British Journal for the History of Philosophy

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/rbjh20

Descartes and his critics on passions and animals

Evan Thomas

To cite this article: Evan Thomas (2022) Descartes and his critics on passions and animals, British Journal for the History of Philosophy, 30:5, 773-796, DOI: 10.1080/09608788.2021.2024494

To link to this article: https://doi.org/10.1080/09608788.2021.2024494

Published online: 14 Mar 2022.

BRITISH JOURNAL FOR THE HISTORY OF PHILOSOPHY
2022, VOL. 30, NO. 5, 773–796
https://doi.org/10.1080/09608788.2021.2024494

Routledge
Taylor & Francis Group

ARTICLE

Descartes and his critics on passions and animals

Evan Thomas

Department of Philosophy, The Ohio State University, Columbus, USA

ABSTRACT

Descartes' theory of the passions has important connections to his view that nonhuman animals are automata. In this paper, I show how critics of animal automatism exploited these connections. I interpret a criticism of animal automatism developed by Gabriel Daniel (1649–1728). Daniel argues that animal automatism commits Descartes to an implausible account of the phenomenology of conflicts between passion and reason. If animal bodies act by mere automatic mechanism, then when a human being resists their animal impulses they should experience a conflict between the disposition of their body and their rational soul. However, our experience of conflicts between passion and reason instead suggests that these conflicts are internal to the soul. Daniel's objection to Cartesian animal automatism was later criticized by David Renaud Boullier (1699–1759), but Boullier himself raises an objection to Cartesian animal automatism that develops insights from Daniel. I argue that Boullier succeeds in raising a powerful objection to Cartesian animal automatism.

ARTICLE HISTORY Received 8 April 2020; Revised 29 August 2020, 6 May and 5 September 2021; Accepted 27 December 2021

KEYWORDS Descartes; passions; animals; Gabriel Daniel; mechanism

Descartes' defence of the view that nonhuman animals are automata sparked a rich controversy in early modern European philosophy.[1] The subsequent debate over the status of animals which unfurled over the seventeenth and eighteenth centuries addressed a wide range of issues.[2] In this paper I

CONTACT Evan Thomas thomas.3172@osu.edu Philosophy, The Ohio State University, University Hall, 230 N. Oval Mall, Columbus 43210-1132, USA

[1] I omit 'nonhuman' and 'European' in what follows for the sake of brevity.

[2] See Rosenfield, *From Beast-Machine to Man-Machine; Animal Soul in French Letters from Descartes to La Mettrie* for an overview of this debate. The debate engages theological questions (Strickland, "God's Creatures?"), metaphysical questions about mind and body (Pardies, *Discours de La Connaissance Des Bêtes*, §C–§CXIII; Dilly, *De l'Ame Des Bêtes Ou Après Avoir Démontré La Spiritualité de l'ame de l'homme, l'on Explique Par La Seule Machine, Les Actions Les plus Surprenantes Des Animaux*, §XII; Daniel, *Nouvelles Difficultez Proposées Par Un Peripateticien à l'auteur Du Voyage Du Monde de Descartes. Touchant La Connoissance Des Bestes. Avec La Réfutation de Deux Défenses Du Système Général Du Monde de Descartes*, 117; Bayle, *Historical and Critical Dictionary*, 221–234; Guichet, "Les ambiguïtés de la querelle de l'âme des bêtes dans la seconde moitié du XVIIe siècle"), questions about language (Daniel, *Nouvelles Difficultez Proposées Par Un Peripateticien à l'auteur Du Voyage Du Monde de Descartes. Touchant La Connoissance Des Bestes. Avec La Réfutation de Deux Défenses Du Système*

examine a strand of this debate that focuses on the passions and human agency. I begin by clarifying why questions about the status of animals are connected to questions about the passions. I then argue that two critics of animal automatism, Gabriel Daniel (1649–1728) and David Renaud Boullier (1699–1759), develop a powerful objection to animal automatism that exploits this connection.

The debate on the status of animals was "a central preoccupation" of early modern philosophy (Thomas, *Man and the Natural World*, 35). Given the centrality of the debate over animals to the early modern philosophical landscape, we may conclude that this debate is worthy of study in its own right. But Daniel's and Boullier's critical engagement with Cartesian animal automatism also merits our attention because of the light it sheds on Descartes' philosophical system. Daniel's and Boullier's objections together reveal that animal automatism has problematic implications for Descartes' theory of the passions. Daniel's objection shows that animal automatism has implausible implications for the phenomenology of conflicts between passion and reason. And Boullier's objection shows that the Cartesian can avoid these implications only by embracing speculative and ad hoc hypotheses. Consequently, when taken together, Daniel's and Boullier's objections reveal steep theoretical costs of Descartes' system that we might otherwise miss.

Here is a brief roadmap for the paper. In §1 I present Descartes' theory of the passions and some of its connections to animal automatism. I argue that Descartes' theory of the passions is crafted to ensure that bodily dispositions play a role in the passionate behaviour of humans that is analogous to the role of bodily dispositions in animal behaviour. In §2 I turn to distinguishing between two different ways that episodes of the passions can come into conflict with reason in Descartes' system. According to what I call the 'body account', our bodies are sometimes disposed during episodes of the passions to move in ways that our will opposes. By contrast, according to what I call the 'irresolution account', the passions sometimes dispose our will to consent to irrational behaviours. In §3 I apply this distinction to illuminating Daniel's objection to animal automatism. On the reading that I develop, Daniel claims that phenomenological observation supports the irresolution account. But, if animals are automata, then our conflicts between passion and reason should instead conform to the body account. So phenomenological observation disconfirms what one would expect given the truth of

Général Du Monde de Descartes, 68–71; Cordemoy, *A Philosophicall Discourse Concerning Speech*), and questions about animal instinct and the relationships between sensation, reflection, and reason (Pardies, *Discours de La Connaissance Des Bêtes*; Dilly, *De l'Ame Des Bêtes Ou Après Avoir Démontré La Spiritualité de l'ame de l'homme, l'on Explique Par La Seule Machine, Les Actions Les plus Surprenantes Des Animaux*; Bayle, *Historical and Critical Dictionary*, 221–231; Boullier, *Essai Philosophique Sur l'âme Des Bêtes*; Fontenelle, *Œuvres de Monsieur de Fontenelle*, 339–350).

animal automatism. In §4 I examine a critical reply to Daniel from Boullier as well as Boullier's own objection to animal automatism. Boullier argues that the Cartesian can accommodate Daniel's phenomenological observations by adopting auxiliary hypotheses. However, he ultimately concludes that the Cartesian position is problematically speculative and ad hoc. I argue that Boullier's objection implicitly builds on insights from Daniel. In §5 I consider a Cartesian response to the line of objection developed by Daniel and Boullier. I argue that this Cartesian response has merit but that it ultimately fails to absolve the Cartesian of the problem that Daniel and Boullier together articulate. I conclude in §6.

1 Descartes' theory of the passions

Descartes' theory of the passions may be introduced by comparison to the tripartite theories of the soul held by many Scholastic authors. Such theories distinguish between the vegetative, sensitive, and rational parts of the soul (Hatfield, "Mechanizing the Sensitive Soul", 2012). Each part of the soul is responsible for a characteristic set of functions with the sensitive soul being responsible for the passions among other functions. The sensitive soul acts via its hylomorphic presence in the body. The passions are consequently, as one prominent Scholastic text on the passions puts it, "action[s] of the soul and body together" (Chambre 1640). Descartes' theory of the passions likewise appeals to both body and soul. According to Descartes the passions are confused thoughts "which the mind does not derive from itself alone but experiences as a result of something happening to the body with which it is closely conjoined." (AT VIIIA 317/CSM I 281; AT VII 72–73/ CSM II 50–51). [3] For both Descartes and many Scholastic authors, then, understanding the passions requires understanding the union of body and soul.[4]

However, Descartes sought to supplant much or all hylomorphic explanation with mechanical explanation, i.e. explanation in terms of the motions of parts of matter characterized by extension (Hattab, *Descartes on Forms and Mechanisms*).[5] On Descartes' view, mechanical explanation should be extended so far as to cover the motions that previous authors had ascribed to the sensitive soul (AT XI 202/ CSM I 108). Since the motions of the passions are among those previously ascribed to the sensitive soul, Descartes' mechanization of the sensitive soul implies the mechanization of the bodily motions accompanying the passions. These motions

[3]The contrast to confused thoughts are distinct thoughts (AT VII 164/CSM II 116). See articles 45–46 of the *Principles of Philosophy* for Descartes' clearest discussion of the notion of distinctness (AT VIIIA 22/ CSM I 207–208).

[4]See Shapiro, "Descartes' Passions of the Soul" for discussion of connections between Descartes' theory of the passions and his views on the mind-body union.

[5]For discussion of whether Descartes retains a kind of hylomorphism see Hoffman, "The Unity of Descartes' Man"; Rozemond, "The Faces of Simplicity in Descartes' Soul".

include the "internal movements of the appetites and passions" such as a slow pulse in sadness (AT X 202/CSM I 108; AT XI 403/CSM I 363). But Descartes also mechanizes "external signs" of the passions such as facial expressions and "external movements of all the limbs … appropriate not only to the actions of objects presented to the senses, but also to the passions" such as fleeing from dangerous animals during episodes of fear (AT XI 411/CSM I 367; AT X 202/CSM I 108; AT XI 358/ CSM I 342–343).

The mechanical cause that Descartes cites to explain the automatic bodily movements that accompany the passions is the motion of the animal spirits (AT XI 357/CSM I 342). Motions of the animal spirits also determine our experience of the passions via their impact on the pineal gland (AT XI 357/CSM I 342). I will follow Descartes in speaking of movements of the spirits and nerves as *causing* passions in the soul via their influence on the pineal gland (AT XI 349/CSM I 338–339; AT XI 371/CSM I 349). Whether this language expresses a genuine causal relation or is merely a manner of speaking is an important and controversial issue that I cannot settle here.[6] According to Descartes, the reason why passions in the soul are accompanied by characteristic automatic bodily motions is not because the passions in the soul cause these motions. Rather, the correlation between passions in the soul and accompanying bodily movements is explained by their having a common cause in motions of the animal spirits (AT XI 333/CSM I 331). The motions of the animal spirits that cause the passions also "act without the soul, causing the spirits to make their way to certain muscles rather than others, and so causing them to move our limbs" (AT XI 338/CSM I 333). In this paper, I use the phrase 'episodes of the passions' to refer to the complex of these movements of the spirits and their bodily and mental effects. By contrast I use 'passions' to refer more narrowly to confused thoughts in the soul. The exegesis that follows more precisely characterizes the passions, the bodily motions that accompany them, and their relationship to each other in episodes of the passions.

In article 1 of the *Passions of the Soul* (hereafter *Passions*), Descartes associates the passions with passivity, as was common in the period (James, *Passion and Action*). A passion is "whatever takes place … with regard to the subject to which it happens" (AT XI 328/CSM I 328). And an action is whatever takes place "with regard to that which makes it happen." (AT XI 328/CSM I 328). After this preliminary, Descartes then defines the passions of the soul in a broad sense before successively narrowing the definition. In the broadest sense, all perceptions are passions of the soul (AT XI 342/CSM I 335). An important division among the perceptions of the soul is between those that are caused by the soul itself and those that are instead caused by the body (AT XI 343/CSM I 335). Within the latter category, Descartes further

[6]See Garber, "Descartes and Occasionalism" for some reasons to think that such movements of the spirits are mere occasional causes.

distinguishes between those "we refer to bodies outside of us" (sensory perceptions), those "we refer to our body … [such as] hunger, thirst and other natural appetites", and those "we refer only to our soul" (AT XI 346–347/CSM I 337).[7] The latter include "joy, anger and the like" which are passions of the soul in the strictest sense of the term and the subject matter of the *Passions* (AT XI 347–348/CSM I 337–338).

Descartes emphasizes the importance of distinguishing the passions of the soul in this restricted sense from the soul's actions. In a letter to Pierre Chanut, Descartes distinguishes between love that is "purely intellectual or rational" and love that is instead a passion (AT IV 601/CSMK 306). Purely intellectual love is constituted by volition which joins the soul willingly to some good (AT IV 601/CSMK 306). The love that is a passion is instead a confused thought that disposes the soul towards intellectual love (AT IV 602–603/CSMK 306). A parallel distinction also applies in the case of thirst: "in thirst the sensation of the dryness of the throat is a confused thought which disposes the soul to desire to drink, but is not identical with that desire" (AT IV 603/CSMK 306).

In the *Principles of Philosophy* (hereafter *Principles*), Descartes applies this model to all passions in the restricted sense as well as to the natural appetites such as hunger or thirst. These states are all confused thoughts that should be distinguished from the volitions that frequently accompany them (AT VIII 317–318/CSM I 281). The reason these states are frequently accompanied by volitions must be that, as in the letter to Chanut, they dispose the soul to form these volitions. In the *Passions*, Descartes explicitly makes this claim about passions in the restricted sense. All such passions are confused thoughts that dispose the soul towards corresponding volitions (AT XI 372/CSM I 349). Descartes does not affirm in the *Passions* that this point also applies to the natural appetites. But there is no reason to doubt this given the many passages in which Descartes lumps these states together.

Indeed, Descartes' view in the *Passions* and his claims about the natural appetites and pain in the *Sixth Meditation* have significant similarities. In the *Sixth Meditation* Descartes claims that "nature teaches me … that when I feel pain there is something wrong with the body, and that when I am hungry or thirsty the body needs food and drink" (AT VII 80/CSM II 56). The natural appetites and pain thereby motivate us to perform actions that are conducive to bodily health (AT VII 87–88/CSM II 60–61). Descartes writes that by "nature" he refers to "what God has bestowed on me as a combination of mind and body" (AT VII 82/CSM II 57). God thus plays a role in arranging the mind–body union such that we experience thoughts in the soul that motivate behaviours appropriate to preserving bodily health. In the *Passions,* Descartes

[7]In the *Sixth Meditation* and the *Principles of Philosophy* Descartes similarly distinguishes between the external senses and the internal senses which include the natural appetites, bodily pains and pleasures, and the passions in the restricted sense (AT VII 76–77/CSM II 53; AT VIIIA 316–318).

makes similar claims about our nature and the passions. The passions in the restricted sense:

> are all ordained by nature to relate to the body … Hence, their natural function is to move the soul to consent and contribute to actions which may serve to preserve the body or render it in some way more perfect.
>
> (AT XI 430/CSM I 376)

Descartes' assertions about the "natural function" of the passions echoes his earlier claims about the teachings of nature with respect to the natural appetites and bodily pain in the *Sixth Meditation*. Descartes understands all of these states as functioning to preserve bodily health – a view that may or may not conflict with his repudiation of teleology in natural philosophy (Detlefsen 2013).

Given the many similarities just surveyed, it seems probable that the basics of Descartes' theory of the passions presented here are also meant to apply to the natural appetites and bodily pains and pleasures. For example, episodes of bodily pain include automatic bodily motions such as retracting limbs from noxious stimuli and pain is a confused thought that disposes the soul to respond appropriately to bodily damage (AT XI 141–142/ CSM I 101–102; AT VII 81–82/CSM II 56–57). And the feeling of thirst is a confused thought that does not directly cause thirst quenching behaviour but that rather disposes the soul to form a volition to drink (AT IV 603/CSMK 306; AT VIIIA 317–318/CSM I 281). Since the basics of Descartes' theory of the passions apply to the natural appetites and bodily pains and pleasures, I will refer to all such states as 'passions.' This usage departs from Descartes' and so should not be read as attempting to capture Descartes' notion of the passions in the restricted sense (AT XI 346–347/CSM I 337).

Mind to body causation for Descartes is accomplished by acts of volition that move the pineal gland (AT XI 354–355/CSM I 341; AT XI 360/CSM I 343).[8] Since Descartes sharply distinguishes the passions from volition, it follows that the passions are not the direct cause of any behaviour. The passions nevertheless play an indirect role in our behaviour insofar as they dispose the will to consent to behaviours "which may serve to preserve the body" (AT XI 430/CSM I 376). Given that during episodes of the passions our bodies are automatically disposed toward certain behaviours, the passions must dispose the will to pursue ends that the body is already automatically disposed to pursue.

Of course, the will can refuse to consent to the behaviours that the body is automatically disposed towards. In such a case the will attempts to change the state of the pineal gland being produced by motions of the animal

[8]As with the topic of body to mind causation, Descartes' system raises questions about mind to body causation that I cannot address here but see the literature cited in note 4.

spirits (AT XI 364/ CSM I 345–346). If we successfully inhibit the behaviour to which we are automatically disposed, we can attribute this outcome to our will. By contrast, when the will consents to a passionate behaviour, the relationship between the will and our behaviour is less clear.[9] In some cases the will might consent to the general course of action to which the body is disposed while modifying the details of the behaviour. Hence Descartes' claim that the soul may "initiate, or inhibit, or *change in some way*" automatic bodily responses and that the passions dispose the soul to "consent and *contribute* to actions" (AT XI 131–132, emphasis added; AT XI 430/CSM I 376, emphasis added). In other cases, the will might consent without modifying the behaviour to which the body is disposed. The most obvious interpretation of these cases is that the will simply refrains from influencing the pineal gland thereby allowing the body to exhibit its automatic responses.

From the above, it is clear that Descartes ascribes a large and central role to automatic mechanisms in his theory of the passions. In this respect, Descartes' theory of the passions harmonizes nicely with the doctrine of animal automatism. For Descartes claims that the behaviours of animals, which are all entirely automatic, resemble our passionate behaviours (AT XI 431/CSM I 376–377). Prima facie, it would be objectionably arbitrary to give wholly different explanations of animal behaviour on the one hand and analogous behaviours in humans on the other. Such a view would flout what I call 'Montaigne's principle': other things being equal, we should explain like effects by like causes.[10] Montaigne's principle is an intuitively appealing principle of parsimony. In some cases, flouting Montaigne's principle multiplies the causes in one's ontology beyond necessity. For example, if Descartes claimed that passionate behaviours are caused by the passions, then he would have to recognize not only automatic mechanism and volition as causes of behaviour but also the passions. In other cases, flouting Montaigne's principle does not add to one's ontology but still detracts from the explanatory parsimony of a theory by introducing two different explanations where one would suffice.[11] For example, explaining animal behaviour automatically and analogous human behaviour by appeal to reason and volition is less simple than explaining both sets of behaviour by appeal to the same kind of cause.

In other work, I have argued that Descartes' argument for animal automatism assumes Montaigne's principle (Thomas, "Descartes on the Animal

[9]Thanks to Julia Jorati for drawing my attention to this issue.

[10]In *Apology for Raymond Sebond* Michel Montaigne asserts in a discussion of animal intelligence that "we must infer from like results like faculties." Descartes expresses familiarity with Montaigne's views on animals in a letter to the Marquess of Newcastle (AT IV 573/CSMK 302).

[11]Montaigne's principle corresponds to what Fitzpatrick calls "parsimony of explanations" (Fitzpatrick, "Doing Away with Morgan's Canon").

Within"). We thus have good reason to ascribe the principle to Descartes independently of its intuitive philosophical appeal. Indeed, Descartes advertises the fact that his theory of the passions and animal automatism are unified in the manner prescribed by Montaigne's principle. In article 50 of the *Passions,* Descartes asserts that behavioural conditioning in humans should be explained mechanically. During an episode of the passions, motions of the animal spirits may alter the dispositions of our brains such that stimuli that formerly elicited one passion come to elicit another in the future (AT XI 369/ CSM I 348; AT X 119). Descartes remarks that such behavioural conditioning is also found in animals and should be explained in the same way:

> And the same may be observed in animals … [A]ll the movements of the spirits and of the gland which produce passions in us are nevertheless present in them too, though in them they serve to maintain and strengthen only the movements of the nerves and the muscles which usually accompany the passions and not, as in us, the passions themselves.
>
> (AT XI 369–370/ CSM I 348)

The causal story behind animal behaviour overlaps with the causal story behind the automatic bodily motions that accompany the passions in humans. Animals have similar motions of the animal spirits and so exhibit similar behaviours and like us are susceptible to behavioural conditioning. The difference in the animal case is that their automatic behaviours are never accompanied by any passions and will never be modified or resisted by any acts of will.

We can now see an important connection between Descartes' theory of the passions and animal automatism. Descartes distinguishes the passions proper and their influence on the will from the automatic bodily motions that accompany the passions. Animals lack the passions and the will but have automatic bodily motions that resemble those that accompany the passions in humans. This connection ensures that Descartes' theory of the passions and animal automatism are unified in the manner prescribed by Montaigne's principle. Before turning to Daniel, we also need to understand Descartes' account of conflicts between passion and reason and how this account relates to the distinctive features of his theory of the passions. I turn to this task in §2.

2 Two accounts of conflict between passion and reason

Theories of the passions often seek to explain experiences of conflict between passion and reason. A common strategy in the period for explaining such conflicts was to distinguish between the sensitive and rational parts of the soul (Rozemond, "The Faces of Simplicity in Descartes' Soul"). But Descartes rejects dividing the soul into parts (AT XI 364/CSM I 346). Consequently, Descartes must develop a novel approach to these conflicts. In this section of the

paper, I argue that Descartes develops two accounts of conflicts between passion and reason.[12] One of these accounts relates to the automatic bodily motions that accompany the passions, and the other relates to the passions themselves.

As previously discussed, the proximate cause of the passions is the impact of the animal spirits on the pineal gland (AT XI 343–349/ CSM I 335–338).[13] Reason by contrast belongs to the soul. Consequently, conflicts between passion and reason must originate from a conflict *between* the soul and motions of the animal spirits. We experience a conflict between passion and reason when the animal spirits are tending to move the pineal gland one way while the soul by means of the will is pushing the gland in another direction (AT XI 364/ CSM I 345–346). Conflicts between passion and reason originate from a mismatch between what reason prescribes and what the body is automatically disposed towards.[14]

Conflicts between passion and reason are thus cast as struggles for control over the pineal gland. Descartes claims that the will is typically victorious in these conflicts. However, "stronger and more violent passions" are typically accompanied by disturbances in the blood and the animal spirits (AT XI 363–364/CSM I 345). These disturbances give rise to automatic bodily motions that are very difficult for the soul to prevent or change:

> The most the will can do while this disturbance is at its full strength is not to yield to its effects and to inhibit *many* of the movements to which it disposes the body. For example, if anger causes the hand to rise to strike a blow, the will can *usually* restrain it …
>
> (AT XI 364/CSM I 345, my italics)

When we are in the grip of a powerful passion, our will may be unable to fully inhibit all of the motions to which our body is automatically disposed. Descartes thus endorses what I call the "body account" of conflicts between passion and reason. According to the body account, during episodes of the passions we sometimes experience a conflict between what our bodies are automatically disposed towards and what our will prescribes. The outcomes of these conflicts depends in part on the strength of our will's power over the pineal gland.

Claude Clerselier provides a helpful example of the kind of conflict described by the body account in his introduction to a 1677 publication of

[12]This same distinction is also discussed in Hoffman, "The Passions and Freedom of the Will".

[13]Descartes distinguishes between "proximate and primary" causes "without which [the effect] cannot exist" and remote causes which bring about proximate causes (AT VIIIB 360/CSM I 305). In the case of the passions, the "principal and most common" remote causes are "objects which stimulate the sense" (AT XI 372/CSM I 349). Such causes are remote because they only give rise to the passions if they cause appropriate movements of the animal spirits which in turn are the proximate cause of the passions.

[14]For discussions of these same passages and conflicts see also Brown, *Descartes and the Passionate Mind*; Alanen, *Descartes' Concept of Mind*.

Descartes' *Treatise on Man*: involuntary urination (1677, ii iii). In a case in which we struggle to prevent ourselves from urinating, the phenomenology of the conflict that we experience does not seem to be well described as a conflict between our will and an appetite for urination that is internal to the soul. Rather, what we seem to experience is a conflict between our body and our mind. We experience our bladder as being a bodily mechanism that will empty itself when it is sufficiently full regardless of the desires or commands of the soul to prevent this.

But the body account does not exhaust Descartes' understanding of the ways in which episodes of the passions can conflict with reason.[15] In article 48 of the *Passions,* Descartes discusses the importance of "firm and determinate judgments bearing upon the knowledge of good and evil" for regulating our conduct (AT XI 367/ CSM I 347). In the *Fourth Meditation,* Descartes describes judgement as resulting from the will affirming, denying, or suspending judgement on contents presented to it by the intellect (AT VII 56–57/CSM II 39–40). A firm and determinate judgement, then, would be something like a belief or decision about how one should act to which the will is firmly committed. Without firm and determinate judgements, the will is liable to pursue whatever course of action our passions currently represent as choice-worthy:

> Thus, when fear represents death as an extreme evil which can be avoided only by flight, while ambition on the other hand depicts the dishonour of flight as an evil worse than death, these two passions jostle the will in opposite ways; and since the will obeys first the one and then the other, it is continually opposed to itself, and so it renders the soul enslaved and miserable.
>
> (AT XI 367/ CSM I 347)

The problem that Descartes identifies here is that the passions can "jostle the will" in problematic ways. The problem is thus located in the relationship between the passions and the will rather than between the will and the pineal gland. The problem is that the passions can dispose the will to consent to irrational behaviours.[16]

Descartes advises against forming judgements while experiencing the distorting effects of the passions. The will may be "conquered and led astray" by the passions into embracing false judgements (AT XI 368/ CSM I 347). And when we discover that we have been following a false judgement we experience regret (AT XI 368/ CSM I 347). Souls may be judged "stronger or weaker according to their ability to follow" firm and determinate judgements and to "resist the present passions which are opposed to them" (AT XI 368/ CSM I

[15] Alanen (*Descartes' Concept of Mind*, 211) also notes that Descartes has two accounts of conflict between passion and reason.

[16] Part of the problem might be that the will fails to successfully control the passions through indirect means (AT XI 362–363/CSM I 345). However, Descartes describes the passions as *pulling* the will which suggests that the passions can dispose the will to irrational behaviours.

347). The locus of the strength of these souls is thus not in their control over the pineal gland but rather in their ability to stick by firm and determinate judgements in the face of passions that tempt them to change course. Descartes describes the souls that lack such strength as "irresolute" (AT XI 367/ CSM I 347). If we are irresolute, then we may end up willing to follow our passions rather than a firm and determinate judgment. I call this the 'irresolution account' of conflicts between passion and reason.

The following example illustrates the irresolution account. Firstly, we rationally form a new year's resolution to stick to a diet. But later in the afternoon when we are hungry and see a forbidden doughnut we lose our resolve and willingly choose to eat the doughnut. Once the passion of hunger has passed and we have a cool head again we regret our decision. The phenomenology of the conflict between passion and reason that we experience in this case is one of our will being drawn towards what we had previously resolved against. At the outset we experience our will as being committed to the diet. But once we are hungry, we find our will instead being drawn towards eating the doughnut. In such a case our passions lead us to willingly consent to an irrational behaviour that we later regret.[17]

Descartes' theory of the passions thus recognizes two different ways that episodes of the passions can come into conflict with reason. According to the body account, the automatic bodily movements that accompany the passions can conflict with reason insofar as our bodies can be disposed towards behaviours that our will opposes. According to the irresolution account, the passions can conflict with reason insofar as they tempt the will to abandon our firm and determinate judgements. One might worry that it is redundant to have these two accounts of conflicts between passion and reason. But to this Descartes could respond that the phenomenology of such conflicts is heterogenous. The phenomenology of some conflicts conforms to the body account insofar as we experience our bodies acting contrary to our will. In other cases, the phenomenology conforms to the irresolution account insofar as we experience our will consenting to behaviours that conflict with our considered judgements about how we should act. Given this difference between the two sorts of cases, it seems that not all cases of conflict between passion and reason should be assimilated into a single explanatory framework.

[17]There are at least two different ways to develop the irresolution account. One option is to regard the practical failures resulting from irresolution as instances of strict akrasia, i.e. cases where we choose what we simultaneously judge to be worse. But there is good reason to think that Descartes denies the possibility of strict akrasia (Williston, "Akrasia and the Passions in Descartes"). Another option, consistent with the denial of strict akrasia, is that passions mislead us to mistaken judgments about which behaviour is best.

The body account and the irresolution account are equally parts of Descartes' theory of the passions, but the body account appears to play a particularly important role in the Cartesian system. Probably the most controversial aspect of Descartes' theory of the passions is his claim that the motions accompanying the passions are explained by automatic mechanisms. Consequently, the plausibility of Descartes' system is greatly improved if independent motivation can be given for regarding the motions that accompany our passions as automatic. If the body account provides the best explanation of some conflicts between passion and reason, then this provides such motivation. For according to the body account our passionate behaviours are sometimes automatically produced. And if our passionate behaviours are sometimes automatic, then Descartes' mechanization of the bodily motions that accompany the passions becomes much more plausible.

Clerselier is clearly aware of the importance of the body account for Descartes' system. He claims that the body account provides the best explanation of involuntary urination (Clerselier 1677, ii ij). The phenomenology of such a case suggests a conflict not between appetite and will but rather between the bladder and our will. Consequently, the feeling of needing to urinate is not the cause of urination but must rather merely dispose the soul to consent to the otherwise automatic motions that constitute urination (Clerselier 1677, ii ij). And once an indirect role is ascribed to feeling in the case of urination, there is no obvious reason why this model should not be extended to other appetites and passions such as thirst (1677, ii iij). Clerselier also claims that the trembling we experience upon hearing a frightening sound must not depend on the feeling of fear because the trembling either precedes or is coeval with the feeling of fear (1677, ii iij). In such a case we might even raise our arms to protect ourselves without any deliberation (1677, ii iij). In Clerseliers' presentation, then, the phenomenological plausibility of the body account is used to motivate the essentials of Descartes' theory of the passions.

Critics of animal automatism also noticed the importance of the body account for the Cartesian system. Daniel argues that if animal automatism is correct, then our experiences of conflicts between passion and reason should conform to the body account. But the phenomenology of such conflicts instead conforms to the irresolution account. Consequently, we should reject the body account and animal automatism as well. I examine Daniel's objection in greater detail in §3.

3 Daniel's objection

Gabriel Daniel was a French Jesuit whose anti-Cartesian writings "enjoyed an immense vogue in French, as well as in Latin, English, and Spanish

translations" (Rosenfield, *From Beast-Machine to Man-Machine*, 86). His *Nouvelles Difficultez* (1693, hereafter *ND*), is one of the principal contributions to the controversy over animal automatism.[18] In this work, Daniel criticizes the Cartesian case for animal automatism and defends a broadly Scholastic view of animals.

Daniel begins by claiming that all reasoning about animal mentality must be founded on what we experience in ourselves and what we observe in animals (*ND* 16). Our studies of animal mind should thus conform to a two-step method I have called the 'introspective-analogical' method in other work (Thomas, "Animals and Cartesian Consciousness"; "Descartes on the Animal Within, and the Animals Without"). The first step is to rely on introspection to determine which motions of our body are automatic and which instead depend on thought. The second step is to observe animal behaviours to determine whether they better resemble our automatic motions or those motions that depend on thought. Daniel claims that the Cartesians use this "method and argument of analogy" to support their conclusions (*ND* 23).

Daniel concedes that the Cartesian arguments show that the "natural movements" of animals such as the beating of the heart are automatic (*ND* 19–20). We experience these motions as not depending on the will or perception so there is no need to attribute these faculties to animals to explain their natural movements (*ND* 18–19). But this same pattern of reasoning cannot be extended to show that the "spontaneous movements" of animals such as walking or eating are automatic (*ND* 18). This is because the spontaneous movements of animals resemble voluntary human behaviours which seem to depend on knowledge and sentiment (*ND* 20–24). Consequently, the Cartesian reasoning that supports the conclusion that the natural movements of animals are automatic supports the opposite conclusion with respect to their spontaneous movements:

> For just as the first [i.e. natural movements] are not in us following upon or the effect of either knowledge or sentiment, and from this one concludes, that they depend on no other principle in beasts but the disposition of the body machine; likewise, by a consequence that does not seem less well drawn, one can conclude that this second species of movement [i.e. spontaneous movements] has for its principle in beasts' knowledge and sentiment.
>
> (*ND* 20–21)

Daniel appeals to the example of a dog coming home from a long hunt to illustrate this point (*ND* 20). After a long walk, we eat and rest because we are feeling hungry and tired. Since we observe hunting dogs acting in these same ways in similar circumstances, the Cartesian's analogical method seems to show that the dog's behaviour is explained by similar mental states.

[18]The full title of this work is : Nouvelles difficultez proposées par un Peripateticien à l'auteur du Voyage du Monde de Descartes. Touchant la connoissance des Bestes. Avec la Réfutation de deux défenses du Système général du Monde de Descartes.

A Cartesian might object that the difference between human and animal behaviour could be revealed through counterfactual analysis; the dog cannot but act as they do, but humans have the freedom to act otherwise. Perhaps for this reason, Daniel recognizes that the analogy between human and animal behaviour does not by itself refute animal automatism. The analogy merely establishes the "negative conclusion" that the Cartesian arguments that work in the case of natural movements cannot be extended to establish that spontaneous movements are automatic as well (ND *24*).

Daniel next argues that we have within us the evidence we need to "positively persuade" us that animals are not automata (*ND* 25). To support this, he considers a case in which he sees bread while hungry. He claims that:

> whatever proportion there is between the bread and the disposition of my empty stomach, I witness to myself, that this proportion … in no way determines the animal spirits to give to the muscles of my legs and arms the motions necessary to advance towards the table and the bread.
>
> (*ND*, 27–28)

Daniel claims that we never experience ourselves involuntarily eating bread in the sense of our body moving without the consent of the will. Such motions are always preceded by knowledge and an act of will (*ND*, 27–28). This is presumably meant to be a point not just about hunger but also the other passions. Daniel claims that we never act passionately without an act of will.

Daniel next explains why this phenomenological observation is a problem for animal automatism. Observation confirms that a horse with an empty stomach will walk towards oats and consume them (*ND* 29). The Cartesian explains the horses' motions by appeal to automatic bodily dispositions (ND 29).[19] But Daniel observes, implicitly invoking Montaigne's principle, that if animal bodies contain dispositions for such simple food acquisition behaviours then human bodies should contain similar dispositions as well (*ND* 28).[20] Given this, the Cartesian must hold that if it were not for our soul we would "walk just as necessarily towards the bread, as the horse walks towards the oats" (*ND 33*).

The Cartesian must consequently explain how the soul prevents us from automatically consuming food (*ND* 32). But this will require "an effort or an action" by the soul to keep the animal spirits from flowing as they otherwise would (*ND* 35). And for the Cartesian such action is constituted by volition. However, we know from introspection that we do not need to form a volition to refrain from eating bread (*ND* 39). The mere absence of a volition to eat bread suffices to prevent bread eating behaviour from being automatically triggered.

[19]Descartes does not discuss this sort of case, but he does provide an account of how the human body automatically swallows food at the back of the mouth (AT XI 140).

[20]It is not obvious that a Cartesian must make this concession. But such a view is certainly suggested by Descartes' claim that the functions of human beings that we share with animals are automatic (AT VI 46/CSM I 134).

Daniel contrasts his bread case with one's hand touching a hot coal (*ND* 42). The Cartesian claims that in such a case we retract our hand automatically without any command from the soul (ND 42). However, it seems that the Cartesian must treat the bread case in the same way. In the absence of a volition to refrain, eating behaviour should be automatically triggered. But the bread example shows that this is implausible. Even if we are very hungry, our body only begins moving towards bread in our perceptual environment after a consenting act of will.

Daniel's objection can be clarified using the distinction between the body account and irresolution account. Daniel's core claim is that the body account and its corresponding notion of the will's power over the pineal gland does not accurately capture the sense in which we must exercise our will in conflicts between passions such as hunger and reason. When we are hungry, our bodies do not have an automatic tendency towards consuming food that we must prevent with a volition to remain put. It is not as if we feel in our "legs or [our] body some shaking, or some effort of attraction towards the object" (*ND* 41). The phenomenology of conflicts between passion and reason thus contradicts the body account. Resisting passionate behaviour requires us to exercise our will in the sense of resolving to stand by firm and determinate judgments not in the sense of exercising our will's power over the pineal gland.

Daniel's objection can be summed up as follows. If animals are automata then, given Montaigne's principle, we should expect human bodies to contain automatic dispositions to produce passionate behaviours. But in that case our experiences of conflicts between passion and reason should conform to the body account. However, the phenomenology of conflicts between passion and reason does not conform to the body account. Our experience of conflicts between passion and reason thus disconfirms what one would expect given the truth of animal automatism.

There are several strategies that a Cartesian might employ in responding to Daniel. For example, the Cartesian could reject Daniel's phenomenological claims. But one might find these phenomenological claims plausible. Alternatively, the Cartesian might deny Montaigne's principle. But Montaigne's principle is intuitively compelling, and Descartes himself seems to respect this principle. So this strategy seems even less promising. Finally, a Cartesian might try to explain Daniel's phenomenological claims in a manner that is consistent with Descartes' theory of the passions. As we will see in §4, Boullier employs this strategy in his criticism of Daniel.

4 Boullier's development of insights from Daniel

David Renaud Boullier was a Dutch protestant priest whose *Essai Philosophique sur l'ame des bêtes* (1728, hereafter *Essai*) is the most elaborate

eighteenth-century contribution to the controversy over animal automatism (Schmal, "The Problem of Unconscious Perception in the Early Enlightenment"). The *Essai* is both a critical history of the controversy and an original work that develops a novel view of animal mind and cognition. The positive view put forward in the *Essai* is a fascinating blend of Cartesian, Lockean, and Leibnizian influences. Despite the interest of Boullier's positive views, my discussion will be restricted to his critical engagement with Daniel and Cartesian animal automatism. Boullier argues that the Cartesian can accommodate Daniel's phenomenological claims. However, I argue that Boullier's core objection to the Cartesians develops insights from Daniel.

Boullier's reply to Daniel can be thought of as targeting Daniel's implicit application of Montaigne's principle. Montaigne's principle is only plausible if it contains a *ceteris paribus* clause. *Other things being equal*, we should explain like effects by like causes. Boullier articulates a reason for thinking within a broadly Cartesian framework that things are not equal when it comes to human passionate behaviour and animal behaviour. The Cartesian can claim that "the soul being of a nature more excellent than it [i.e. the body], is not made for the body: to the contrary, the body is made for the soul" (*Essai* 26). God consequently grants the soul empire over the body which is to serve as its instrument (*Essai* 26). This empire of the soul over the body is the source of our free actions (*Essai* 27).

Given the empire of the soul over the body, motions that previously "would have been produced by the impression of external objects, or the internal disposition of the machine" must now be determined by "the soul's will" (*Essai* 27). This is because human freedom requires that the soul and not the body determine our actions:

> This is why we do not experience that attraction or mechanical impulse of objects … There would be extreme inconveniences if the body by its operations could incessantly subtract from the power of the soul … The soul would be obliged to always obey blindly the needs of the body …
>
> (*Essai* 27–28)

If the body could act without the consent of the will, then the soul would have to "obey blindly the needs of the body" thereby subtracting from its empire over the body and hence our freedom. God consequently ensures that the body cannot act without the consent of the will. In this way, the fact that the human body is united to a soul can explain why motions that are automatic in animals depend on the consent of the will in humans.

Boullier's reply to Daniel might conflict with Descartes' prohibition on considering God's ends when doing natural philosophy (AT VIIIA 15–16/ CSM I 202). But even putting this aside, Boullier's reply is questionable on its own terms. It seems that meaningful human freedom does not require

that our spontaneous motions *always* be preceded by the consent of the will. Nevertheless, the Cartesian can surely claim that things are not equal in the cases of passionate human behaviour and animal behaviour. For the Cartesian claims that only humans have reason and a will (AT VI 56–59/ CSM I 139–141). This affects what we can conclude based on Montaigne's principle. Montaigne's principle still favours the view that human bodies contain automatic dispositions sufficient to cause the sorts of behaviours observed in animals. But Montaigne's principle does not tell us how we should think about the relationship between these automatic dispositions and the will. There are two obvious possibilities. One possibility is that bodily dispositions and the will enjoy a degree of autonomy such that either can cause behaviour and may sometimes even come into conflict. Another possibility is that the will has priority over the automatic dispositions of the body such that the latter cannot generate a behaviour without a consenting act of will. Montaigne's principle does not tell us which of these hypotheses to endorse. So the Cartesian can endorse Boullier's hypothesis about the empire of the soul over the body without violating Montaigne's principle.

Despite his criticism of Daniel, Boullier goes on to offer his own refutation of animal automatism. Boullier's objection targets the Cartesian argument from parsimony according to which "the hypothesis that gives them [i.e. animals] a soul is false, because it is superfluous" (*Essai* 57). Boullier begins his response to the Cartesian argument from parsimony by first explaining why it would be a mistake to conclude that other humans are mere automata on grounds of parsimony. Once he has shown why the argument from parsimony fails in the human case, he claims that the argument from parsimony fails for similar reasons in the animal case.

Boullier begins his refutation of animal automatism by asserting that Descartes' famous argument from language cannot explain why the argument from parsimony fails in the human case. To this end, Boullier approvingly cites an argument from Daniel that we have not yet discussed (*Essai* 21). Daniel argues that our capacity for language cannot prove that humans have souls (*ND* 68–71). As Daniel understands Descartes' famous argument for animal automatism from the fifth part of the *Discourse on the Method*, the crucial premise is that "it is not conceivable that … a machine should produce different arrangements of words so as to give an appropriately meaningful answer to whatever is said in its presence" (AT VI 56–57/CSM I 140). But speech only requires that bodily organs exhibit appropriate mechanical motions (*ND* 70–71). And an omnipotent God could create automata that would be disposed to exhibit such motions (*ND* 70–71). So, contra Descartes, it is conceivable that linguistically competent human beings are mere automata. Daniel and Boullier thus both reject Descartes' famous argument from language. Whether

Daniel's objection succeeds or whether it presupposes a problematically uncharitable interpretation of Descartes' argument from language is a complicated matter that I cannot settle here.[21]

Having put Descartes' argument from language off the table, Boullier then introduces the figure of a Pyrrhonian (he has Pierre Bayle in mind) who argues for the sceptical conclusion that other humans are mere automata. Boullier replies to the Pyrrhonian that this hypothesis is inferior to the hypothesis that other humans have a soul like our own. This is so for two reasons. Firstly, the automata hypothesis appeals to a "hidden mechanism, which is in fact unknown to you, as well as to me, and of which you cannot form the idea, nor give it to me." (*Essai* 68). What makes the mechanisms in the automata hypothesis "hidden" and "unknown" must be in part that we have no independent evidence for the existence of these sorts of mechanisms. By contrast, the hypothesis that the motions of other humans are caused by a soul posits "a cause of which I have an idea … [t]hat cause is a soul similar to my own" (*Essai* 68). Such a cause is not hidden or unknown because we are acquainted with the existence of souls like our own from the first-person point of view.

Secondly, Boullier asserts that the automata hypothesis relies on a "cause of which you certainly do not see the connection with any of the effects and which does not give a reason for any of the effects" (*Essai* 68). Boullier's point must be that the automata hypothesis is promissory in nature insofar as the Pyrrhonian does not specify the actual mechanisms that are operative. By contrast, the hypothesis that the motions of humans are determined by a soul like or own employs "a cause which unites, a cause which explains all these effects" without being promissory in nature (*Essai* 68). This is again presumably because the first-person perspective affords us with an understanding of how thoughts in a soul can explain various behaviours.

Principles of theory construction thus favour the hypothesis that other humans have minds over the hypothesis that they are mere automata. In general, it is better to prefer hypotheses that posit causes similar to those that we know exist based on independent evidence, and causes that explain their effects without being promissory in nature. Boullier next claims that "all that I have just said applies easily to the actions of brutes" (*Essai* 70). We observe animal behaviours that "express a meaning, and which represent the ideas, desires, interests and designs of some particular being" (*Essai* 70). One can hypothesize as the Cartesians do that these behaviours are all automatic. But it is better to explain these behaviours by appeal to the idea of a sensitive principle (*Essai* 74–75). Cartesian animal automatism relies on "the vague

[21] Some authors have read Descartes' argument in a way that shields it from the sort of objection that Daniel raises (Gunderson, "Descartes, La Mettrie, Language, and Machines"; Newman, "Unmasking Descartes' Case for the Bête Machine Doctrine").

idea of a possible mechanism, but unknown and inexplicable to you and to me" (*Essai* 74). By contrast, Boullier claims that his idea of sensitive principles as a cause of animal behaviour is clear (*Essai* 74). Boullier acquires this clear idea from first-person acquaintance with his own soul as a sensitive principle:

> [H]ere is my proof. I see that my soul as a sensitive principle acts and shakes my body in a thousand manners, all similar to the ways in which animals move their bodies in similar circumstances. I do not know of any other principle that gives me these distinct relations …
>
> (*Essai* 75)

Unlike the Cartesian's vague ideas of possible mechanisms, the clear idea we have of the sensitive principle as a cause "explains clearly and unites universally all the phenomena" (*Essai* 74). Once again, it is better to prefer hypotheses that appeal to causes for which we have independent evidence and that can explain phenomena without being promissory in nature.

We can now see how Boullier's objection to the Cartesians develops Daniel's objection. Daniel shows that animal automatism has implausible implications for the phenomenology of conflicts between passion and reason. However, as Boullier notes, the Cartesians can adopt hypotheses that avoid these implausible implications. But given Daniel's phenomenological observations we have no evidence that human bodies contain dispositions sufficient for producing passionate behaviours analogous to animal behaviour. Consequently, Boullier points out, the Cartesians explain behaviours by appealing to automatic mechanisms for which we have no independent evidence. By contrast, first-person experience acquaints us with mental states sufficient to completely explain passionate human behaviour and animal behaviour. The Cartesian position is thus revealed to be problematically speculative and ad hoc.

5 Assessing Daniel and Boullier's objection

I hope that my interpretation of Daniel and Boullier has already gone a long way towards convincing the reader that they develop a powerful objection to animal automatism. The objection that we can develop from their texts rejects the Cartesian theory of the passions on phenomenological and methodological grounds. The falsity of animal automatism is then inferred via an application of Montaigne's principle. In this section of the paper, I want to further probe the cogency of Daniel and Boullier's objection by considering a case for the Cartesian theory of the passions inspired by Clerselier as well as possible responses from Daniel and Boullier. I argue that Daniel and Boullier may not decisively refute the Cartesian theory of the passions but that they do identify real costs of the theory.

Clerselier argues, plausibly in my view, that the case of involuntary urination shows that urination is best explained as an automatic bodily motion and that the feeling of needing to urinate merely disposes the will to consent. Daniel and Boullier do not explicitly consider the case of urination, but they could concede the automatic hypothesis with respect to urination while resisting generalizing from this case to other cases of passionate behaviour. But at this point the Cartesian could respond by appealing to Montaigne's principle. The explanatory framework Clerselier develops for urination can be applied to passionate behaviour in general. One can say, for example, that the body contains an automatic disposition for eating and that the feeling of hunger merely disposes the will to consent to eating. In this way, one explains similar human behaviours by appeal to similar causal processes. Thus, if the automatic hypothesis is granted in one case, Montaigne's principle seems to favour extending it to all other cases of passionate behaviour.

Additional support for this Cartesian theory of the passions can be found in Descartes' observations about the internal movements of the passions. Descartes discusses how different passions are accompanied by different changes to the pulse or the distribution of blood and the animal spirits (AT XI 401–407/CSM I 362–365). Such internal movements are truly involuntary insofar as they do not depend on the will. Daniel's and Boullier's arguments thus do not cast doubt on the view that these internal movements are automatic. And if these internal movements are automatic then this shows that there are at least *some* automatic bodily motions that accompany the passions. Moreover, when presented with an arousing stimulus, the first bodily motions that we experience are these internal movements. Cartesians can thus argue that since the first stage of our passionate responses are automatic we should conclude that the later stages of our passionate responses are likely automatic as well. Indeed, even the passionate behaviours that are triggered by a consenting volition arguably require a bodily disposition for their execution given that we do not form volitions for each and every minute bodily motion that taken together constitute our passionate behaviours. As Descartes observes in the *Description of the Human Body* "even the movements which we call 'voluntary' occur principally as a result of this disposition of the organs" (AT XI 225/CSM I 315). Given how large a role is played by dispositions in our passionate responses it may appear doubtful and superfluous to assign any necessary role to the mind.

However, in order to produce appropriate passionate responses to stimuli an organism must (i) register stimuli as either harmful or beneficial, (ii) select an appropriate response from a range of possibilities, and (iii) produce this response. Descartes' observations about the internal movements of the passions suggests that (i) can be accomplished automatically. The body is able to automatically initiate a fear response to threatening stimuli or an appetitive

response to desirable stimuli. So, contra Scholastic theories of the tri-partite soul, a sensitive soul is not required to register objects as harmful or beneficial (Hatfield, "Mechanizing the Sensitive Soul"). But once an organism has identified objects as either harmful or beneficial, they must then select and produce an appropriate behavioural response. Our earlier reflections suggested that once the will has consented to a passionate behaviour its production, corresponding to (iii) in the above, is handled by automatic mechanisms. Notice that this still leaves us without any explanation of how task (ii) is accomplished.

The Cartesian can argue that parsimony supports the view that (ii) is completed automatically. However, Daniel observes that we never need to form a volition to prevent our passionate responses from running to completion. Arguably the best explanation of this phenomenological observation is that our bodies contain dispositions to initiate but not to complete passionate responses. Boullier points out that the Cartesian can provide their own explanation of this phenomenological observation. But insofar as the Cartesian must explain away the phenomenology of conflicts between passion and reason this detracts from the explanatory parsimony of their system. Moreover, Boullier seems right to point out that the Cartesian view that human and animal bodies contain dispositions sufficient for producing the sort of behaviours observed in animals is problematically speculative and ad hoc.

It is consequently unclear whether principles of parsimony tip the scales in favour of the Cartesian. The Cartesian theory of the passions does manifest parsimony insofar as it provides a unifying explanation of cases like urination and other passionate behaviours per Montaigne's principle. But there are multiple ways to assess the simplicity of a theory and sometimes these assessments conflict with each other (Fitzpatrick, "Doing Away with Morgan's Canon"). In this case, the Cartesian theory of the passions lacks explanatory parsimony insofar as they must explain away Daniel's phenomenological observations. The Cartesian position also seems problematically speculative and ad hoc insofar as it postulates automatic mechanisms for which we have no independent evidence as causes of behaviour that could instead be explained by mental states that we know exist. What we should conclude on the basis of these conflicting considerations is a difficult question which I can not settle here. But even without resolving this question, we can conclude that Daniel and Boullier reveal theoretical costs of the Cartesian theory of the passions. And to the extent that they are successful in this, they also provide us with reasons for doubting animal automatism.

6 Conclusion

In this paper I have explored a strand in the debate over animal automatism that has received relatively little attention. This strand examines the connection between theories of the passions and the status of animals. I have provided

an interpretation of Daniel's objection to animal automatism according to which the phenomenology of conflicts between passion and reason provides evidence against animal automatism. I have also provided an interpretation of how Daniel's insights get developed by Boullier. Boullier argues that Daniel's phenomenological observations are consistent with animal automatism but that they force the Cartesian to adopt auxiliary hypotheses. Daniel's phenomenological observations also reveal the Cartesian position to be problematically speculative and ad hoc insofar as they posit mechanisms for which we have no independent evidence. The Cartesian can thus accommodate Daniel's phenomenological observations but doing so exacts serious theoretical costs.

Acknowledgements

I would like to thank Lisa Downing, Julia Jorati, Richard Samuels, and Patrick J. Connolly for feedback and encouragement in the writing of this paper. I would also like to thank two anonymous referees for the *BJHP* for their helpful comments on earlier drafts.

Disclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

Evan Thomas http://orcid.org/0000-0002-6261-6332

Bibliography

Alanen, Lilli. *Descartes' Concept of Mind*. Cambridge, MA: Harvard University Press, 2003.

Bayle, Pierre. *Historical and Critical Dictionary*. Translated by Richard Popkin. Bobbs-Merrill (The Library of Liberal Arts), 1965.

Boullier, David-Renaud. *Essai Philosophique Sur l'âme Des Bêtes: Où l'on Traite de Son Existence et de Sa Nature: Et Où l'on Mêle Par Occasion Diverses Réflexions Sur La Nature de La Liberté, Sur Celle de Nos Sensations, Sur l'union de l'âme et Du Corps, Sur l'immortalité de l'âme, Etc. et Où l'on Réfute Diverses Objections de Mr. Bayle*. Amsterdam: Chez François Changuion, 1728.

Brown, Deborah J. *Descartes and the Passionate Mind*. Cambridge, UK: Cambridge University Press, 2006.

Clerselier, Claude, ed. *L'homme de René Descartes et La Formation Du Foetus, Avec Des Remarques de Louis de La Forge, a Quoy l'on a Ajouté Le Monde Ou Traité de La Lumière Du Mesme Autheur*. Paris: Charles Angot, 1677.

Cordemoy, Géraud de. *A Philosophicall Discourse Concerning Speech, Conformable to the Cartesian Principles*. London: John Martin, 1668.

Cureau de La Chambre, Marin. *Les Charactères Des Passions*. Paris: Chez P. Rocolet et P. Blaise, 1640.

Daniel, Gabriel. *Nouvelles Difficultez Proposées Par Un Peripateticien a l'auteur Du Voyage Du Monde de Descartes. Touchant La Connoissance Des Bestes. Avec La Réfutation de Deux Défenses Du Système Général Du Monde de Descartes*. Paris: Chez la Veuve de Simon Benard, 1693.

Descartes, Rene. *The Philosophical Writings of Descartes*. 2 Volumes. Translated by John Cottingham, Robert Stoothoff, and Dugald Murdoch, 1991.

Descartes, Rene. *Philosophical Writings of Descartes: The Correspondence*. Translated by John Cottingham, Robert Stoothoff, Dugald Murdoch, and Anthony Kenny. Cambridge: Cambridge University Press, 1991.

Detlefsen, Karen. "Teleology and Natures in Descartes' Sixth Meditation." In *Descartes' Meditations: A Critical Guide*, edited by Karen Detlefsen. Cambridge University Press, 2013.

Dilly, Antoine. *De l'Ame Des Bêtes Ou Après Avoir Démontré La Spiritualité de l'ame de l'homme, l'on Explique Par La Seule Machine, Les Actions Les plus Surprenantes Des Animaux*. Anisson et Posuel: Lyon, 1676.

Fitzpatrick, Simon. "Doing Away with Morgan's Canon". *Mind and Language* 23, no. 2 (2008): 224–246.

Fontenelle, Bernard. *Œuvres de Monsieur de Fontenelle*. Vol. 9. Paris: Desaint & Saillant, 1761.

Garber, Daniel. "Descartes and Occasionalism". In *Causation in Early Modern Philosophy*, edited by Steven Nadler, 9–26. Pennsylvania State University Press, 1993.

Guichet, J. L. "Les ambiguïtés de la querelle de l'âme des bêtes dans la seconde moitié du XVIIesiècle : l'exemple du Discours de la connaissance des bêtes d'I.-G. Pardies (1672)". In *Animal et animalité dans la philosophie de la Renaissance et de l'Âge classique*, edited by Thierry Gontier, 59–75. Leuven: Peeters Leuven, 2005.

Gunderson, Keith. "Descartes, La Mettrie, Language, and Machines". *Philosophy* 39, no. 149 (1964): 193–222. doi:10.1017/S0031819100055595.

Hatfield, Gary. "Mechanizing the Sensitive Soul". In *Matter and Form in Early Modern Science and Philosophy*, edited by Gideon Manning, 151–186. Leiden: Brill, 2012.

Hattab, Helen. *Descartes on Forms and Mechanisms*. New York: Cambridge University Press, 2009.

Hoffman, Paul. "The Unity of Descartes' Man". *Philosophical Review* 95, no. 3 (1986): 339–370.

Hoffman, Paul. "The Passions and Freedom of the Will". In *Passion and Virtue in Descartes*, edited by Byron Williston, and André Gombay, 261–299. Humanity Books, 2003.

James, Susan. *Passion and Action: The Emotions in Seventeenth-Century Philosophy*. Vol. 110. New York: Oxford University Press, 1997.

Newman, Lex. "Unmasking Descartes' Case for the Bête Machine Doctrine". *Canadian Journal of Philosophy* 31, no. 3 (2001): 389–425.

Pardies, Ignace-Gaston. *Discours de La Connaissance Des Bêtes*. Paris: S. Mabre-Cramoisy, 1672.

Rosenfield, Leonora Cohen. *From Beast-Machine to Man-Machine; Animal Soul in French Letters from Descartes to La Mettrie*. New York: Oxford University Press, 1941.

Rozemond, Marleen. "The Faces of Simplicity in Descartes' Soul". In *Partitioning the Soul: Debates from Plato to Leibniz*, edited by Dominik Perler, and Klaus Corcilius, 219–244. Boston: De Gruyter, 2014.

Rozemond, Marleen. *Descartes' Dualism*. Cambridge, MA: Harvard University Press, 1998.

Schmal, Daniel. "The Problem of Unconscious Perception in the Early Enlightenment: The Case of David-Renaud Boullier". In *What's New in the New Europe? Redefining Culture, Politics, Identity*, edited by Krystyna Kujawińska-Courtney, Grzegorz Zinkiewicz, Tomasz Fisiak, and Agnieszka Miksza, 323–330. Łódz: Łódź University Press, 2019.

Shapiro, Lisa. "Descartes' Passions of the Soul". *Philosophy Compass* 1, no. 3 (2006): 268–278.

Strickland, Lloyd. "God's Creatures? Divine Nature and the Status of Animals in the Early Modern Beast-Machine Controversy". *International Journal of Philosophy and Theology* 74, no. 4 (2013): 291–309. doi:10.1080/21692327.2013.858230.

Thomas, Evan. "Animals and Cartesian Consciousness: Pardies vs. the Cartesians". *Journal of Modern Philosophy* 2, no. 1 (2020a): 1–17.

Thomas, Evan. "Descartes on the Animal Within, and the Animals Without". *Canadian Journal of Philosophy* 50, no. 8 (2020b): 999–1014.

Thomas, Keith. *Man and the Natural World*. New York: Oxford University Press, 1996.

Williston, Byron. "Akrasia and the Passions in Descartes". *British Journal for the History of Philosophy* 7, no. 1 (1999): 33–55.