthened. For whereas Theophrastus stressed and laid emphasis on the human features that animals seem to have a share of, and thereby in a way enhancing their moral standing, Aristotle seemed to do something similar when he instead stressed and laid emphasis to the features that humans have that are common among many animals.¹⁷ Aristotle thus can be seen as degrading humans to animal status and then add the *differentia*, thinking/reason, with which the standing of humans skyrockets as that is a feature that is only shared by some possible gods. The reason for acknowledging Browning Cole's theory of diverging emphasis as only partly strengthened is that it is hard to explain the several occurrences where animals are actually credited, or implied to have, a greater intellectual ability in Theophrastus view than the animals are allowed in Aristotle's.

It thus seems plausible that animals are considered to have a bit more reasoning power in Theophrastus' view than in Aristotle's. Possibly Theophrastus might even have consented to the statement that animals' intelligence do not differ in sort, but rather by grade. That might very well be to push it too far, at least there is not sufficient evidence for such a statement available. It is, however, obvious that he has taken a few steps in closer to make such a statement coherent with his view.

In his biological works, Aristotle is remarkably gradualistic. In *On the Parts of Animals*, Aristotle describes the entities of nature:

Nature passes in a continuous gradation from lifeless things to animals, and on the way there are living things which are not actually animals, with the result that one class is so close to the next that the difference seems infinitesimal. (*PA* 4.5 681a11-15. Trans. A.L. Peck)

In a similar vein, the border between man and animals, with regard to temperaments, is explored in *History of Animals* (8.1) so the sharp distinction between man and animals when it comes to reason

16 This is suggested by Browning Cole (1992, p. 61)

17 Catherine Osborn writes: "His [Aristotle's] outlook stresses the continuity between human and animal behaviour, and then seeks the explanation, convinced that there must be, in fact, a way in which animals can act intelligently without intellect." (Osborne, 2009, p.84)

and intellect is rather surprising from that perspective. That is also why the Theophrastean approach which might emphasize difference in grades, as explored above might be seen as more Aristotelian than Aristotle's own in a way.¹⁸ As amusing as this might sound, such statement is clearly not taking into account the, by Aristotle identified, τέλος of the posited uniquely human treat reason. The teleological view of the world is arguably closer to the core of Aristotelianism than the gradualism displayed in his biological works.

Recognizing the inconsistencies in Aristotle's corpus, which seems to collide with his denial of reason, knowledge and emotion to animals (some of them brought described in section 2.3 above) Browning Cole puts forward an interesting thought, which is well worth quoting:

If Aristotle and Theophrastus worked together in a true collaboration, as they must have, then the Theophrastean inclination to see similarity and kinship where Aristotle sometimes saw blank difference would have been accommodated within the collaboration somehow. Seen in this way, the tensions about animal intelligence within the Aristotelian corpus are not disturbing discords but may rather provide a fascinating glimpse into what must have been one of the most joyous intellectual partnerships in the era, and perhaps of all time. (Browning Cole, 1992, p.61-2)

If this thought would resemble the truth, and it is not improbable that it really is, Theophrastus would not only have provided a more reasonable view on animal intellect, but might also have influenced his former master to embrace, at least some of, his ideas as well.

Theophrastus' view is, provided that it resembles Aristotle's as much as put forward above, close to being on par with Aristotle's regarding its plausibility as a model of the soul. The general model is pretty much intact and the only real difference seems to be that animals might have more reason than Aristotle ascribed to them. This hardly affects the model's plausibility but it is a nice addition, which, is a more plausible feature on its own.

¹⁸ Browning Cole seems to make more or less the same point when she suggests that Theophrastus "can be seen as carrying Aristotle's own naturalism about intelligence and virtue even further" (1992, p.61).

4. Concluding remarks

Theophrastus might have granted reason of some degree to animals but is it not possible to have reason and thinking (λόγος/νοῦς) of a lesser degree and thereby being able to grasp just some of the intelligibles/forms? For perception this is the case – all animals have differing perceptual abilities and some can thereby grasp more information from the world than others. Why cannot reason work in the same way? Would not that be even more plausible? Clearly, this raises the question of what degree of reason particular species would have but that is way out of scope here.

Related to the above, one can also wonder if there is an important difference at all between the sort of (the suggested lesser) reasonings, required to handle memories and produce imagination, and the (higher) reasonings required for abstract reasoning? To state that these are two different “things” just because there is a difference about what one thinks about seems implausible. Is thinking about cooking recipes and thinking about football strategies so different things that they should be said to be of different sorts? Imagine, for example, one who is completely ignorant of football and studies football games, without information from anyone else, in order to learn what they are doing. Her struggle and eventual success will lead to her grasping the idea/form of football (reach a higher truth). A coach, on the other hand who studies games of her coming opponent as well as strategies excessively and ends up devising a few promising tactics, is not grasping any higher truths. Instead what she perhaps grasps is a sort of lesser knowledge – about particulars – needed to best the next opponent. Which is the higher reasoning? Is it even a point of making up different names of the reasonings, which will affect the way we value them, just because one can?

I think not, and it seems better to talk about one single sort of reasoning (one which compares and calculates data) and to explain all differences between species and individuals as differences of degree rather than sort. Perhaps this is where Ockham’s razor, mentioned in the introduction, enters? There do not seem to be any good reasons for having a lot of different intellects and that is something, which ought to be shaved off. Admittedly that does not earn any of the dualists the victory here, but Theophrastus is arguably the man who was positing the fewer amounts of implausible assumptions, as he at least perceived something close to a gradual difference of reason between species rather than supposing differing kinds, when there are no real differences.

5. Bibliography

5.1 Books:

Aristotle – *De anima*

Aristotle. (2011). *De Anima* (M. Shiffman, Trans.). Newburyport: Focus Publishing

Aristotle – *Eudemian Ethics*

Aristotle – *History of Animals*

Aristotle – *Generation of Animals*

Aristotle. (1902). *Generation of Animals* (A. L. Peck, Trans.). Cambridge MA: Harvard University Press

Aristotle – *Metaphysics*

Aristotle. (1953). *Metaphysics* (W. D. Ross, Trans.).

Aristotle – *Nichomachean Ethics*

Aristotle. (2002). *Nichomachean Ethics* (C. Rowe, Trans.). New York: Oxford University Press

Aristotle – *On the Parts of Animals*

Aristotle. (1902). *On the Parts of Animals* (A. L. Peck, Trans.). Cambridge MA: Harvard

Aristotle – *Politics*

Aristotle. (1885). *Politics* (B. Jowett, Trans.).

Aristotle – *Posterior Analytics*

Porphyry – *De abstinentia*

Porphyry. (2000). *De abstinentia* (G. Clarke, Trans.). Newburyport: Focus Publishing

Porphyry. (1823). *De abstinentia* (T. Taylor, Trans.).

Fortenbaugh, W. W., & Gutas, D. (Ed.). (1984). *Quellen zur Ethik Theophrasts*. Amsterdam: Verlag B.R. Grüner

Osborne, C. (2009). *Dumb Beasts & Dead Philosophers: Humanity & the Humane in Ancient Philosophy and Literature*. New York: Oxford University Press

Sorabji, R. (2001). *Animal Minds and Human Morals: The Origins of the Western Debate* (2nd ed.). London: Duckworth

5.2 Articles:

Browning Cole, E. (1992). Theophrastus and Aristotle on Animal Intelligence. In Fortenbaugh, W. W., & Gutas, D. (Ed.), *Rutgers University Studies on Classical Humanities*, vol 5, pp. 44-62

Frede, M. (2008). Aristotle on Thinking. In *Rhizai Vol. 2*, pp.287-302

Kraak, W. K. (1953). First Attempts at Animal Ethology in Greek Biology (Theophrastus). In *Actes du VIIe Congrès International d'Historie des Sciences*, Jerusalem