Animal sentience and Descartes's dualism: Exploring the implications of Baker and Morris's views

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The debate on the issue of whether Descartes held to the notorious doctrine of the *béte-machine* continues to be heated. While some commentators still defend the view that Descartes saw animals essentially as non-conscious pieces of clockwork machinery,¹ others have argued that, while Descartes ruled out the possibility of rational thought in animals, he did indeed ascribe to them sentience and feelings. Among those who hold that Descartes allowed animals sentience and feelings, a secondary debate of some importance has ensued: viz., on whether Descartes’s account of animals as sentient and passionate is consistent with his dualism of mind and matter.

For Descartes, minds are thinking and non-extended, while body is extended and non-thinking. Descartes clearly holds that animals do not think (*cogitare*) and hence do not have a mind, so it seems they must belong wholly to the realm of matter. But if Cartesian matter is (as commonly portrayed) extended and non-conscious, animals with their feelings and sensations cannot belong wholly to the realm of matter. This being so, commentators have suggested that a Cartesian ascription of sentience and feeling to animals is incompatible with Cartesian dualism. For example, in an influential paper that argues that Descartes attributes feelings such as anger and joy to animals, Cottingham concludes that ‘the truth, perhaps, is that Descartes was never completely comfortable with strict dualism’.²


²Cottingham, BB, p. 559.
Baker and Morris would disagree with such a view. Their recent re-evaluation of Descartes’s dualism is significant in being, to date, the most concerted and detailed attempt to fit the ascription of sentience to animals into the Cartesian dualist framework. They contend that Descartes’s ascription of sentience to animals can be seen to be wholly consistent with his dualism, once we understand correctly the nature of Cartesian minds and Cartesian matter.

This paper traces some interesting consequences that result from adopting Baker and Morris’s views on Cartesian animal sentience. I then briefly argue for the general claim that there may be inherent difficulties in accommodating animal sentience within Descartes’s official dualist framework.

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Baker and Morris’s account of Descartes’s dualism has been characterized as ‘path breaking’.3 It departs in significant ways from previous Anglophone readings of Descartes, and has received considerable discussion. This section outlines Baker and Morris’s views on Cartesian animal sentience, locating them in relation to more standard readings of Descartes.

According to Baker and Morris, standard views see Descartes as including under ‘thinking’ all states of consciousness. In particular, Descartes is seen as including under ‘thinking’ the ‘brute’ sentient states such as hunger, pain and sensory awareness. These states are ‘commonly associated with a characteristic “phenomenology” (“qualia”, “raw feels”, the “What’s it like?”)’ and are ‘conceived of as “non-propositional” [or] “non-cognitive”’.4 Moreover, as all states of consciousness now belong to Cartesian mens, Cartesian body is seen as wholly non-conscious. This leads to the ascription to Descartes of the notorious doctrine of the bète-machine. Since animals do not have minds, they wholly belong to the realm of res extensa, and are no more than ‘clockwork’ machinery.

Baker and Morris challenge this account of Cartesian mind and body. With respect to Cartesian mind, they argue that Descartes included under acts of thinking only cognitive states. Understanding Descartes’s use of the term conscientia (commonly translated as ‘consciousness’) is indispensable to understanding Cartesian mens. Having conscientia for Descartes involves ‘possessing knowledge whose scope is the soul and its “operations”’.5 Conscientia is thus a cognitive power of the rational soul, and any exercise of this power must involve having (articulable) thoughts and making judgements. Hence, conscientia excludes those forms of ‘brute’ sentience commonly thought to be shared by animals and humans.

3Stephen Gaukroger, jacket of Descartes’s Dualism.
5Baker and Morris, DD, p. 106.
Moving on to Cartesian body, Baker and Morris maintain that Descartes did not hold that *res extensa* was wholly non-conscious. Descartes’s treatment of the human body and of animals is symmetrical, in so far as he thinks both are machines. His description of both as machines is intended to highlight the following contrasts between them and human rational thinkers – viz., they are ‘mechanical’ in so far as they do not exhibit the intelligence and flexibility in behaviour of rational humans and they also lack the free will (and thus the moral responsibility) of such rational humans. However, that human bodies/animals are machines does not exclude that they are sentient. The human (and animal) functions that Descartes includes among those ‘which can be imagined to proceed from matter’ include the digestion of food, as well as ‘the reception by the external sense organs of light, sounds, smells’, etc. and ‘the internal movements of appetites and passions’ (AT 11:202, CSM 1:108). Thus, animals and human bodies are able to sense light and sounds, and feel hunger and pain. On Baker and Morris’s view, sentience is one of the modes of *res extensa*.

Descartes sees the human being as a composite of mind and body. How then do the bodily modes of sentience relate to the mental modes of *res cogitans*? Baker and Morris use the following well-known passage from the Second Meditation to illustrate the relation:

> I am now seeing light, hearing a noise, feeling heat. But I am asleep, so all this is false. Yet I certainly seem to see, to hear, and to be warmed. This cannot be false: what is called ‘having a sensory perception’ [*sentire*] is strictly just this, and in this restricted sense of the term it is simply thinking [*cogitatio*].

(AT 7: 29, CSM 2: 19)

Descartes is often seen in this passage as either ‘discovering’ or ‘legislating’ what sense-perception truly is, and is assumed to assert here that ‘having a sensory perception’ is strictly just having a visual impression or sense-datum. However, Baker and Morris argue that what he is actually doing is disambiguating two senses of *sentire*:

How do we interpret ‘It seems to me that I see light’? [The passage above makes] a distinction between two meanings of ‘seeing (light)’. In one sense this expression refers to something purely bodily, which animals too could exhibit . . . we will mark this sense with a subscript: seeing₁ (or ‘animal seeing’).

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7Baker and Morris, DD, p. 33.
In another sense, it refers to something purely mental, namely having a thought with a particular content, which brutes . . . could not exhibit. We mark this sense with another subscript: seeing\textsubscript{2} (or rational seeing). For a thinker to see\textsubscript{2} (to see in the restricted sense) is for him to think that he sees\textsubscript{1}.\footnote{Baker and Morris, DD, p. 72.}

In the Second Meditation passage, Descartes maintains that he cannot be wrong in his (current) claim that he sees\textsubscript{2} light (i.e. that he thinks or judges that he sees\textsubscript{1} light). However, he might well be wrong in a claim that he is (currently) seeing\textsubscript{1} light, for there might be at that point no such corresponding bodily state. (At the point of the Second Meditation, he does not know whether he has a body, far less that his body is in the state of seeing\textsubscript{1} light.) Descartes thus calls attention to the fact that there are two senses – mental or bodily – in which one may be said to ‘see’. More broadly, there are two senses in which one may be said to sense light, sound, smells, as well as ‘internal’ hunger and pain. The bodily sense of seeing, etc. is also undergone by animals – thus one can indeed ascribe sentience to animals within the Cartesian dualist schema.

We must pause to consider what Baker and Morris think is involved in mental modes such as seeing\textsubscript{2} light. Baker and Morris argue that to ‘see\textsubscript{2} light’ is to think or judge that one sees\textsubscript{1} light. It is important to note that seeing\textsubscript{2} light is not a purely intellectual judgement that one sees\textsubscript{1} light. Descartes makes clear in the Sixth Meditation that the human thinker is an embodied thinker who ‘forms a unit’ with her body (AT 7: 81, CSM 2: 56). Given this status, the human thinker would have sensations of pain, light, etc., which a disembodied thinker (such as an angel) would not experience. For example, where an angel who was somehow connected to a body would perceive damage to a body ‘purely by the intellect’ (AT 7: 81, CSM 2: 56), the human thinker perceives damage to her body by having a sensation of pain.

This being the case, seeing\textsubscript{2} light in the embodied thinker involves having a mental perception or sensation of light; but such mental perceptions or sensations of light are not ‘brute’ feels. They are cognitive states, which the human thinker can describe in propositional terms. Baker and Morris argue that Descartes distinguishes between the sensation of pain, and pain itself, holding that the sensation of pain belongs to the human thinker, while pain itself is undergone by the animal or human body. Similarly, the mental sensation of light belongs to the thinker, and is to be distinguished from animal/bodily sentience to light. The mental sensation of light is essentially a judgement (which may sometimes be wrong) that one is undergoing a bodily state of seeing\textsubscript{1} light.

An important part of Baker and Morris’s claims concerning these two senses of ‘seeing’ or ‘feeling pain’ is that they show Descartes’s views to be not such a radical departure from his Aristotle-inspired medieval
predecessors. Aristotle thought all living things comprise matter informed by *psuche* or soul. He posited a series of soul-functions ranging from nutrition to intellection, which were classed by his interpreters as belonging to three kinds of soul – vegetative, sensitive and nutritive. Plants occupy the lowest level in the hierarchy of living things, for they manifest only the vegetative soul. Animals exhibit both the vegetative and sensitive souls. Humans occupy the apex, for in addition to manifesting the vegetative and sensitive souls, they alone manifest the rational soul.

Standard accounts of Descartes see him as departing from Aristotle in so far as he moves sentient states into the province of *mens*, and leaves body as extended and non-conscious. This excludes animals (who have no minds) from having the soul-functions traditionally assigned to the sensitive soul. However, on Baker and Morris’s account, Descartes continues to allow animals to share (to some extent) those functions traditionally assigned to the sensitive soul. While the mind is the rational soul, and the body performs the functions of the vegetative soul, the functions of the sensitive soul are assigned to *both* mind and body. According to Baker and Morris, S-predicates (i.e. predicates designating those functions previously assigned to the sensitive soul) are ambiguous for Descartes – they have a rational sense (as when the thinker ‘sees2’ light), and a bodily sense (as when the animal or human body ‘sees1’ light). Thus, the animal is able to partake of those sensitive soul functions belonging to body. So Descartes’s position on animals may not be as different from Aristotle’s as the *béte-machine* doctrine would have us believe.

Nevertheless, I want to argue that a crucial disanalogy between Aristotle and Descartes still remains. Whereas Aristotle’s hylomorphism allows that there is a graded hierarchy of living things with increasingly complex soul-functions, the Cartesian schema is still ultimately dualist. The various soul-functions thus have to be allotted to either mind or matter. On Baker and Morris’s reading, animal (and human bodily) *sentience* is allotted to the body, while *sensation* belongs to the mind. In the next section, I show that one crucial result of the division in allotment is that the Cartesian human thinker cannot have any conception of what it is like to see (animal) light or to feel (animal) pain.

To see why the Cartesian thinker cannot know what it is like to undergo animal pain or animal sensory awareness, let us look first at

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9Baker and Morris’s work is cited in Peter Anstey’s recent paper arguing that the gap between Descartes and Aristotle is not as wide as is commonly represented in Aristotelian secondary literature. (*De Anima* and Descartes: making up Aristotle’s mind*, History of Philosophy Quarterly (2000) 17(3): 237–60).
Principles 1: 53, where Descartes discusses the natures of extended and thinking substance:

Extension in length, breadth, and depth constitutes the nature of corporeal substance; and thought constitutes the nature of the thinking substance. Everything else which can be attributed to body presupposes extension, and is merely a mode of an extended thing; and similarly, whatever we find in the mind is simply one of the various modes of thinking. For example, shape is unintelligible except in an extended thing and motion is unintelligible except as motion in an extended space; while imagination, sensation and will are intelligible only in a thinking thing.

(AT 9B: 25, CSM1: 210–11, emphasis mine)

In the above passage, Descartes points out that shape is ‘unintelligible’, that is, cannot be understood, except in an extended substance, and similarly, sensation cannot be understood except in a thinking substance.

What precisely is Descartes claiming here, in stating that shape is ‘unintelligible’ except as a mode of extended substance or sensation ‘unintelligible’ except as a mode of thinking substance? One might read him weakly as claiming that one can ascribe shape only to extended substance – hence, shape is not to be ascribed to thinking substance. Similarly, sensation can be ascribed only to thinking substance, and not to extended substance. This claim would leave open that one could still appeal to shape in order to understand the nature of some mental mode, or sensation to understand the nature of some material mode. But Descartes could also be read as putting forward in this passage a stronger thesis: in claiming that shape is (wholly) unintelligible except as a mode of extended substance, he is cautioning against any attempt to conceive or understand the modes of thinking substance by reference to shape. Similarly, he is against any attempt to conceive or understand extended modes by reference to mental sensations.

There is good evidence that Descartes’s position is best captured by the stronger thesis. In the Third Replies, Descartes tells Hobbes:

Now there are certain acts that we call ‘corporeal’, such as size, shape, motion…and we use ‘body’ to refer to the substance in which they inhere…There are other acts which we call ‘acts of thought’, such as understanding, willing, imagining, having sensory perceptions, and so on:…and we call the substance in which they inhere a ‘thinking thing’.…Acts of thought have nothing in common with corporeal acts [actus cogitativi nullam cum actibus corporeis habent affinitatem], and thought is…different in kind from extension.

(AT 7: 176, CSM 2: 124)

Descartes stresses here the utter difference between thought and extension. Significantly, he states that ‘acts of thought have nothing in common with corporeal acts’. If one is to conceive a corporeal mode by reference to a
mental mode or vice versa, there must minimally be some commonality or analogy between the two. If there is nothing in common (no ‘affinity’) between the two, it is hard to see how one could conceive one by reference to the other. More specifically, it is hard to see how animal/bodily sentience is to be understood by reference to mental sensations, if the two have ‘nothing in common’.

Descartes’s well-known letter to Elizabeth of 21 May 1643 (hereafter LTE) also bears out the position that one would be unable to conceive animal/bodily sentience by reference to mental sensations:

I consider that there are in us certain primitive notions which are as it were the patterns on the basis of which we form all our other conceptions . . . First, there are the most general – those of being, number, duration etc. – which apply to everything we can conceive. Then, as regards body in particular, we have only the notion of extension, which entails the notions of shape and motion; and as regards the soul on its own, we have only the notion of thought, which includes the perceptions of the intellect and the inclinations of the will. Lastly, as regards the soul and the body together, we have only the notion of their union, on which depends our notion of the soul’s power to move the body, and the body’s power to act on the soul . . . All human knowledge consists solely in clearly distinguishing these notions and attaching each of them only to the things to which it pertains. For if we try to solve a problem by means of a notion that does not pertain to it, we cannot help going wrong. Similarly we go wrong if we try to explain one of these notions by another, for since they are primitive notions, each of them can be understood only through itself.

(AT 3: 665–6, CSMK: 218, emphasis mine)

Descartes’s classification here is more fine-grained than in the Principles, since he maintains that, apart from notions that pertain specifically to body and to the mind, there are also those that pertain specifically to the mind–body union. But once again, Descartes affirms that one should attach the notions ‘only to the things to which [they] pertain’. Thus the notion of extension (which entails notions such as shape and motion) is to be attached only to body; the notion of thought only to the mind, and so on.

Descartes then goes on to add, importantly, that ‘we go wrong if we try to explain one of these notions by another, for since they are primitive notions, each of them can be understood only through itself’ (emphasis mine). The notions of extension, thought and mind–body union ‘can be understood only through themselves’ – that is, as primitive notions, they cannot be understood by reference to any other notions. Thus, one cannot try to understand the notion of extension (and the entailed notions of shape, motion, etc.) by reference to either the notions of thought or of mind–body union.

It is not altogether clear where the Descartes of LTE would locate the notion of sensation – that is, whether he would see it as pertaining to the mind–body union (sensation being that which obtains only where there is a mind–body union) or to the mind alone (sensation being a form of thought).
In either case, however, it is clear that we cannot form a conception of animal/human bodily sentience by reference to the notion of (mental) sensation, for we cannot conceive extension (and its modes) by reference to either the notion of thought or of mind–body union.

Thus, whether we accept Descartes’s stand in LTE to be consistent with or to depart from his stand in the *Principles*, it is quite clear that, in general, Descartes is committed to what I shall call the ‘sensation principle’ (or SP for short): ‘No mode of extension is to be understood or conceived by reference to the sensations of the human (embodied) thinker.’

This being the case, the rational embodied thinker can have no conception of what it’s like to see 1 light and feel 1 pain. We are apt to conceive of animal seeing and pain by reference to our own cognitive seeing or pain – by thinking, as Cottingham suggests, of animal pain as a degraded form of cognitive pain lacking in reflective self-awareness. However, if animal sentience is (as Baker and Morris claim) located in extended matter and is a mode of extension, thinking of animal pain in such terms is blocked in virtue of Descartes’s acceptance of SP. In that case, the embodied thinker cannot know what it is like to see 1 light and feel 1 pain – any more than an angel can know what it is like to see 2 light and feel 2 pain (i.e. to have mental sensations of light and pain).

Baker and Morris accept that, just as the predicate ‘sharp’ means differently when predicated of a knife and a note on a lyre, so the S-predicates have different meanings when predicated of body and mind. They hold that, nevertheless, the two senses of S-predicates enjoy ‘parity of esteem’:

> It would be a serious misunderstanding to claim, for instance, that a dog only goes through the motions of feeling pain or seeing light, or that ‘strictly speaking’ only a person feels pain or sees light. The truth is that a dog really feels 1 pain or sees 1 light, but that it cannot feel 2 pain or see 2 light – just as the knife is really sharp in one sense, and cannot be sharp in the other.10

However, given that we as thinkers are unable to conceive what an animal/human bodily sentient state like feeling 1 pain would be like, there is a worry as to whether we can ascribe any sort of sense to such bodily S-predicates as ‘feel 1 pain’. Baker and Morris hold that the mental sensation of pain is a judgment that one feels 1 pain, but can one make this judgement without being able to conceive what it is like to feel 1 pain?

Can one meaningfully employ an S-predicate in the animal/human bodily sense when one cannot conceive what it is like to be sentient in this sense? This section and the next will examine possible ways in which such

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10 Baker and Morris, DD, p. 82.
predicates may be meaningfully applied, given that SP holds true. This section looks at a possible solution that Baker and Morris might give, on the basis of their other claims concerning such predicates. Other possible solutions are examined in the next section. It will be argued that none is tenable.

In *Descartes’s Dualism*, Baker and Morris maintain that Descartes held there are behavioural criteria for applying such predicates. For example, we can apply the predicate ‘feels1 pain’ to a human body or animal if we see that body or animal (say) jerking its foot away from the source of injury or limping. In that case, even though we have no conception of what it is to feel1 pain, Baker and Morris might still maintain one can ‘cash out’ such felt1 pain in terms of observable behaviour that conforms to certain criteria.

One difficulty with this position is that it is not entirely clear from Baker and Morris’s account how these behavioural criteria are to relate to the mode of sentience in question. That is, it is unclear whether:

1. these behavioural criteria *identify* cases of animal/human pain (where such pain is a state independent of these behaviours); or
2. these behavioural criteria *define* animal/human bodily pain.

As I shall show, there are difficulties attached to adopting either construal.

Suppose that Baker and Morris’s claim is (1). Consider what happens when we attribute modes of animal/human bodily sentience to animals/human bodies on the basis of behavioural criteria. When an animal/human body displays the behaviour of withdrawing its foot from a nail, we attribute the mode ‘feels1 pain’ to it. When a sheep displays the behaviour of turning and running in the vicinity of a wolf, we attribute the mode ‘feels1 fear’ to it. But when we make such attributions of ‘fear’ and ‘pain’, we are doing it on the basis of our own cognitive mental experiences in the same kinds of circumstances. That is, because I qua thinker recognize that I am having a mental sensation of pain when I step on a nail that I attribute to the animal/human body a mode of feeling1 pain in the same circumstances.11 Again, it is because I feel2 fear in the presence of a predator that I attribute to the sheep a bodily mode of feeling1 fear in the same circumstances.

Making such attributions would be acceptable only if it is the case that we think animal pain and fear are simulacra of mental pain and fear (e.g. if we were to think of animal fear and pain as degraded forms of human pain and fear). However, on Baker and Morris’s account, animal sentience is

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11 Note that this attribution does not entail that I accept that my sensation of pain is *always* accompanied by a mode of feeling1 pain in my body, or vice versa. As Baker and Morris point out, it is possible for one to occur without the other. The point here is rather that our usual attributions of pain and fear to human bodies/animals are guided by our mental experiences in the same circumstances (in violation of SP).
specifically stated to be a bodily mode. Thus, given Descartes’s acceptance of SP, one cannot conceive animal sentience by reference to mental modes. It would be misleading to assign ‘feel1 pain’ to the animal/body that has stepped on a nail, and ‘feel1 fear’ to a sheep in the vicinity of a wolf. In carving up the various animal/bodily sentient responses in this way, we are implicitly guided by our own framework of sensational responses in relevantly similar circumstances. But, given Descartes’s acceptance of SP, animal/bodily sentient responses are precisely not to be understood or conceived in terms of such a framework.

The point made here goes quite deep. While Nagel (in his classic ‘What is it Like to be a Bat?’) points out that we are unable to have the subjective experiences that a bat has, he nevertheless states that ‘we may ascribe general types of experience on the basis of the animal’s structure and behaviour’. Thus, ‘we describe bat sonar as a form of three dimensional forward perception; we believe that bats feel some versions of pain, fear [and] hunger’. But we ascribe such types of experience to the bat on the basis that they are versions of the pain, fear, hunger, etc. that we subjectively undergo. If bat sentience is a mode of body, we would, in Descartes’s view, be unable to make such ascriptions on the basis of our subjective experiences. We could not ascribe versions of experience to the bat that would correspond to our mental experiences in relevantly similar circumstances because of SP. Bat-behaviour then becomes wholly incomprehensible, for one is unable to ascribe to it (some form of) hunger when it heads for a fruit on a tree, or (some form of) fear when it flies away from a predator.

Let us now turn to (2), that is, the position that bodily S-predicates are defined in terms of a set of behavioural criteria. Towards the end of their explication of the distinction between rational and bodily sentience in Descartes’s Dualism, Baker and Morris address the following objection to their account:

You might feel that the sense in which machines can be said to ‘see’ or ‘feel pain’ is, after all, an impoverished sense. To say of a ‘machine’ (say, an animal or human body) that it ‘feels pain’ seems to be just to say that it reacts to injury of, say, its foot by pulling its foot away from the source of the injury. . . So-called ‘sentient’ machines merely ‘go through the motions’ of what is called ‘feeling pain’: where are the ‘subjective experiences’ and ‘raw feels’? How can we purport to be talking about sentience if there’s no ‘What’s it like’?

Baker and Morris offer a brief twofold reply to this point. First, such ‘subjective experiences’ of pain etc. are thought of as ineffable and inexpressible. There is no room in Descartes’s framework for such

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13Ibid., pp. 169–70.
inexpressible forms of thinking, whether in thoughtless brutes or human beings. Second, we should not think of such ‘sensitivity’ or ‘sentience’ as mere sensitivity or sentience. Descartes and his contemporaries would have linked such sensitivity to health. Thus, such sentience should be understood in the context of its benefit for animal/human bodily well-being.

In outlining the objection that Cartesian animal sentience is ‘impoverished’, Baker and Morris apparently define animal sentience in terms of behavioural criteria – for they state that ‘to say of [an animal or human body] that it ‘feels pain’ seems to be just to say that it reacts to injury of, say, its foot by pulling its foot away from the source of the injury’. It is unclear whether they accept this characterization as an accurate account of Descartes’s position: in their reply, they do not refute specifically this characterization of Cartesian animal sentience, relying on other considerations to answer the charge of impoverishment. However, if they do accept this characterization as accurately representing Descartes’s views, certain difficulties would ensue.

To begin with, if bodily S-predicates are defined in terms of behavioural criteria, then it is hard to make sense of Baker and Morris’s earlier claim (see p.13) that ‘the dog really feels1 pain’ and that it does not merely ‘go through the motions’ of such pain. If ‘feeling,1 pain’ for Descartes is no more than a set of pain-behaviours, then it is difficult to see how animal sentience comes at all into the Cartesian picture. This would vitiate much of the impact to their claim that there are two senses of feeling pain – rational and animal. If the animal pain is identified with a series of pain behaviours, it would leave Baker and Morris’s Descartes pretty close to holding the doctrine of the bête-machine that mechanically responds to various stimuli by effecting certain behavioural responses.

Baker and Morris would also still be open to the charge of illicitly transposing mental concepts to matter. Why do we define the predicate ‘feels1 pain’ in terms of bodily movement away from the source of injury? Why do we not instead define the predicate ‘feels1 joy’ or even ‘muddydoo’ in these terms? The answer must be that our cognitive mental experiences in the same set of circumstances are guiding our assignation of a set of behavioural criteria to a particular predicate. Our mental recognition of a sensation of pain is (usually) accompanied by bodily behaviours such as the jerk of the foot or limping. As a result, we use the predicate ‘feel1 pain’ to designate this set of behaviours. But why should we carve up the various behaviours exhibited by an animal in terms of a set of ‘pain’-behaviours, ‘fear’-behaviours or ‘hunger’-behaviours? In doing so, we are imposing a framework shaped by our own mental modes onto what is no more than a mechanical system of stimulus and response, and thus understanding such a system in terms of our own mental modes. Given Descartes’s adherence to SP, he must surely reject the attempt to do this.
Attempts to develop meaningful animal/human bodily S-predicates via an appeal to behavioural criteria mentioned by Baker and Morris are unsuccessful, in virtue of SP. But are there other means by which the Cartesian thinker could come to meaningfully predicate ‘see1 light’ or ‘feel1 pain’ of an animal/human body?

As mentioned earlier, the thinker cannot conceive modes of bodily sentience by reference to mental sensations. Our notions of see2 light and feel2 pain are derived from our mental apprehensions of light, pain, etc., and are applicable only to human mental states. But could we not conceive of modes of bodily sentience by reference to other modes of extension? An examination of how we come to conceive or recognize other extended modes might yield an account of how we might form a conception of see1 light, etc., which does not make reference to human mental sensations.

Apart from the modes of sentience claimed by Baker and Morris to belong to extension, Descartes includes among the modes of extension length, breadth and depth, shape, position and motion – i.e. those features commonly thought to comprise the primary qualities. It is generally accepted that Descartes admits two ways in which we can apprehend such qualities. First, we apprehend the various primary qualities of actual bodies. (For example, I apprehend that the stick on the grass is 3 ft long.) Descartes indicates that such apprehensions involve acts of rational calculation by the thinker, made on the basis of various perceptions of colour, sound, etc. The latter, in turn, come about in accord with various physical changes that occur in the human brain. Descartes holds such perceptions of length, breadth, etc. to be confused and obscure, as they may turn out to be mistaken (AT 7: 80, CSM 2: 55). Second, we can apprehend the primary qualities abstractly or generally. Commentators differ over whether such apprehension is accomplished solely by the intellect or intellect in conjunction with imagination.

14I omit to consider the concept of extended substance in this context. According to Descartes, our concept of a substance is parasitic upon our apprehension of its modes, in so far as we first apprehend or conceive the modes, then infer the presence of a substance in which they inhere (see, for example, AT 7: 161, CSM 2: 114). Thus, in so far as (as I shall show) we cannot conceive bodily sentient modes by reference to other modes of extension, we are even more unlikely to do so by reference to extended substance.

15I have argued that Descartes thinks there is a third way in which we can apprehend these qualities (‘Descartes’s Two Proofs of the External World’, Australasian Journal of Philosophy (2002) 80: 487–501). However, this third kind of apprehension is achieved on the basis of the two earlier kinds of apprehension.

16See, for example, AT 6: 81–147; CSM 1, 152–75; AT 7: 437ff, CSM 2: 294ff.

But they agree that they are clear and distinct, insofar as the primary qualities in question are apprehended as conforming to mathematical laws.

Given this account of how we apprehend the primary qualities, note first that the human thinker cannot come to apprehend bodily sentient modes by means similar to those by which she comes to apprehend the primary qualities. To begin with, as Descartes points out in *Principles* 1: 71, all human thinkers (with the requisite bodily sensory equipment) come to have a phenomenological awareness of the length, shape, etc. of actual bodies in their ‘early childhood’ (AT 8A: 35, CSM 1: 218). In the Sixth Replies, he writes that we have from ‘our earliest years’ made the rational calculations that result in such judgments concerning the primary qualities (AT 7: 437; CSM 2: 295). In contrast, the human thinker, even in her adult years, never achieves the same phenomenological awareness of the mode of seeing light that she early on achieves with length, etc., in spite of constant interaction with her physical environment. Moreover, there is no evident procedure, comparable to the procedures of rational calculation by which we arrive at our perceptions of length, etc., which could yield an awareness of the mode of seeing light.

Matters become even worse if we consider the clear and distinct apprehensions of the primary qualities in the intellect and/or imagination. Descartes makes clear that these perceptions are clear and distinct in so far as the qualities involved are recognized as metrical and conforming to geometrical (and other mathematical) laws. In contrast, since we have no apprehension of seeing light, we do not know whether this state is metrical or conforms to such laws. Thus we cannot achieve a clear and distinct perception of it in a way that we can the other modes of extension comprised by the primary qualities.

It is evident that we do not recognize seeing light through means similar to those by which we recognize the primary qualities. We also cannot form a conception of such states by reference to the primary qualities. To begin with, suppose that we define ‘see light’ as, say, a specific set of local motions in the human or animal body. Such a move would vitiate Baker and Morris’s claim that the animal really sees light. Moreover, our initial determinations of the local motions that comprise seeing light would likely be accomplished by reference to the local motions that occur when the human thinker sees light. This would be illicit given SP, for (once again) one would be imposing a framework derived from our mental modes onto an extended mechanical system.

Suppose, then, that we hold that seeing light is a sentient state over and above the local motions in question, and define this state as that which occurs when the relevant local motions take place. Here again, our method of picking out the local motions that correspond to seeing light would likely refer to those local motions that occur when we (as thinkers) see light – a procedure that is of course illicit in virtue of SP. And if no such reference is
made at all to the thinker’s mode of seeing₂ light, then a less misleading
predicate than ‘see₁ light’ would surely be in order.

In sum, we cannot conceive animal/human bodily sentient modes by
reference to mental modes or other modes of extension. Is there any means
at all by which we could legitimately conceive bodily modes of sentience? I
end this section by looking at a general Cartesian account of the origin of
human concepts, and argue that this account also indicates that we have no
means by which we can legitimately conceive ‘seeing₁ light’ and the like.

In the Third Meditation and elsewhere, Descartes indicates three possible
origins for the ideas he apprehends – they may be innate, invented or
‘adventitious’ (i.e. they come from things located outside him), (see, for
example, AT 7: 37–8, CSM 2: 26). It is unlikely that the ideas of modes such
as seeing₁ light are either adventitious or innate in origin. The most likely
candidates for inclusion among adventitious ideas would be the apprehen-
sions of the length, shape, etc. of actual bodies mentioned earlier.¹⁸ Such
adventitious ideas are formed in accord with primary-quality changes in the
thinker’s brain initiated by objects in the external world, and under the right
conditions, they provide accurate information on the properties of these
objects. However, as argued earlier, we do not apprehend modes like seeing₁
light through the same (or similar) procedures, and thus our ideas of such
modes would not be adventitious in origin.

Descartes includes among innate ideas the (clear and distinct) ideas of
God, truth and geometrical figures apprehended in the intellect/imagination.
Descartes accepts that the object of an innate idea has a determinate nature,
and that continued examination of the idea reveals ‘unforeseen and unwilled
consequences’ concerning this object (e.g. examination of one’s idea of a
triangle enables one to demonstrate properties of a triangle that one ‘did not
expect it to have and which are not within [one’s] power to change’).¹⁹ This
being so, our ideas of modes such as seeing₁ light cannot be innate. As we
have seen, we could form such ideas by reference to bodily behavioural
criteria or local motions in matter; or more likely, we could (illicitly) view
seeing₁ light as a degraded form of seeing₂ light; but the very indeterminacy
in the object of the idea (and the consequent failure to yield the requisite
‘unforeseen and unwilled’ consequences), rules out that the idea is innate.

¹⁸Descartes’s stated examples of adventitious ideas include the idea of the sun, as well as that of
the town of Alkmaar. However, as mentioned in note 14, Descartes clearly holds that our
apprehensions in the first instance are of modes or properties. Thus, our sensory ‘idea’ of a
physical object like the sun is constituted by, or perhaps derived from, adventitious ideas of the
primary qualities of that object.

¹⁹Walter Edelberg, ‘The Fifth Meditation’, Philosophical Review (1990) 99(4): 496–7 (see, also,
Margaret Wilson, ‘True and Immutable Natures’, in Ideas and Mechanism, op. cit.). Note also
that Descartes sometimes uses ‘innate’ in a broader sense, under which even the perceptions of
primary qualities of actual bodies would qualify as innate (see, for example, AT 8B: 359, CSM
2: 304).
Finally, let us look at invented ideas. Such ideas are constructed (at will) by putting together elements found in innate and/or adventitious ideas, and Descartes’s examples of such ideas include those of sirens and hippogriffs. Given the presence of this class of ideas within the Cartesian schema, one promising suggestion is that the thinker could come up with an invented idea by which she may – however inadequately – conceive of or refer to modes of bodily sentience such as seeing\textsubscript{1} light.

However, it is highly unlikely that the thinker can legitimately put together such an idea. Note that the thinker’s idea of seeing\textsubscript{1} light as a degraded form of seeing\textsubscript{2} light is in fact an invented idea, for it is formed by taking the idea of cognitive pain (or elements of the idea) and adding to that a location in the animal/human body. However, invented ideas of this sort are achieved through appropriating elements that belong specifically to mental modes and conjoining them to bodily modes. Such procedures are ruled out by Descartes’s acceptance of SP. Again, it is hard to conceive of how we could come up with an invented idea of seeing\textsubscript{1} light put together solely from elements drawn from the primary qualities (and which makes no reference to mental modes). Thus, we are unable to form legitimately an invented idea (however inadequate) that could be used to pick out modes such as seeing\textsubscript{1} light.

Cottingham holds that Descartes’s attribution of sensation and feeling to animals cannot be squared with his dualist schema. On his account, Cartesian animal pain is understood by reference to human or rational pain for it is a degraded version of such pain; but the price one pays is that there is nowhere to locate such animal pain in Descartes’s dualist framework. One cannot attribute it to \textit{res cogitans}, as animals do not think, and as such pain is a degraded version of our human mental pain, one cannot (in virtue of Descartes’s acceptance of SP) locate such modes in that utterly different substance, \textit{res extensa}.

In contrast, Baker and Morris’s Descartes is (apparently) able to fit animal feelings and sentience neatly into his dualism, for such feelings and sentience are modes of \textit{res extensa}. However, as we have seen, there is also a price to be paid here. The price is that such feelings and sentience cannot be understood by reference to the modes of \textit{res cogitans}. We thus have no access to such animal sentience, no means by which we can understand what it could be.

The difficulty outlined here is not confined to Baker and Morris’s account. Arguably, it would apply to anyone who wishes to claim that (1) Descartes attributes sentience or feeling to animals, and (2) such an attribution can be coherently accommodated within Descartes’s dualist framework. As Descartes clearly thinks that animals are not \textit{res cogitans}, any modes
belonging to them must be modes of *res extensa*; but if such sentient modes are modes of *res extensa*, they cannot be understood by reference to the modes of *res cogitans*. Within the context of Descartes’s dualist schema, anyone who wishes to claim that animals are sentient is truly stuck between a rock and a hard place – either we have some understanding of what that sentience is but nowhere to locate it, or we are able to locate it but do not know anything about it at all.\(^{20}\)

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