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Contributi/2

Bayle's 'Rorarius', Leibniz and Animal Souls

Richard Fry

Articolo sottoposto a doppia *blind-review*. Ricevuto il 19/06/2015. Accettato il 17/07/2015

Bayle produces a set of three criteria to evaluate views of non-human animal souls. These criteria arise from Bayle's interaction with the extant Modern views on the topic and are meant to capture features that any successful view will have. Bayle criticizes Leibniz's view of animal souls at length for its reliance on the theory of pre-established harmony, entering into a long exchange with Leibniz on the topic, but Bayle never explicitly applies his criteria. This leads some (including Leibniz) to conclude that Bayle thinks Leibniz's view satisfies the criteria. I argue in this paper that Leibniz's view properly satisfies at most one of Bayle three criteria, but that this examination shows a deep tension between two of those criteria.

1. Introduction

There has been no sustained examination of G.W. Leibniz's view of animal souls in the *New System of Nature* employing systematic criteria contemporary to him¹. Pierre Bayle offers just such a set of criteria. Bayle never applies his criteria to Leibniz's view, though, and as a result some have thought Bayle took the view strong enough to meet the criteria. Explicitly applying them shows that Leibniz's view is not as strong as it initially appears.

Bayle's criteria arise in the article 'Rorarius' of his *Historical and Critical Dictionary*, wherein Bayle discusses non-human animals. Among Moderns, Bayle sees the disputes about animal souls as primarily arising between Scholastics and Cartesians. From the arguments given by the two camps, Bayle derives three criteria for assessing views on non-human animals. These criteria arise from his sustained, thoughtful interaction with the available views and represent his synthesis of philosophical thinking, religious doctrine, empirical evidence and common sense.

¹Though there have been thoughtful examinations of what place there can be for non-human animals in Leibniz's ultimate metaphysics (e.g., G. Hartz, *Leibniz's Final System*, New York, 2007) and Leibniz's relationship to biology generally (J. E. H. Smith, *Divine Machines: Leibniz and the Sciences of Life*, Princeton 2011).

Leibniz's view satisfies at most one of the three criteria. The weakness of Leibniz's view is obscured by the fact that, while Bayle discusses Leibniz's view at length in 'Rorarius,' Bayle focuses on rejecting Leibniz's view of pre-established harmony between body and soul². One could easily take the fact that these are Bayle's only stated criticisms to suggest that he was otherwise pleased by Leibniz's view. This is how Leibniz understands Bayle, and contemporary interpreters follow him in this understanding³.

So, while Leibniz respects Bayle as a formidable opponent — his *Theodicy* is structured in large part as a point-by-point refutation of Bayle⁴ and Leibniz takes 'Rorarius' seriously, citing Bayle's keen criticisms of pre-established harmony as helping him sharpen both the content and the presentation of that view⁵ — even he does not see the depth of critique incipient in Bayle's criteria⁶.

Because Bayle sees himself as a reporter and not an advocate of any particular view, and because his perspective is encyclopedic, to satisfy his criteria would be to satisfy all participants in the discussion about the nature and character of non-human animal souls⁷. Leibniz and his commentators may well think that Leibniz's view does — or should — satisfy everyone in this way, but this interpretation is only viable because Bayle's criteria have never been explicitly applied to the view.

I argue here that Leibniz (and others) are wrong to think that his view satisfies Bayle's criteria, as it satisfies at most one of the three. This is significant because it shows Leibniz's view does not have all the features the religious

² Bayle objects specifically to the doctrine of spontaneity (D. Rutherford, 'Bayle's Dog and the Dynamics of the Soul,' in *Leibniz et Bayle: Confrontation et Dialogue*, edited by C. Leduc, P. Rateau, J. Solère, Stuttgart 2015), but Bayle and Leibniz talk of the exchange as being about pre-established harmony more generally, so I shall follow them here.

³ See Section III below and D. Des Chene, 'Animal as Category: Bayle's "Rorarius,"' in *The Problem of Animal Generation in Early Modern Philosophy*, edited by J.H. Smith, Cambridge 2006.

⁴ Bayle's writing occasioned Leibniz to write the *Theodicy* and much as been written about Bayle's influence on that work; see J. Israel, 'Leibniz's *Theodicy* as a Critique of Spinoza and Bayle — and Blueprint for the Philosophy Wars of the 18th Century,' C. Mercer, *Prefacing the Theodicy*, and K. Irwin, *Which "Reason"? Bayle on the Intractability of Evil*, all in the generally useful *New Essays on Leibniz's Theodicy* edited by L. M. Jorgensen and S. Newlands, Oxford 2014.

⁵ For Leibniz's praise of Bayle in particular, see G.W. Leibniz, *Clarification of the Difficulties Mr. Bayle has Found in the New System of the Union of Soul and Body*, in *Philosophical Papers and Letters* edited by L. E. Loemker, Dordrecht 1989, esp. pp. 492 and G.W. Leibniz, *Reply to the Thoughts on the System of Pre-Established Harmony contained in the Second Edition of Mr. Bayle's Critical Dictionary, Article Rorarius*, in *Philosophical Papers and Letters*, cit. esp. pp. 574.

⁶ Chronologically, the exchange on pre-established harmony consists of Bayle's *Dictionary* article 'Rorarius' Remark H, pp. Leibniz's response cited above, 'Rorarius' Remark L, and Leibniz's further response (also cited above). Comparatively little has been written about this exchange, but T. Ryan, *Pierre Bayle's Cartesian Metaphysics: Rediscovering Early Modern Philosophy*, New York 2009 and Rutherford (*Bayle's Dog and the Dynamics of the Soul*, cit.) treat the issues related to pre-established harmony at length.

⁷ For Bayle as reporter, see J. R. Maia Neto, *Bayle's Academic Skepticism*, in *Everything Connects: in Conference with Richard Popkin*, edited by J. E. Force and D. S. Katz, Leiden 1998 and J. R. Maia Neto, *Academic Skepticism in Early Modern Philosophy*, in «Journal of the History of Ideas» LVIII/2, (1997), pp. 199-220.

thinking of the time, common sense, and our philosophical reflections would want for a view. This may not be a problem for Leibniz in the end, though, as my examination also suggests that the second and third criteria as formulated by Bayle are ultimately mutually unsatisfiable⁸.

2. Bayle on Moderns: the Genesis of his Criteria

Bayle primarily address the Scholastic and Cartesian views on animal souls⁹. These groups agree that only humans are capable of rational thought but differ radically with respect to non-human animals. Scholastics, following Aristotle, take non-human animals to have only sensitive souls: they are thus capable of perception and memory but not reason. Cartesians, following Descartes, take non-human animals to be mere machines, that is, to have no mind (or soul) at all. Bayle thinks each of these positions is ultimately untenable in light of the critiques issued by the other.

In outline, Bayle, adapting the Scholastic reasoning, argues that the Cartesian view is untenable because it cannot explain the cleverness of non-human animals. If the Cartesian position is to be tenable, it must be able to account for the behavior we observe in non-human animals. In particular, Bayle claims, it must explain those extraordinary instances of sagacity and cleverness we see in them¹⁰.

Because these behaviors so closely resemble human reasoning behaviors, the Cartesian is put into a dilemma: either he will succeed in giving a mechanical explanation of non-human animal behavior, eschewing appeals to minds and reason, or not. If the Cartesian succeeds, the same explanation will be available for human reasoning behavior, *contra* the fundamental tenant of Cartesianism that only human animals have minds. If he fails to account for similar behaviors

⁸ Citations to Bayle's *Dictionary* will be given in reference to the canonical English translation from 1709, reprinted in 1737: P. Bayle, 'Rorarius,' in *Historical And Critical Dictionary*, edited and translated by P. Desmaizeaux, London 1737. There is reason to think Bayle authorized this translation by his friend Desmaizeaux and the text in it closely matches Bayle's original (unlike the other, unauthorized, and greatly enlarged editions made available in England in the period.) The Popkin translation (Indianapolis, 1991) is reasonably complete with respect of 'Rorarius,' but does include several passages from Remarks D and F, nor the article 'Pereira' (P. Bayle, 'Pereira,' in *Historical And Critical Dictionary*, edited and translated by P. Desmaizeaux, London 1737). There are no substantive differences, to my eye, in the passages I cite here between the Desmaizeaux and Popkin editions.

⁹ Des Chene (*Animal as Category: Bayle's Rorarius*, cit.) is the only prominent English-language working-through on Bayle's arguments against the Cartesians and Scholastics. My exposition of Bayle's general anti-Scholastic and anti-Cartesian arguments below is indebted to it, though it does, at times, depart from Des Chene's.

¹⁰ E.g., the dog who refrains from eating his master's food though he is hungry, horses that react violently after forced mating with a relative, and dogs that avenge their masters. These examples come from *Rorarius*, cit., Remark B alone; there are many other examples throughout 'Rorarius' and 'Pereira.' Part of what makes Bayle's catalog so important is that — unlike, e.g., Locke (see J. Locke, *An Essay concerning Human Understanding*, edited by P.H. Nidditch, Oxford 1975, II.ix-xi) — he gives us an explicit list of different behaviors that need to be accounted for.

across different groups, this demonstrates the insufficiency of mechanical explanation.

Bayle argues that the Scholastic position that attributes a sensitive but non-rational soul to non-human animals is also problematic. The reasons for this are again dilemmatic: either sensitive souls are capable of great sagacity, in which case the difference between them and purportedly rational souls is *ad hoc*, or they differ greatly, leaving us with no explanation of the sagacious behavior of non-human animals.

This recounting simplifies Bayle's arguments, but it is worth noting that Bayle's full argument turns on the Scholastic claim that souls embedded in matter are incapable of rational thought. It is from this claim that Bayle shows the account to be insufficient¹¹.

In sum, the Scholastics marshal evidence of animal sagacity to show that non-human animals must be closer to humans than the Cartesians allow. Bayle accepts this evidence and uses it to show that it destabilizes the Scholastic position, too. The Scholastics must also find a way to make humans and non-humans close, but not *too* close (else they lose the purported difference in kind of soul).

Bayle synthesizes his argumentation against these views into criteria for any view on non-human animal souls, occasioned by the final Scholastic case study he gives. Father Gabriel Daniel, an French Jesuit historian, posits a 'middle being' between material substance and spiritual substance to explain why animals are capable of some things — but not everything — that humans are. Scholastic restrictions on what matter is capable of, have figured in Bayle's previous assaults, so Daniel's compromise seems a wise one, designed to avoid just these issues while maintaining the core of the Scholastic position: animals have a soul, on Daniel's view, but it is not entirely immaterial, like a human soul.

In response, Bayle makes the clearest statement of what a view of non-human animal souls must do, laying out three *desiderata* for a theory. He finds that Daniel's 'middle being' satisfies none of them:

It remains for me to shew the insufficiency of Father Daniel's hypothesis. I. We want a system, which maintains that the souls of beasts are mortal: but this cannot be proved by supposing a middle being between a body and spirit: for such a being is not extended: it is therefore indivisible; nothing but annihilation can destroy it: diseases, fire, and sword, cannot hurt it; and therefore it is in that respect of the same nature and condition with spirits, and human souls. II. We want a system whereby it may appear that there is a specific difference between the souls of men and those of beasts: but this middle Being does not afford it; for if the soul of a beast, being neither a body nor a spirit, has nevertheless sensations, the soul of man will be able to reason, tho' it be neither body nor spirit, but a middle being between both. It is a more difficult thing for a being destitute of sense to arrive to the perception of a tree, than for a sensitive

¹¹ To complete the argument: if this is the case, then the capacities of the souls posited depend on the organs to which they are attached. But because the kinds of organs a soul is attached to is merely a contingent feature, a human soul similarly situated would have similar capacities. Thus, a distinction in kind is unmotivated. See the discussion below (Section 5) as well.

being to acquire the faculty of reasoning. III. We want a system, that gives an account of the surprising skill of bees, dogs, apes and elephants; and you talk of such souls in beasts, as have only sensations, without thinking and reasoning. If you consider it well, you will be sensible that such a soul is not sufficient to explain the phænomena. Father Daniel confesses it in another place of his book...¹²

Bayle makes three explicit demands here. First, the view must make the souls of non-human animals mortal. Second, it must outline a 'specific difference' between the souls of humans and non-human animals, aside, presumably, from the mortality of the former. Third, a theory must explain the apparent instances of reasoning in non-human animals.

Daniel's 'middle being' fails to show why beast souls should not then be simple (that is, unextended and having no parts), and hence immaterial. If they are immaterial, they cannot be subject to natural generation and corruption, so they would be immortal, failing the first desideratum.

'Middle being' also fails to show how a soul that is sensitive could fail to be rational, because it does not show why those different types of soul should have some of the same capacities — the more difficult ones, on Bayle's view¹³ — but not all. Finally, 'middle being' does not, hence, explain the actions of beasts because it fails to show how a being that lacked reason could be as clever as beasts in fact are.

3. Leibniz, Generally

Bayle assesses Leibniz's view rather more favorably, praising Leibniz as providing at least one satisfactory answer to his objections. He then complains that Leibniz's view is wed to a highly dubious metaphysical system. Bayle's evaluation is based entirely on Leibniz's *New System of Nature*: Bayle explicitly cites the *New System*, summarizes it fairly, and Leibniz's subsequent response does not reformulate any of these points. Thus, both thinkers agree that the *New System* presents the view under discussion. While Leibniz revised his views later, the view under discussion is exclusively the one presented in Leibniz's *New System*.

Bayle sees Leibniz's view as consisting in several theses, as he summarizes it in 'Rorarius', Remark H. First, Leibniz claims that animals are always organized: they are not matter that comes to be organized. Second, because matter alone cannot be unified into a single subject, non-human animals must have a «form, which is simple, indivisible, and only one being» (Bayle's gloss). Third, Leibniz holds that this form of organization is never separated from the animal to which it is wed, so there cannot be generation or death in nature. Leibniz sets human souls aside from this, implying that they are not necessarily caught up with matter.

¹² P. Bayle, 'Rorarius', Remak G.

¹³ *Ibid.*, Remak F.

Bayle concludes that Leibniz's «hypothesis frees us from part of the difficulties»¹⁴. Some interpreters follow Leibniz himself in taking Bayle to be entirely satisfied that Leibniz's view resolves the problems raised for other views. As Des Chene puts it, «pre-established harmony, despite its benefits, is too much to swallow» for Bayle¹⁵. Leibniz himself claims that Bayle is satisfied with the view on animal souls. Leibniz says of Bayle:

He does not reject what I have said about the conservation of the soul or even that of the animal, but he still does not seem satisfied with the way I have tried to explain the union and intercourse of the soul and the body...¹⁶

The rest of Bayle and Leibniz's exchange focuses exclusively on pre-established harmony. This is appropriate, given the emphasis Bayle places on it in his original comments, but in no way rules out other, unexplicated criticisms. This interpretation, however, takes it that the only objections Bayle has to the view are the expressly noted objections that target pre-established harmony¹⁷.

In general, this reading of Bayle seems to overstate how pleased Bayle should have been with Leibniz's view. In particular, the notion that Bayle should have only objected to pre-established harmony is false. Bayle's detestation of pre-established harmony does not entail that Bayle should not reject Leibniz's view of non-human animal minds/souls for other reasons. Note that Bayle says only that Leibniz's hypothesis «frees us from *part* of the difficulties» (emphasis added), and that Bayle's immediate move is to praise the system for what it gets right, before criticizing pre-established harmony. None of this suggests that Leibniz's system is a perfect account of non-human animal souls, or that Bayle thought it entirely satisfactory considered independently of pre-established harmony. Nor should he, as it fails at least two of his criteria.

4. Leibniz and the First Criterion (Mortal Souls)

Bayle's first criterion is that an account of non-human animal souls should make the souls of non-human animals mortal. It should have been apparent to Bayle that Leibniz's view fails to meet this criterion because it explicitly insists that the souls of beasts are eternal.

Leibniz's reasoning, in outline, rests on the claims that non-human animals constitute real unities and that real unities cannot be material¹⁸. In order to

¹⁴ *Ibid.*, Remark H, p. 909.

¹⁵ Des Chene, *Animal as Category: Bayle's Rorarius*, cit., p. 218

¹⁶ G.W. Leibniz, *Clarification of the Difficulties Mr. Bayle has Found in the New System of the Union of Soul and Body*, cit., p. 492

¹⁷ T. Ryan, *Pierre Bayle's Cartesian Metaphysics*, cit., and D. Rutherford, *Bayle's Dog*, cit., both treat the exchange on pre-established harmony at length but do not address whether Bayle was satisfied by the rest of Leibniz's view. Whether this is because they, like Des Chene, take Bayle to be satisfied or because that topic is not germane to their work is not clear.

¹⁸ All quotations from the *New System* are from G. W. Leibniz, *A New System of Nature*, in *Philosophical Essays*, edited and translated by R. Ariew and D. Garber, Indianapolis 1989. G.

constitute true unities, they must be indivisible¹⁹. Because they are indivisible, they are not subject to natural generation or corruption, that is, coming together or coming apart. Because generation and corruption are the only ways in nature of coming to be or ceasing to be, it must be that non-human animal souls do not arise from generation (or dissolve in corruption) but instead can only be subject to Godly creation and annihilation²⁰. Consequently, they have always existed²¹.

Bayle demands that the souls of beasts be mortal; Leibniz insists that they are immortal. So Leibniz's view does not satisfy this first criterion. Why, then, does Bayle praise Leibniz? It is because Leibniz circumvents the criterion; his view does not bring about the unacceptable consequences that led Bayle to reject immortal souls for beasts. Bayle argues that if we extend the doctrine of the immortality of the soul to beasts

...into what an abyss do we fall? What shall we do with so many immortal souls? Will there be for them also an Heaven and a Hell? Will they go from one body to another? Will they be annihilated as the beasts die? Will God create continually an infinite number of spirits, to plunge them again so soon into nothing? How many insects are there which only live a few days? Let us not imagine that it is sufficient to create souls from the beasts which we do know, those that we do not know are far the greater number. The microscopes discover them to us by the thousands in a single drop of liquor. Many more would be discovered if we had more perfect microscopes. And let no man say that insects are only machines; for one might better explain by this hypothesis the actions of dogs than the actions of pismires and bees²².

The main argument here is dilemmatic: if non-human animal souls were immortal, either they would be preserved upon bodily death or they would not.

If they are preserved, this generates problems with the number and character of souls: not only would there be too many, as noted above, but they either would be apt to reward and punishment or would transmigrate from body to body. Both consequences are unacceptable, to Bayle, so this disjunct is unacceptable.²³

The other disjunct—that beasts' souls are annihilated at death—is even more hideous. Bayle says that if

W. Leibniz, *New System*, cit., p. 139: «I perceived that it is impossible to find *the principles of a true unity* in matter alone».

¹⁹ «I saw that these forms and souls must be indivisible, as our mind is» (*NS*, p.139).

²⁰ «For, since every *[[simple]] substance* which has a true unity can begin and end only by miracle, it follows that they can begin only by creation and end only by annihilation» (*NS*, p. 140). In the Ariew and Garber translation, double square brackets indicate Leibniz's own later additions.

²¹ «The forms constitutive of substances must have been created together with the world, and must always subsist» (*NS*, p. 140).

²² P. Bayle, *Rorarius*, Remark E, p. 906.

²³ The substantive reasoning for this part of the argument comes from Remark C. If beasts were apt to reward and punishment, they would have to be rational, which this view denies (p. 902). If they were preserved but not apt to reward and punishment, they must be re-incorporated (because they are material souls). This later line of reasoning is evident from Bayle's response to Leibniz's view in Remark H (p. 910).

these souls are annihilated, when beasts die: where is then the constancy of GOD? He creates souls, and soon annihilates them. He does not deal so with matter: he never destroys it. He therefore preserves the less perfect substances, and destroys the more perfect. Is this the part of a wise agent²⁴?

A God that would create durable, immortal souls that existed for only a finite amount of time, only to annihilate them upon some change in matter — which God does not annihilate — would not be a wise and just God. Any view that entails that immaterial souls are destroyed must thus be false.

Leibniz's view avoids these consequences by preserving the beast's form attached to its body. On Leibniz's view, non-human animal souls are not annihilated with the beast's (seeming) death, nor do they transmigrate. This is because the souls of beasts are always in some organized parcel of matter, though that parcel may be very minute in comparison to its entire mature body (*NS*, 140-141). Bayle praises Leibniz, noting that, were this not the case, ovens would play a great role in the life of souls. Ovens that incubate eggs would have the power to bring souls into being by creating the conditions for a material body to come about. Ovens could also annihilate souls, too, as «many sorts of animals may be destroyed; if they are put in an oven a little too hot»²⁵. If souls existed only when gross bodies existed, ovens would have enormous power over souls. But this power should be reserved only to God. Bayle sees that Leibniz's view avoids this issue by making animal souls eternal, along with their minute parcel of matter.

On Leibniz's view, animal souls cannot be brought into being (or destroyed) by any mechanical change, and they do not transmigrate because they are wed to a continuous parcel of matter. So despite the fact that Leibniz's view does not satisfy the criterion *per se*, it solves the same problem. Bayle capitulates the point, saying:

Mr. Leibniz's hypothesis removes all those difficulties for it induces us to believe, 1. That God in the beginning of the world created all the forms of all bodies and consequently the souls of beasts. 2. That those souls have subsisted ever since, being inseparably united to the first organized bodies in which God placed them. This exempts us from the necessity of recurring to the metempsychosis or transmigration of souls, which otherwise we must have done²⁶.

Bayle fully accepts a circumvention of this criterion rather than a satisfaction of it. Bayle treats this *desideratum* not as a criterion *per se* but rather as circumscribing responses to arguments that our intuitions and other philosophical views generate. When assessing the first criterion, Bayle uses it as a guide; its force rests on the argumentation that underwrites it.

²⁴ *Ibid.*, Remark C, p. 902.

²⁵ *Ibid.*, Remark H, p. 909.

²⁶ *Ibid.*

5. Leibniz and the Second Criterion (A Specific Difference)

Using these same evaluative standards with the second criterion produces a different result: Leibniz's view nominally satisfies the second criterion, but it does not answer the arguments that generated it. If Bayle uses the same evaluative standards for the first and second criteria, Leibniz will fail at least one of them.

Bayle's second criterion demands a 'specific difference' between the souls of humans and beasts, that is, it must make humans and non-human animals different kinds of thing. This difference cannot be given in terms of rationality: simply identifying only one group as rational is not sufficient, as the non-rationality of beasts is to be proved. Bayle's criticism of Daniel's 'middle being' illustrates this: while 'middle being' that is neither fully corporeal or spiritual would put a specific difference between the two, it fails to establish the difference in rationality that it seeks on the basis of this supposed difference in substratum.

Leibniz thus cannot merely note a difference in reasoning capability. Rather, if there is to be a difference in rationality, some *other* specific difference must be identified between the two sorts of souls. Leibniz's system answers that requirement directly: non-human animal souls are *always* wedded to matter. Unlike human souls, non-human animals always have a body, whether that body's organs are enfolded or expanded, enmeshed in a larger system of matter or a very minute one.

Human souls, by contrast, constitute minds. Of minds, Leibniz says:

We must not indiscriminately confuse minds or rational souls [with other forms or souls], minds being like little gods in comparison with them, made in the image of God, and having in them some ray of the light of divinity. That is why God governs minds as a prince governs his subjects, whereas he disposes of other substances as an engineer handles his machines. Thus minds have particular laws, which place them above the upheavals in matter²⁷.

And because they follow these 'much higher laws' than the physical laws which govern matter (and thus the souls that are enmeshed in matter), minds

are exempt from anything that might make them lose that quality of being citizens of the society of minds; God has provided so well that no changes of matter can make them lose the moral qualities of their personhood²⁸.

Human souls — that is, minds — do not depend on matter the same way that non-human animal souls do for Leibniz. This is necessary for minds to be always subject to God's moral laws that ensure that the world is «adjusted for the happiness of the good and the punishment of the wicked»²⁹.

The argument turns on the claim that humans must always be subject to reward and punishment. As such, they must always maintain the same

²⁷ G. W. Leibniz, *New System*, cit., p. 140.

²⁸ *Ibid.*, p. 141.

²⁹ *Ibid.*, p. 140.

capacities (i.e., rationality, will, knowledge of the good, *etc.*). Because souls that consist of a certain form organizing matter depend on the state of their organs for their capacities, human souls must not be a certain form organizing matter. Thus human souls must be different in kind from non-human animal souls. The ultimate difference between humans and non-human animals is that only humans are subject to moral law. From this difference, Leibniz derives a difference in how their souls relate to matter.

Leibniz does identify a difference in kind that goes beyond the seemingly *ad hoc* distinctions Bayle identified the Scholastics as propounding. Because one sort of soul must always be wedded to matter and the other cannot be constituted in this way, they are fundamentally different kinds of thing.

Bayle should object that, for Leibniz, the predicates 'subject to moral law' and 'rational' are too intimately related to establish this difference in kind. Leibniz argues from the former to the latter, but the opposite entailment should hold for Leibniz as well, given his characterization of reason as entailing certain critical, interrogative capacities³⁰. Being rational should make one subject to moral law. Saying a group is (or is not) subject to moral law is tantamount to saying that it is (or is not) rational. The two predicates are extensionally equivalent, then, and as Bayle protests drawing the distinction in the latter terms, he should protest drawing the distinction in the former terms, as well.

One might think that problems arise for Leibniz only on the stronger claim that the two categories are necessarily equivalent. To determine if this is the case, consider if some evidence could establish rationality independently of any evidence that established moral status. If some evidence could do this, it would open space between rationality and being subject to moral law. Religious evidence that humans are subject to divine governance and, crucially, that non-human animals are not, might suffice. But this evidence cannot be drawn from or based in any way on observations of or reasoning about the similarities and differences between humans and non-human animals, as this begs the question.

There is disagreement, however, about what Christian theology teaches on this question. What matters most here is that Bayle himself seems to think that religious authorities disagree about the nature and status of animals. Thus an appeal to religious authority will not provide Bayle with the clear evidence needed in the absence of considerations of rationality. It is also not clear that religious claims that humans and non-human animals differ in more than just their reasoning ability are not ultimately based on comparisons of reasoning ability³¹.

³⁰ Those necessary to determine the 'reasons for things,' as he puts it in the *New Essays* (II.xi). Those would seem to be part-and-parcel of moral accountability.

³¹ For evidence of disagreement between religious authorities, see Bayle's disputation of Malbranche's Remarks about Augustine in P. Bayle, *Rorarius*, Remark C. Similarly, Bayle's arguments against using freedom of the will to distinguish man from beast at the end of 'Rorarius,' Remark F follow the general form of the argument I propose here. Note also Europe's history of putting animals on both ecclesiastical and juridical trial; see, for instance, W. Ewald, *Comparative Jurisprudence (I): What Was It Like to Try a Rat?*, in «University of Pennsylvania Law Review» CXLIII, 1995, pp. 1889-2149, particularly section I.

Leibniz does not appeal to any such religious evidence in the *New System of Nature*, so it is not clear whether he would endorse this approach. Further, it is not clear that Bayle would allow appeals to such specifically religious evidence. Consistent with his dealings with the Scholastics, Bayle should require Leibniz to produce *non-theological* underpinnings for the claim, as it is the soul's relationship to matter that constitutes the specific difference on both views³². What such non-theological underpinnings might be for him is unclear.

Leibniz seems an apt target for some of Bayle's other anti-Scholastic arguments. In particular, Leibniz's view falls afoul of Bayle's arguments regarding «sucking children, naturals, and mad men»³³. Infants pose a problem insofar as they do not have rational capacities but still have human (and, ergo, on the Scholastic view, rational) souls:

Aristotle and Cicero, at the age of one year, never had more sublime thoughts than those of a dog; and if they had lived in the state of infancy thirty or forty years, the thoughts of their souls had never been anything but sensations and little passions for play and eating: it is therefore by accident, that they have surpassed beasts³⁴.

Leibniz has claimed that minds — i.e., human souls — are always apt to God's moral reward or punishment. From this, he derives that human souls must not be constrained by matter, as they must always maintain their (rational) capacities (and knowledge) across change of their material bodies. But infant Aristotle is not rational, seeming to put the lie to Leibniz's claim that human souls must always have the capacities necessary for being morally judged.

Later Leibniz can appeal to his claim that humans *come to have* rational souls: he claims that “Human spermatic animals” that is, the seed of the natural machine that will become a human body, “are not rational and do not become rational until conception settles that these animals will have a human nature”³⁵. More needs to be said for this to solve the problem of post-conception infants developing rational souls, but it does secure that changes in status with respect of body can create changes with respect of soul that eventually produce an apt candidate for moral reward and punishment.

There is little reason to attribute this particular view to the Leibniz of the *New System*, though³⁶. This change does not solve the underlying problem,

³² When considering the Scholastic view that the materiality of soul in animals is the specific difference, Bayle says: «But how do they prove that? I suppose they only argue upon the principles of natural reason, without having recourse to scripture or the doctrines of religion; and I ask of them one good proof, to shew that the souls of beasts are corporeal, and that ours is not?» (*Rorarius*, Remark F).

³³ *Ibid.*, Remark E, p. 906.

³⁴ *Ibid.*

³⁵ G. W. Leibniz, *Principles of Nature and Grace*, § 6, p. 209.

³⁶ One might think his claim that rational souls are «exempt from anything that might make them lose the quality of being citizens of the society of minds» (*NS*, p. 141) counts against such an attribution. But the claim from *Principles* only suggests that material souls can turn into rational souls; this quote only denies change of rational souls into material souls. This leaves open the possibility that God transmutes material souls into a rational ones, though not the reverse.

either: while it introduces change of souls into the system, which was needed, that change still depends on a material process (conception). The material process of conception functions the same way here that developing particular organs functioned in determining whether Aristotle grew to be rational in Bayle's objection to the Scholastics. This leaves Leibniz needing to explain how a contingent, material process (conception) could settle a difference in kind of soul. Leibniz must decouple change of soul from material change, and while the introduction of the *Principles* claim makes change of soul possible, it does not do this decoupling. Leibniz might be able to respond in other ways, but this would move him further from the *New System* and the view that Bayle considered.

By interrogating the view in the same way that he did similar Scholastic views, Bayle would have shown Leibniz's view to fail the second criterion. This is despite the fact that Leibniz nominally satisfies it, a reversal of the first criterion, where Leibniz fails the criterion as stated but satisfies the arguments. Whichever evaluative standards Bayle uses — satisfaction of the criterion as stated, or of the underlying arguments — Leibniz fails one of the first two criteria. This shows that interpreting Bayle as only objecting to pre-established harmony is mistaken.

6. Leibniz and the Third Criterion (Explaining Animal Reasoning)

The final criterion is that a system must explain the 'surprising skill' of beasts, that is, explain how non-human animals come to act the way they do. Bayle provides a partial catalog of the capacities to be explained. For instance, by considering the hungry dog that avoids his master's food, Bayle concludes that beasts must be capable of memory, drawing conclusions, and comparing ideas³⁷. Through other examples, Bayle concludes that non-human animals must also be capable of guilt and vengeance³⁸, acting with design, improving with experience, foreseeing what's to come, cunning, precaution, docility³⁹, and the power of abstaining or acting⁴⁰, i.e., what constitutes free will on Bayle's view. At a minimum, any view must explain these capacities in non-human animals if it is to make sense of what we observe of their behavior.

As Bayle's discussion of the Cartesians and Scholastics shows, not all explanations of these capacities are going to be acceptable, all things considered. Bayle applies this criterion dilemmatically: whatever explains these capacities in non-human animals is going to either be the same as or different from whatever explains these capacities in humans. If it is the same, this explanation may undermine the specific difference set forward in answer to the second criterion, as with the Scholastics. If it is different, the number of shared capacities and the depth of the similarity Bayle once explained will make motivating that difference difficult, as with the Cartesians.

³⁷ P. Bayle, *Rorarius*, cit., Remark B, p. 901

³⁸ *Ibid.*

³⁹ P. Bayle, *Rorarius*, cit., Remark F, p. 907.

⁴⁰ *Ibid.*, p. 908.

Leibniz must find a middle path. His psychological story must be consistent with the specific difference he identified before. But he has also claimed that humans and non-human animals both constitute true unities and that these unities ultimately account for whatever we observe of their behavior.

Leibniz's *New System* does not detail a psychology for non-human animals that would explain their behavior without appealing to reason, it does not detail any psychology at all. We know what such a system would look like for Leibniz, because Leibniz offers one in the *New Essays on Human Understanding* II.ix-xi. Such a story is completely absent from the *New System*, which does not even draw the distinction between knowledge of reasons and empirical inference the *New Essays* account depends on.

Whether Bayle would have found that system sufficient is an interesting but perhaps unanswerable question. It would be anachronistic to include the psychological story from the posthumously published *New Essays* in Leibniz's-system-as-understood-by-Bayle, which is what I am evaluating⁴¹.

We can say, however, that given his other claims, whatever answer the Leibniz of the *New System* gave would likely be unstable. Leibniz implies that non-human animals depend for their capacities on the state of their organs, unlike humans. But if non-human animals depend on the state of some material system for their capacities, and the human capacities relevant to moral punishment and reward are independent of them, there must be two different ways of accounting for, e.g., foresight: one that depends on the physical condition of the body and another that does not. Some part of the explanation of human and non-human animal reasoning must differ, making it so that any psychological story will fail the third criterion.

7. Bayle's Commitments and the Criteria

Clearer and stronger answers to the second criterion make satisfying the third criterion more difficult, as greater specific difference requires greater difference in explanation of the faculties involved. Difference great enough to *satisfy* the second criterion (even nominally, as Leibniz does) would seem to make the third criterion unsatisfiable.

Bayle's second and third criteria being mutually unsatisfiable is somewhat surprising; taken together, they simply seek to delineate humans from non-human animals. This seems appropriate: insofar as we observe similarities (and differences) in the behaviors of humans and non-human animals, those similarities (and differences) must be taken account of in our explanations of that behavior. The criteria broadly understood, then, should not produce a

⁴¹ While the *New Essays* were completed in 1704, they were not published until 1765. A similar view — though less fully explicated — is offered in the *Monadology* and *Principles of Nature and Grace based on Reason*. There is no reason to believe that Bayle had access to the manuscripts and all were published after Bayle's death. For a list of Leibniz texts Bayle read, see T. Ryan *Pierre Bayle's Cartesian Metaphysics*, cit., p. 97.

problem unless the phenomenon is itself internally incoherent. That would not seem to be the case here, suggesting that the mutual unsatisfiability of Bayle's criteria comes from Bayle's particular formulation of them. To see why Bayle's criteria are so strong, it is useful to look to Bayle's other commitments. Bayle's religious inclinations strengthen the second criterion; his skepticism strengthens the third⁴².

The notion that non-human animals might have souls like ours — or that we might have souls like those typically attributed to them — is a matter apt for moral panic among the religious. Bayle is aghast at the possibility, saying:

One cannot, without horror, think of the consequences of this doctrine, *The soul of men and the soul of beasts do not differ substantially, they are of the same species, the one acquires more knowledge than the other, but these are only accidental advantages, and depending on an arbitrary institution*⁴³.

The 'consequences' Bayle lists, some of which are discussed above, are all religious in character. This was not an uncommon opinion among religiously inclined thinkers. Descartes, for instance, says that he has spent so much time arguing that animals are mere machines because, aside from denying the existence of God, there is no error

that leads weak minds further from the straight path of virtue than that of imagining that the souls of the beasts are of the same nature as ours⁴⁴.

It is incumbent on believers, then, to show that non-human animals differ in kind from humans, and that this difference matters for our moral status. Because moral status and rationality are to-be-proved, though, the specific difference cannot be given in terms of rationality (or result directly from religious evidence). Thus the second criterion must be formulated strongly enough to itself indirectly ensure that animals are not rational. Bayle's religious commitments demands he draw the second criterion strongly enough to produce just such a difference.

Bayle differs from Descartes, Leibniz, Daniel, and others involved in these debates, though, insofar as his skeptical heritage demands that he see non-human animals as minimally different from humans. Seeing non-human animals as having capacities similar — or even superior — to humans is common in the

⁴² While there remains disagreement about the exact relationship Bayle thinks reason ought to have to faith, work exemplified by Labrousse (1964) shows Bayle's religious commitments to be sincere. For an opposed perspective, see G. Mori, *Bayle Philosophe*, Paris 1999, but note also the rejoinders to this position by K. Irwin, *Bayle on the (Ir)rationality of Religious Belief*, «Philosophy Compass» VIII/6, (2013), pp. 560-569, and T. Lennon, *Reading Bayle*, Toronto 1999 and Id., *What Kind of a Skeptic Was Bayle?* in «Midwest Studies in Philosophy» XXVI, (2002), pp. 258-279.

⁴³ P. Bayle, *Rorarius*, cit., Remark E, p. 906, emphasis original.

⁴⁴ R. Descartes, *Discourse on Method* in *The Philosophical Writings of Descartes*, vol. I., edited by J. Cottingham, R. Stoothoff, and D. Murdoch, Cambridge 1985.

skeptical tradition. Sextus Empiricus⁴⁵, Montaigne⁴⁶, Charron⁴⁷ and others all produce arguments that trade on or support the human-like capabilities of non-human animals.

Bayle is skeptical of attempts to identify a difference in capacities between humans and non-human animals: significantly, no piece of behavioral evidence adduced in 'Rorarius' supports the view that non-human animals are different from humans. Bayle believes that humans and non-human animals are extremely similar, and this is evinced by the long list of shared capacities he adduces.

Ultimately, Bayle's criteria demand both that non-human animals differ in kind from humans and that they share the same capacities, making his criteria mutually unsatisfiable. That Bayle's religious commitments and skepticism play a key role here can be seen from how other thinkers avoid this problem. Leibniz, for instance, shares some of Bayle's religious commitments but not his skeptical point of view, and while he does see that humans and animals are similar, he does not need to accommodate the *extreme* similarity that Bayle sees. Hume, in contrast, shares Bayle's skeptical point of view but not his religious commitments; Hume works to accommodate the tight similarity between humans and non-human animals but not any (religiously-motivated) difference in kind⁴⁸. Both thinkers endeavor to satisfy Bayle's criteria, broadly understood, but they do not endeavor to satisfy them on Bayle's terms, perhaps because neither found that they could while maintaining consistency.

Bayle's criteria were meant to outline a position that would mollify all involved in the debate, but instead they reveal a fundamental tension between the human desire to see ourselves as different in kind from other kinds of animals and our every day observations of similarity in our behavior. Bayle's catalogue of animal behaviors and philosophical views are important contributions, but perhaps more important in the end is his repeated insistence that prior views were unstable and the resultant elucidation of these criteria. It is only by showing clearly what we demand of a view of non-human animals that we can see the extreme tension in any account that wants to make sense of both strong religious and skeptical/naturalistic commitments.

⁴⁵ See J. Annas and J. Barnes, *The Modes of Scepticism*, Cambridge 1985, ch. 4.

⁴⁶ M. Montaigne, *Apology for Raymond Sebond*, edited and translated by R. Ariew and M. Grene, Indianapolis 2003, esp. pp. 15-47, and R. H. Popkin, *The History of Scepticism from Erasmus to Spinoza*, Berkeley 1979, esp. pp. 45, 51.

⁴⁷ R. Kogel, *Pierre Charron*, Geneva 1972 pp. 120, and M. C. Horowitz, *Pierre Charron's View of the Source of Wisdom*, in «Journal of the History of Philosophy» IX /4, (1971), pp. 443-457.

⁴⁸ D. Hume, *Treatise of Human Nature* (edited by D. F. Norton and M. Norton, Oxford 2000), § 1.3.16, and Id., *Enquiry Concerning Human Understanding* (edited by T.L. Beauchamp, Oxford 1999), § 9. In both sections, Hume argues by analogy that humans must have the same mental mechanisms that produce non-human animal inference (see D. Boyle, *Hume on Animal Reason*, in «Hume Studies» 29 (2003), pp. 3-28). *Treatise* Book 2 makes similar arguments regarding the passions.