

*Articoli/1*

## ***Between Machinery and Rationality***

### **Two Opposing Views on Animals in the Renaissance – and Their Common Origin**

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While a fascination with the mechanics of the body is evident in many Renaissance authors, the question about the extent of the animals' rationality also gained currency. I aim to show that already before Descartes these two opposing conceptions of the nature of animals – considered as machines, or as intelligent beings partaking in rationality – intertwined, manifesting a surprising common origin. Drawing especially on the works of Pereira and Tommaso Campanella, I argue that both hypotheses derive from a difficulty in dealing with the view of nature as a continuum, alongside the crisis of the Aristotelian structure of the soul. If no clear line can be drawn to separate sensation and rationality, aren't we forced to conclude that animals must either be rational *or* lack sensation altogether? While Pereira proposes to follow this second path, Campanella warns that the proper goal is to avoid both these extremes. But the success of Descartes' theory ultimately obfuscated the fact that the distance between animal automatism and animal rationality was shorter than it might seem: they could indeed be viewed as two possible ways to solve (or rather to escape) the problem of dealing with the continuity between man and animal.

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#### **Introduction**

As Pierre Bayle pointed out in his *Dictionnaire*, thinking about the soul of animals seems to lead either to extreme positions, or to a medium position that one can't possibly fully explain and justify<sup>1</sup>. Bayle has in mind two specific extreme positions: some consider animals to be rational, just like humans, while others compare them to machines, devoid not only of rationality but of sensation altogether. Both these views are represented in two famous articles

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<sup>1</sup> P. Bayle, *Dictionnaire historique et critique*, Amsterdam/Leyde/La Haye/Utrecht 1740, 4 vols., here vol. 3, p. 653 (article: *Pereira*): «Les opinions extrême sur ce sujet [i.e. the soul of animals] sont, ou absurdes, ou très-dangereuses; le milieu qu'on y veut garder est insoutenable».

in the *Dictionnaire*, devoted respectively to Girolamo Rorario, author of *Quod animalia bruta ratione utantur melius homine*<sup>2</sup>, and to Gómez Pereira, who discussed in *Antoniana Margarita* (1554) a theory of animal automatism which has often been considered to bear some similarities with that of Descartes<sup>3</sup>. Attempts to argue for – so to speak – a third way in between these two polarised positions appear to Bayle to be doomed to failure, and indeed the debate on the soul of animals after the publication of Descartes' *Discourse on Method* is dominated by precisely these extreme interpretations.

In this essay I draw attention to a possible background from which the split between animal rationality and animal 'machinery' could have originated, showing that both extremes share a common way of arguing about the animal soul. In other words, they may be regarded, from a logical point of view, as similar solutions to the problem they deal with: the differentiation between the soul of man and the soul of animals. Instead of considering them as opposed, I propose to investigate these two positions in their interrelation. Such an approach will show that the polarisation between considering the soul of animals to be either very close or rather very far from the human one (claiming that animals are rational, or that they don't feel at all) reveals a structural problem, rooted in the Renaissance reception of Aristotle's account of the soul<sup>4</sup>. The controversy on animal machinery and animal rationality thus leads us beyond the historiographical construction based on considering Descartes as the turning point with regard to the debates on animal automatism.

I will proceed in three steps: first I will outline the problem of the continuity of sensation and rationality, which is at the basis of the split between animal rationality and animal automatism; then I'll sketch the rise of the two extreme solutions presented by Bayle, considering in particular the case of Pereira; finally I will reconstruct how Tommaso Campanella dealt with precisely these two options – and ended up advocating a third way.

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<sup>2</sup> Rorario probably wrote this text in 1539, but it was published for the first time by Gabriel Naudé in 1648. Cf. M. Marcialis, *Filosofia e psicologia animale. Da Rorario a Leroy*, Cagliari 1982, in particular pp. 51ff.

<sup>3</sup> Descartes himself famously denied even having read *Antoniana Margarita* (see a letter to Mersenne dated 23 June 1641, in R. Descartes, *Œuvres de Descartes*, ed. C. Adam and P. Tannery, Paris 1964-1974, vol. 3, p. 386 (cf. on this D. Des Chene, *Spirits and Clocks: Machine and Organism in Descartes*, Ithaca, New York 2001, p. 13). On Pereira's theory of automatism see J. Bandrés and R. Llavona, *Minds and Machines in Renaissance Spain: Gómez Pereira's Theory of Animal Behavior*, in «Journal of the History of Behavioral Sciences», XXVIII, 1992, pp. 158-168, here pp. 164-167. See for instance: M. Spallanzani, *Descartes e il 'paradosso' degli animali-macchina*, in «Bruniana&Campanelliana», XVII/1, 2011, pp. 185-198; L. Bianchi, *Rorario tra Naudé e Bayle*, in «Bruniana&Campanelliana», XVII/1, 2011, pp. 175-184; M. Wild, *Die anthropologische Differenz*, Berlin 2006, pp. 17-18. On Descartes' conception of animal automatism see especially Th. Gontier, *Descartes et les animaux-machine: une réhabilitation?*, in *De l'animal-machine à l'âme des machines. Querelles biomécaniques de l'âme (XVIIe-XXIe siècle)*, ed. J.-L. Guichet, Paris 2010, pp. 25-44.

<sup>4</sup> On the reception of Aristotelian psychology before Descartes see D. Des Chene, *Life's Form: Late Aristotelian Conceptions of the Soul*, Ithaca NY 2000.

## 1. The Root of the Controversy: the Continuity of Sensation and Rationality

Aristotle's *De anima*, and in particular his discussion of the role of imagination, functioning as a kind of bridge between sensation and rationality, is a principal source of debate concerning the soul of animals in the Renaissance. The key passage is in book I, where Aristotle famously claims that if thought is a sort of imagination, or is impossible without imagination, it follows that even thought cannot take place without the body, which indicates the possibility of grounding the activity of rational thinking firmly in the realm of sensation<sup>5</sup>. It is only through the distinction between two different kinds of imagination – the first shared by animals and humans, and the second present only in human beings<sup>6</sup> – that a clear line can be drawn to separate the activities of the animal soul from those of the intellective soul.

Despite Aristotle's claim that it is possible to define clearly which faculties pertain to animals and which do not, the reception of his theory of imagination shows that the gap between the faculties of the animal soul, and those that are the prerogative of humans, insisted on opening up. For instance the fact that 'new powers' (such as the Avicennian *vis aestimativa*) are added in the aftermath of the Aristotelian reception may be a sign of discomfort, an attempt to bridge two poles that keep moving apart<sup>7</sup>. On the one hand, it seems necessary to acknowledge the possession of the imagination by (at least) certain animals, if one wants to explain how animals form images and create associations between them, for instance when their behaviour shows that they remember or even that they dream. On the other, it appears difficult to decide what exactly pertains to imagination and what should instead be ascribed to the realm of rationality, which operates on the basis of the products of imagination itself. In other words, the cooperative work of imagination and rationality could lead to a very dangerous conclusion: that there is no gap at all between these two faculties, but only a gradual transition, in the form of a rising complexity of associations. Consequently, the entire difference between humans and animals would also be

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<sup>5</sup> Aristotle, *De anima*, 403a. English translation: Aristotle, *On the Soul*, in *The Complete Works of Aristotle*, ed. by J. Barnes, Oxford/Princeton 1991 (first ed. 1984) (= *On the Soul*), vol. I, p. 642: «If we consider the majority of them [i.e. the affections of the soul], there seems to be no case in which the soul can act or be acted upon without involving the body; e.g. anger, courage, appetite, and sensation generally. Thinking seems the most probable exception; but if this too proves to be a form of imagination or to be impossible without imagination, it too requires a body as a condition of its existence».

<sup>6</sup> Aristotle, *De anima*, 434a. (*On the Soul*, p. 690: «Sensitive imagination, as we have said, is found in all animals, deliberative imagination only in those that are calculative: for whether this or that shall be enacted is already a task requiring calculation; and there must be a single standard to measure by, for that is pursued which is greater. It follows that what acts in this way must be able to make a unity out of several images»).

<sup>7</sup> On Avicenna's *wahm* (*vis aestimativa*) see R. E. Hall, *Intellect, Soul and Body in Ibn Sinā: Systematic Synthesis and Development of the Aristotelian, Neoplatonic and Galenic Theories*, in *Interpreting Avicenna: Science and Philosophy in Medieval Islam. Proceedings of the Second Conference of the Avicenna Study Group*, ed. J. McGinnis, Leiden 2004, especially pp. 65-68.

interpreted as a gradual rather than a definite one. A principal question shaping the Renaissance debate on the basis of Aristotle is thus the following: is it possible to coherently argue that animals partake in sensation and imagination, but not in rational thinking<sup>8</sup>? Isn't one led into an insoluble puzzle, if one is to follow Aristotle's claim in *De anima*, according to which all animals feel, most animals use imagination, but no animal thinks rationally? Indeed in *De rerum natura* Bernardino Telesio points out that following this structure inevitably leads to the insertion of new faculties between sensation and rationality, thus 'multiplying the soul': but adding 'steps' in between won't make the distance any shorter, and in the end it remains unintelligible how perception should work together with rationality, while at the same time animals are supposed to be deprived of the latter<sup>9</sup>.

Using Telesio's *De rerum natura* as a basis for his critique of Aristotle's psychology, Tommaso Campanella also refers to this very same pattern when, in the first book of his *Metaphysica*, he writes that Aristotle dealt clumsily with the problem of distinguishing the faculties that belong to the animals from those which are peculiar to humans<sup>10</sup>. Indeed Aristotle's decision that animals must have *prudentia*, but without the support of reason, was in Campanella's view arbitrary. The animals' behaviour, continues Campanella, demonstrates that they not only feel, but they also remember, recollect, «argue with cleverness», and are even able to draw conclusions via «a thousand syllogisms»<sup>11</sup>. All in all, it doesn't appear possible to keep the gap between sensation and rationality: they rather seem to deeply intertwine, so that instead of a clear distinction one is forced to think in terms of a gradual differentiation, leading from the most basic activity of perception, to more complex ways of developing sense-data into arguments. In fact this is true also of sensation itself, which according to Campanella must be continuously present in the entire world, since it is not coherent to attribute sensation to animals (a very heterogeneous group anyway) and, for instance, leave out the plants, which are also capable of adapting to the environment, and in general respond to external stimulations such as the shining of the sun. Therefore – as Campanella claims – it is surprising that Aristotle should have maintained an absolute separation between sensitive beings (animals) and non-

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<sup>8</sup> This question is discussed throughout the volume *The Animal Soul and the Human Mind: Renaissance Debates*, ed. C. Muratori, Pisa-Rome 2013. On Renaissance Aristotelianism see the overview given by L. Bianchi, *Continuity and Change in the Aristotelian tradition*, in *The Cambridge Companion to Renaissance Philosophy*, ed. by J. Hankins, Cambridge 2007, pp. 49-71.

<sup>9</sup> See B. Telesio, *De rerum natura, libri VII, VIII, IX*, ed. L. De Franco, Florence 1976, p. 190 (lib. VIII, cap. VIII): «utique rationes, quae eos [i.e. the Peripatetics] impulere, ut hujusmodi substantiam humanae animae adicerent, et ut substantiae uni plures facultates pluresque attribuerent operationes, et multas omnino illam facerent, explicandas examinandasque esse duximus».

<sup>10</sup> T. Campanella, *Universalis philosophiae seu metaphysicarum rerum, iuxta propria dogmata, parte tres, libri 18*, Paris 1638 (= *Metaphysica*), pp. 54-55 (lib. I, cap. VI, art. VI): «Ergo imperite Aristoteles animalibus dat prudentiam, quibus negat rationem».

<sup>11</sup> T. Campanella, *Del senso delle cose e della magia*, ed. by G. Ernst, Rome-Bari 2007 (= *Del senso delle cose*), pp. 85-86 (lib. II, cap. XXIII).

sensitive ones (plants); similarly, the line he draws to distinguish sensation from rationality, animals from humans, is also too blurred.

Before turning to examining Campanella's solution to this problem in further detail, I consider the way he diagnoses the traps into which a follower of Aristotle might fall, in case he should insist on keeping the radical distinction between sensation and rationality: he would have to choose between two possibilities – both of which are wrong, for Campanella, because they are based on a fundamental misunderstanding.

## **2. One Problem, Two Solutions: Animal Rationality, or Animal Automatism?**

If the gap separating sensation from rationality cannot be closed, and all attempts to bridge the distance by multiplying the faculties 'in between' cannot lead to stable conclusions, then what remains is to choose one of the two extremes, stating either that animals are rational, or that they must lack both sensation *and* rationality. This is the twofold perspective described by Pierre Bayle, and which Campanella had already sketched clearly in *De sensu rerum*<sup>12</sup>. Here he writes: «These learned men went so far as to seemingly deprive of sensation not only all things, but also the beasts themselves. Indeed they fear that, if one attributes to them sensitive discourse, then one gives to them also a mind free in choosing, like the human one»<sup>13</sup>. The structure of Campanella's argument is noteworthy: he writes that the reason for depriving animals of sensation is the belief, or the fear, that once they are granted sensation, nothing could prevent the conclusion that rationality is rooted in sensation, and that therefore we could lose all distinction between humans and animals. This is precisely the argument presented by the Spanish doctor Pereira in the first pages of *Antoniana Margarita*.

In the first chapters of the book, Pereira seems to be trying to prove that animals do partake in rationality: indeed he argues that if they feel like we do, then they must be able to interpret the content of their sensations, distinguishing for instance between friends and enemies. Therefore they must be performing mental operations, and it does not matter what we call this mental capability (for instance whether estimative or cogitative faculty): if animals are able to process their sensations in this way, then they are in fact using an intellect. Pereira refers

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<sup>12</sup>The Latin version of this book was published for the first time in 1620. The first Italian version probably dates back to 1604, and was preceded by an early Latin manuscript (cf. G. Ernst's introduction to her edition of the text: *Del senso delle cose*, p. XXVIIff.)

<sup>13</sup>T. Campanella, *De sensu rerum et magia*, Paris 1637 (= *De sensu rerum*), p. 16 (lib. I, cap. VII): «At eo pervenerunt praefati sapientes, quod videntur tollere sensum non modo rebus cunctis, sed et ipsis bestiis. Quoniam timent, ne si concedant illis sensitivum discursum, mentem quoque arbitrio libera tribuant, qualis est humana: nec vident quanta differentia est inter humanam mentem et hanc sensum communem». Cf. also *Del senso delle cose*, p. 19: «Dunque non si deve dire che l'istinto divino le guidi, ma il proprio senso; e a tanto son trascorsi questi savii che par che tolgano il senso, non solo a gli enti tutti, ma anco alle bestie, perché si credono, donando a loro discorso sensitivo, donargli anco mente d'arbitrio libera come ha l'uomo, e non veggono quanta differenza ci è tra la mente umana e questo senso commune».

directly to Aristotle and to the debate surrounding the continuity of sensation and rationality, and he concludes as follows: «if the animals were equal to us in feeling, then it would be necessary to infer that there is nothing peculiar to us humans which would not be shared with them»<sup>14</sup>. This is revealed as the real target of Pereira's argument: to say it in Campanella's words, it is the fear that by granting animals sensation the assumption automatically follows that they think rationally as well. Pereira therefore leads the reader into rejecting an absurd conclusion: since sensations necessarily need to be processed mentally, then we are *de facto* attributing rationality to animals when we assume that they feel. But this is for Pereira not possible – and therefore this argument is offered as a proof that «animals lack sensation», as the title of the first chapter of the book announces<sup>15</sup>.

Pereira follows step by step the whole list of (absurd) conclusions that would follow if one were to acknowledge the presence of sensation in animals: it is almost a cascade of necessary conclusions that must follow from what might at first sight appear to be an uncontroversial starting point. Pereira is particularly interested by the connection of feeling, thinking and speaking: if animals feel and if they could say what they perceive, shouldn't they be able to say, for instance, «album», or «blanco», when they see something white<sup>16</sup>? He then proceeds to give an account of animal behaviour based on the assumption that brutes do have feeling: animals must be considered capable of abstracting universals<sup>17</sup>, of distinguishing friends from enemies, and especially they must be deemed capable of putting such knowledge into practice by running away from the latter, while being friendly with the former. In so doing, they must therefore form mental judgments: whether we ascribe such behaviour to a *vis aestimativa* or *cogitativa* – Pereira writes – what matters is that some sort of 'internal power' must be attributed by necessity to the animals by simply following from the basic acknowledgement of sensation<sup>18</sup>. All in all, if animals are said to have

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<sup>14</sup> G. Pereira, *Antoniana Margarita*, Medina del Campo 1554, col. 5: «si bruta in sentiendo nobis paria essent, exinde necessario inferendum, nihil proprium nobis hominibus esse, quod illis commune non esse. Namque ex brutorum operationibus si alterum elicitur, et reliquum elici necessarium est».

<sup>15</sup> It is interesting to note, as G. Sanhueza has done (*La pensée biologique de Descartes dans ses rapports avec la philosophie scolastique. Le cas Gomez-Pereira*, Paris 1997, p. 81), that Gómez Pereira does not use the term automatism.

<sup>16</sup> Pereira, *Antoniana Margarita*, col. 3: «Ut si brutis loqui permissum esset, album colorem quem vident, album appellassent si Latine loquerentur, vel blanco, si Hispane».

<sup>17</sup> *Ibid.*, col. 7: «Cum statim colligam, certum esse, si bruta nobiscum paria in sentiendo essent, etiam in ratiocinando, et universalia intelligendo, futura nobis simillima».

<sup>18</sup> *Ibid.*, col. 7-8: «Si bruta actus exteriorum sensuum ut homines exercerent, id canis, aut equus mentaliter [...] conciperent, visis dominis, quod homo viso hero [...]. Vel si aliquis hoc fateri nolit, neque brutis tantum tribuere inficiari non poterit, bruta, visis amicis, aut inimicis, mentales propositiones formare, quibus eorundem anima sensitiva cognoscit hos amicos esse, illos inimicos, amicos enim amice prosequitur, inimicosque fugit: sed hoc fieri nequit, nisi vi aliqua interiore, seu aestimativa, aut cogitativa appelletur (de nominibus enim cura habenda non est, dum res intelligatur) id praecipiat, praeceptumque illud sine cognitione non fieri in nobis experimur, cum posterius sit sensatione. Bruta ergo si in sentiendo paria nobiscum sunt, eodem modo fugere aut aemulari amicos aut inimicos debent, prout et nos: ergo affirmare mentaliter

perceptions, abstract universals, and to adapt their behaviour accordingly, the implication is that they perform nothing short of a mental operation.

This chain of conclusions implies that just like human souls, the souls of animals would be ultimately an indivisible unity. From a theological point of view, this poses the question of their status after death, and where their souls would go<sup>19</sup>. What this problem reveals is the fact that granting sensation means, for Pereira, that it would be impossible to distinguish between the soul of animals and human souls in any meaningful way including the prospect with regard to the afterlife. If animals can feel, then they can think, and establishing this connection would bridge the gap on which human uniqueness depends: the barrier separating their souls and the human souls must fall as a consequence. But the drawbacks of this equality will affect not only the level of religion, establishing that the animal souls must be immortal like the human ones: the pernicious consequences of this position stretch well into the practical terrain of human exploitation of animals. As Bandrés and Llavona have noted, this is one of the most interesting, and deeply unsettling conclusions to be drawn from Pereira's 'paradoxical' reasoning<sup>20</sup>. If animals feel, the question inevitably arises whether the way humans treat them should not be labelled as extremely cruel. Pereira lingers on the description of various painful examples of animal exploitation – examples which are so powerful that *if* animals really felt, just like humans, we would have to drop entirely the idea of a *benignitas* in nature<sup>21</sup>. He mentions the case of the beasts of burden, which are systematically exploited by humans, but also instances of animal torture that humans perform for sport, simply for fun. Therefore allowing animal sensation leads to a question about the deeper meaning and justification of animal pain, by which human life would literally be surrounded all the time – and this, once again, cannot be a tenable option for Pereira.

This practical implication bears comparison with Descartes' statement that his theory about the nature of animals finally liberated man from doubt as to whether we should feel guilt about inflicting pain on them, especially through slaughter<sup>22</sup>. It is thus interesting to note another possible contact point between Descartes and Pereira in the fact that the latter, too, introduced a noteworthy

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alteros amicos, aliosque inimicos coguntur dicere, qui praefatam similitudinem brutorum et hominum ponunt».

<sup>19</sup> *Ibid.*, col. 22.

<sup>20</sup> Bandrés and Llavona, *Minds and Machines in Renaissance Spain: Gómez Pereira's Theory of Animal Behavior*, p. 160.

<sup>21</sup> Pereira, *Antoniana Margarita*, col. 21-22: «si bestiis datum esset sensationibus exterioribus et organicis interioribus nobiscum convenire, inhumanum, saevum, ac crudele, fieri ab hominibus passim concedendum esset. Quid enim atrocius, quam veterina animalia sub gravibus oneribus, et prolixis itineribus fessa, vapulis caedere, et ferro adeo crudeliter pungere, donec sanguis e vulneribus manet, ipsis non raro gemitibus, ac vocibus quibusdam [...] miseratorem petentibus? Ac ultra hanc immanitatem, quae tanto atrocior, quanto frequentior habetur, crudelitatis apicem obtineret, taurorum agitatorum tormentum, sudibus, ensibus, lapidibusque caesis ipsis: nec in alium humanum usum, quam ut iis flagitiis humanus visus delectetur, quibus bestia vindictam mugitu supplex poscere videtur».

<sup>22</sup> R. Descartes, *Tutte le lettere*, ed. G. Belgioioso, Milan 2009, p. 2624.

distinction within the realm of sensation. In the commentary on Aristotle's *De anima*, which is printed together with *Antoniana Margarita*, Pereira underlines that humans are conscious that they feel, and that animals in any case lack that kind of sensation, thus prompting the question whether animals could feel, but, so to speak, unconsciously<sup>23</sup>.

This problem appears not to be relevant for Campanella: indeed, the distinction would be an unnecessary sophism in his view. In *De sensu rerum* he repeats that actually «no one doubts that animals feel»<sup>24</sup>: we observe the behaviour of the animals, and we simply know that they feel, just like we do. It follows that Pereira's conclusion is not at all a plausible solution. But if animals feel, aren't we forced to admit that they have reason as well? In another words, aren't we swapping one extreme solution (the lack of sensation) with another (the lack of differentiation between animals and human)<sup>25</sup>, exchanging Pereira an author like Rorarius, who provocatively wrote that animals are even more rational than humans? Campanella has in mind a third way.

### 3. The Third Way

If Aristotle's psychology can only lead to the two extreme solutions already sketched (both improbable for different reasons), then the only way to escape the *impasse* would be to change perspective on the limit between sensation and rationality. In particular, Campanella claims that all attempts to maintain the Aristotelian distinction between the two faculties are impossible to justify philosophically: they only express the prejudicial fear of placing animals and humans on the same level. He therefore states that: «Rationality doesn't really differ in its fundament from sensation and imagination, but the difference is in the operation of the same soul»<sup>26</sup>. The reason is that «[t]he sensitive soul is the same as the rational soul, *contra* the Peripatetics' view»<sup>27</sup>. Campanella thereby asserts a certain continuity of the two faculties, which are not essentially distinct. Indeed, as he writes in *De sensu rerum*, animals ratiocinate only to a lesser degree than humans, just as plants feel less than animals but should not be supposed to lack sensation<sup>28</sup>. From this point of view, the argument of Pereira and the

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<sup>23</sup> Pereira, *Antoniana Margarita*, col. 537: «No enim homines conscii sumus, nos ipsos sentire». As Bandrés and Llavona (*Minds and Machines in Renaissance Spain: Gómez Pereira's Theory of Animal Behavior*, p. 160) put it: «For Pereira the term 'sensation' is a metaphor where animals are concerned. Animals only have mechanical reactions towards the stimuli of their environment, with no implication of mental experience».

<sup>24</sup> *De sensu rerum*, p. 83 (lib. II, cap. XXIII). *Del senso delle cose*, p. 85 (and see also p. 3: «gli animali, per consenso universale, hanno sentimento»).

<sup>25</sup> Cf. also Bayle's article on Rorarius: «Il y a long-tems qu'on a soutenu que l'ame des bêtes est raisonnable»; and his comment (note D): «Nous pouvons compter Straton & Enesideme parmi ceux qui ont soutenu que l'ame des bêtes est raisonnable; car ils enseignoient que le sentiment ne peut subsister sans l'entendement» (P. Bayle, *Dictionnaire*, vol. 4, p. 77).

<sup>26</sup> *Metaphysica*, p. 54 (lib. I, cap. VI, art. VI): «Rationem vero a sensu et phantasia non differre realiter in fundamento, sed operationem eiusdem animae».

<sup>27</sup> *Ibid.*: «Animam sentientem eandem esse ratiocinativam contra Peripateticos».

<sup>28</sup> Cf. *Del senso delle cose*, p. 88.



ironically-termed «learned men» is firmly rejected as an absurdity: in fact the whole world is an animal, so that there is no place in Campanella's universe for beings resembling automata. But Campanella still needs to explain how he avoids the second extreme solution: is it true that conceding sensation to animals ultimately leads to cancelling the border between sensation and rationality, and therefore between man and the animals?

First of all, Campanella explains that all those functions that the Peripatetics attributed to the intellective soul, including the capability to conceive universals, can indeed be performed by animals as well, according to their different physical dispositions: for instance, everyone knows how well monkeys are able to argue<sup>29</sup>, and just by observing the behaviour of a dog in response to a man approaching makes it clear that animals must be able to conceive universals (the dog at first growls on recognizing the figure of a – potentially dangerous – human being, but responds joyfully when it recognises that it is a man it knows and doesn't need to fear)<sup>30</sup>. If ratiocination is defined as the faculty of drawing syllogisms, of calculating, conceiving universals, imagining, remembering, etc., then it must be considered to be present in the animal world as well. As Campanella states in *Metaphysica*, «all these functions belong to the same soul, and should not be denied to animals, even if they are more perfect in us». When the dog sees the stick, he is afraid, because «he draws a syllogism regarding the fact that he could be hit today just like the other day».

Thus Campanella introduces three reasons that justify this continuity of ratiocination between animals and humans, explaining at the same time why the latter can think better than the former: this is «both because of a more perfect spirit and of better cells, and because of the informing assistance of the mind infused by God»<sup>31</sup>. The first two reasons have to do with the constitution of the body: the (corporeal) spirit and the brain of human beings allow them to perform better calculations. The third reason is in fact Campanella's solution to the dilemma of the continuity of sensation and rationality. The immortal mind that God infuses in humans allows them to be free beings striving for contact with the Creator, thus developing religious feelings. It also assists the activity of ratiocination, but it should not be identified with rationality itself. Therefore there is still a very definite boundary-line between humans and animals, but this limit does not correspond to the capability to think, contrary to the Aristotelian tradition. Campanella has thus introduced a continuity of sensation and rationality, while at the same time arguing that rationality is not the defining characteristic of mankind. This is why all animals have a sensitive soul and also partake in rationality, but they are nevertheless not like humans,

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<sup>29</sup> *Ibid.*, p. 87.

<sup>30</sup> *Ibid.*, p. 82.

<sup>31</sup> T. Campanella, *Metaphysica*, p. 55 (lib. I, cap. VI, art. VI): «Ergo omnes hae functiones, sunt eiusdem animae, nec negandae sunt animalibus, licet in nobis sunt perfectiores, tum ob spiritum perfectiorem, melioresque cellas, tum ob mentis a Deo immissae adstinentiam informantem: canis cum videt baculum, timet verbera, quia syllogizat, se posse verberari hodie, sicut nudius tertius».

because they lack a mind, which is a spark of the divine. In other words, the difference in the capability to ratiocinate is a quantitative one, while the mind is the only qualitative difference between animals and humans.

What exactly the mind does, if it is no longer to be identified with rationality (as it traditionally was), is an interesting problem that has been analysed in detail by Germana Ernst<sup>32</sup>. Campanella's mind is a divine spark: while it might allow man to think better and more sharply than any animal, it also marks the point of radical difference from the world of animals by making man the only creature capable of free, creative thinking. But there are practical consequences deriving from the possession of a mind, too: Campanella argues that man is the only animal who is conscious of his position in the world and in the universe, and thus also the only one whose behaviour can reflect this insight into the structure of the world, which appears to him as a great animal inhabited by all creatures, human and animal<sup>33</sup>.

This conception of the mind is rooted in an approach which seeks a sort of third way between the two extreme positions of animal machinery and animal rationality. Campanella claims that instead of insisting on distinguishing between a sensitive and a rational soul, the real peculiarity of humans as compared to animals should be located elsewhere. Leaving the two extremes behind, the philosopher should articulate elements of continuity (the shared common ground of sensation and ratiocination) and hierarchy (the presence of the mind), in order to understand what humans share with animals, and what is peculiar to them only. In this process the Aristotelian approach to the man-animal distinction must be left behind as well, because it is the structure of the Aristotelian soul which inevitably pushes the argumentation towards one of the two untenable extremes. Moreover, Aristotelian psychology tends to associate the immortality of the human soul with the rational part of the soul, and this, for Campanella, exposes yet another weakness of Aristotelian psychology. In his *Quaestiones physiologicae* (contained in the 1637 edition of the *Philosophia realis*), Campanella recollects that he felt deep disappointment and concern at discovering the fragility of the arguments of Aristotelian origin about the immortality of the soul. The weak point is once again the relationship between sensation and rationality: the proof of the soul's immortality relies on demonstrating satisfactorily that the rational soul is completely differentiated and separable from the sensitive one, which is mixed with the body and thus cannot be said to be immortal<sup>34</sup>.

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<sup>32</sup> See G. Ernst, *L'analogia e la differenza. Uomo e animali in Campanella*, in *The Animal Soul and the Human Mind: Renaissance Debates*, pp. 209-225.

<sup>33</sup> I have considered the ethical aspects of the man-animal distinction elsewhere: C. Muratori, *Eating (Rational) Animals: Campanella on the Rationality of Animals and the Impossibility of Vegetarianism*, in *Ethical Perspectives on Animals in the Renaissance and Early Modern Period*, ed. C. Muratori and B. Dohm, Florence 2013, pp. 139-166 (=«Micrologus' Library», LV); and, *Come i vermi nel formaggio: la distinzione tra uomo e animali in una metafora campanelliana*, in «Bruniana&Campanelliana», 2015/2 (forthcoming).

<sup>34</sup> T. Campanella, *Quaestiones physiologicae*, in *Philosophia realis*, Paris 1637, p. 509: «Quaestio LIV De anima humana a deo immissa et de immortalitate Animorum. Utrum vero, ac sufficienter Aristoteles demonstraverit intelligentis Animae humane immortalitatem, alterumque

But this approach, as we saw, does not lead far, and thus Campanella exclaims:

Poor us, if the immortality of the soul should depend only on these reasonings: one night in my youth, considering how fragile they are, I started to weep aloud and I turned ardently to Plato and Telesio, and to the teachings of the saints, which gave me great comfort: from that time on I have abandoned Aristotle<sup>35</sup>.

Plato and Telesio are able to give the philosopher some comfort from the disappointment of discovering the weaknesses in the Aristotelian system. In *Syntagma*, published posthumously by Gabriel Naudé, Campanella states again that he turned to Plato, Pliny, Galen and Telesio, when he understood that he wasn't gaining much knowledge from studying Aristotle and his commentators<sup>36</sup>. Campanella expresses his disappointment with the fallacies of Aristotelian psychology also by developing what I called a 'third way' with regard to the man-animal continuity.

Yet despite Campanella's appeal to avoid both extreme simplifications, a significant part of the debate on the soul of animals in the seventeenth century seems to get stuck precisely on choosing between these two options, confronting them, and opposing them because of the failure to notice that they are two aspects of the very same argument. Whether or not Campanella's third way is ultimately a satisfying philosophical argument, it remains an indication of the necessity of going beyond the assumption that rationality must be a prerogative of humans, while at the same time rejecting any version of the theory of animal automatism, including in the form of contrasting animal instinct with human reason. Campanella, indeed, even notes that experience shows the fallacy of the theory of animal instinct as a blind yet infallible guide: we see that animals make mistakes, too, and frequently even. In Campanella's view, such absurd theories can be countered by simply observing the behaviour of animals<sup>37</sup>. This is why in *Del senso delle cose* he lists instances of animal behaviour which prove not only the fact that animals feel, but also that they experience complex emotions, such as shame or generosity, and that, most importantly, their actions are clearly

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genus a sensitivo, separabile re, et ratione a magnitudine, et an recte agentem superaddiderit Intellectum».

<sup>35</sup> *Ibid.*, 513. This passage is quoted and commented upon in G. Ernst, *Autobiografia di Tommaso Campanella*, in *Laboratorio Campanella: biografia, contesti, iniziative in corso: atti del Convegno della Fondazione Camillo Caetani, Roma, 19-20 ottobre 2006*, ed. G. Ernst and C. Fiorani, Rome 2007 p. 23.

<sup>36</sup> Cf. T. Campanella, *Sintagma dei miei libri e sul corretto metodo di apprendere*, ed. G. Ernst, Pisa-Rome 2007, pp. 31-32: «Deinde, cum essem anxius quod veritas non sincera, sed potius falsitas pro veritate in Peripato versari mihi videbatur, Aristotelis commentatores, Graecos atque Latinos Arabesque examinavi omnes, et haesitare magis coepi in dogmatis eorum».

<sup>37</sup> Cf. *Del senso delle cose*, p. 19: «Si vanta un di questi autori ch'egli abbia trovato che nullo animale erra dal suo fine e nullo altro ente, se non l'uomo, perché è composto di ragione e di senso ripugnati fra loro; e quelli sono da Dio guidati ai lor fini. Gran schiocchezza, poiché si veggono spesso errare». As Germana Ernst points out in this edition, the reference is to Domingo De Soto's *De iustitia et iure*.

informed by such emotions<sup>38</sup>. These examples are meant to dismiss as an untenable solution the theory of animal automatism, which became equally popular and controversial in the aftermath of Descartes. In fact, it is striking to note that contemporary debates on the question whether animals can be moral still take as a starting point similar observations: the issue of whether animals feel, is still debated in similar terms, despite the different terminology now developed in the field of animal ethics<sup>39</sup>.

For Campanella there can be no doubt that animals feel, and this approach leads to considering any discussion of 'automatism' as a philosophically unproductive way to understand the real difference between humans and all other feeling creatures. After having thus ruled out both the theory that animals are automata, and that they are rational in the same way as human beings, Campanella comes to the conclusion that if a third way is conceivable, then it must integrate continuity with elements of distinction – and this is the challenge that in my opinion Campanella's theory laid down: how to understand the continuity of sensation and rationality without the fear that only the animals' automatism can rescue human beings from being categorised as animals themselves.

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<sup>38</sup> For instance *ibid.*, pp. 86-87: «Li leoni perdonano agli imbelli, abbattono i superbi, si ricordano de' benefici, tanto che in Roma non volsero divorare un condannato che dentro un antro aveva la spina dal piede ad uno di quei leoni cavata fuori. Gli elefanti hanno tutte queste generosità e più sentono; combattono con arte, imparano la lingua, fanno patti con noi, conoscono la colpa e si lavano dopo il coito, d'inginocchiando alla luna come gli antichi Greci, la riveriscono per il beneficio che ricevono la notte da lei».

<sup>39</sup> See for instance M. Rowlands, *Can Animals be Moral?*, Oxford 2012, pp. 7-8. After having described the behaviour of certain animals experiencing grief, or concern for the suffering of other animals, the author refers to contemporary interpretations of such experiments as follows: «These are all examples of the sort of cases sometimes cited as evidence for the claim that some nonhuman animals can experience, and be motivated to act by, emotions of a certain sort. The emotions in question include compassion, sympathy, grief, and courage».