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DEBORAH BOYLE

1. Introduction

Hume's writings contain frequent references to non-human animals; indeed, in both the *Treatise* and the first *Enquiry*, he devotes a section to a discussion of animal reason, offering an argument from analogy in which he compares how humans make causal inferences with the way that animals make such inferences.¹ With such a comparison, he brings humans into the realm of nature, dubbing their reason a kind of "Instinct," in stark contrast to the Cartesian view of humans as possessing a unique ability to reason that animals lack. To remove humans so far from non-human animals, Hume implies, conflicts with the precept that reasoning concerning matters of fact are (and should be) founded on analogy (EHU 9.1; SBN 104); that is, to suggest that humans are, in their mental processes, radically different from animals is not good reasoning when there are such evident similarities in the ways that animals and humans act.²

Still, although Hume thinks the moral reasoning of humans and animals is similar, his texts do suggest some differences in their reasoning abilities. One such difference is that animals, but not humans, possess particular cognitive instincts designed to help them survive and reproduce; another is that animals do not engage in demonstrative reason; and a third is that humans, but not animals, can improve in their reasoning. In this paper, I discuss

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Hume's argument from analogy, and then examine how Hume can hold that there are differences in the reasoning abilities of humans and animals without having to attribute to either a special capacity that the other lacks.

As we shall see, Hume holds that good reasoning is a virtue in humans. One further question we can ask is whether he would make the same claim for animals. A number of commentators have maintained that Hume wanted to exclude animals from the sphere of morality.³ I will argue that while Hume may think animals lack the ability to make moral judgments, they can still be the subjects of our moral evaluations. Thus Hume can claim that both human reasoning and animal reasoning can be virtuous. Indeed, I will argue that Hume's claims about sympathy and his methodological commitment to empirical observation give him good reason to hold that in animals just as in humans, reason is a virtue.

2. Hume on Human Reasoning

We should get clear, first, about what Hume means by "reasoning." David Owen has argued, convincingly to my mind, that by "reasoning" Hume means the imagination's ability to link and relate ideas in various ways that produce either belief (in instances of causal reasoning) or knowledge (when the reasoning is demonstrative).⁴ Hume says in the *Treatise* that "reason is nothing but a wonderful and unintelligible instinct in our souls, which carries us along a certain train of ideas, and endows them with particular qualities, according to their particular situations and relations" (T 1.3.16.9; SBN 179). I will return later to the sense in which Hume thinks reason is an instinct; at this point what is important is Hume's characterization of reason as a way of carrying a thinker through a train of ideas. What Hume is rejecting, Owen emphasizes, is the traditional, Cartesian conception of reason as a distinct faculty which operates independently of imagination.⁵

In both the *Treatise* and the first *Enquiry*, Hume identifies two sorts of reasoning, although he does not use the same terms in the two works. In the *Treatise*, he distinguishes between two groups of relations between ideas, and his division of reasoning depends on what kind of relation of ideas that reasoning concerns. Some relations "depend entirely on the ideas, which we compare together" (T 1.3.1.1; SBN 69). These include the relations of resemblance, contrariety, degrees in quality, and proportions in quantity or number. In such cases, if the relation changes, then the ideas involved must have changed. For example, if one is thinking of a person and a portrait of the person, the relationship between the two ideas is one of resemblance. If one thinks instead of a different person, then the relationship between that

idea and the idea of the portrait is no longer one of resemblance. But there are other relations between ideas such that the relation can change even if the ideas do not; they include contiguity, distance, identity, and causation (T 1.3.1.1; SBN 69).

In the first *Enquiry*, Hume divides reasoning into “demonstrative reasoning” and “moral reasoning.” Reasoning on the basis of the second group of relations—contiguity, distance, identity, and causation—is what Hume calls “moral reasoning.” In the *Enquiry* he says this type of reasoning concerns matters of fact rather than relations of ideas (EHU 4.18; SBN 35), although that is actually a rather misleading way of marking the distinction, since as we’ve seen, he says in the *Treatise* that *both* forms of reasoning relate ideas—it’s just that they involve different relations.

Since “moral reasoning” covers reasoning on the basis of the second group of relations, one might think that demonstrative reasoning includes reasoning on the basis of any of the first group of relations.⁶ However, in the *Treatise*, Hume says that strictly speaking, the relations of resemblance, contrariety, and degree in quality are discovered by “intuition” rather than demonstration; the difference is that demonstration requires a “chain of reasoning” (T 1.3.1.2 and 1.3.1.5; SBN 70-1). Thus the only relation that is a candidate for demonstration is the relation concerning proportions in quantity or number. In some cases of proportions in quantity or number, Hume writes, we can see “at one view” that one number or figure is greater than, smaller than, or equal to another; in those cases, the relation would be known through intuition. In most cases concerning proportions, however, we must carry on a chain of reasoning to establish that one number or figure is greater than, smaller than, or equal to another.

Elaborating on Hume’s distinction between intuition and demonstration, Owen says that demonstrative reasoning is a “process whereby we become aware that one idea stands in a relation to another, not directly, but via a chain containing one or more intermediate ideas such that the relation between each idea and its neighbour is intuitively known.”⁷ Thus we need an account of what it is, for Hume, to know a relation through intuition. Owen describes it thus: “Intuition requires no steps of reasoning: no intermediate ideas need be found.”⁸ But that does not yet sufficiently distinguish intuition from Humean perception, which, as Owen himself points out, also involves immediate awareness.⁹ In other words, without a sharper distinction between intuition and perception, this account of demonstrative reasoning would include chains of reasoning where the relation between the two ideas is immediately grasped through perception—and any perceptual experience over

time fits *that* characterization. But Hume certainly does not want to include ordinary perceptual experiences under the rubric of demonstration.

Later in his account, Owen does distinguish intuition from perception, thereby marking off a special category of demonstrative reasoning: intuition is certain where perception is not. The full account of demonstrative reasoning, then, includes the claim that the relations which we intuit as part of the chain of reasoning are those relations of which we can be absolutely certain. And the only relations of which we can be absolutely certain are those which can be ascertained without appeal to any further experience. This is because if further experience can be brought to bear in determining whether or not the relation obtains, then we could never be certain that the relation really does obtain.¹⁰

In sum, we can say that a Humean demonstration is a process of relating certain ideas via a chain of ideas, such that the relation between any two ideas is known through intuition, where that means that the relation is one of which we can be absolutely certain; and those relations include resemblance, contrariety, degrees of quality, and proportions in quantity or number, which are, according to Hume, the only relations that depend solely on the ideas themselves, and so are the only relations which we can intuit with certainty to obtain.

One advantage of Owen's reading is that it explains why Hume characterizes demonstration in the various ways that he does: as involving only certain relations (T 1.3.1.2; SBN 69); as involving thought alone (EHU 4.1.1; SBN 25); and as pertaining to propositions the contrary of which imply a contradiction (EHU 4.1; SBN 25).¹¹ Hume is entitled to this last claim, I would argue, because he holds that if it is conceivable that a relation between two ideas does *not* hold, that must be because the relation *is* such that the relations can be otherwise without the ideas themselves changing (because conceivability implies possibility, for Hume). So that means that we cannot be certain that the relation does in fact obtain; thus it is not a candidate for demonstration.

3. Hume's Argument by Analogy

Let's turn now to Hume's claims about animal reason. In both the *Treatise* and the first *Enquiry*, Hume presents arguments by analogy to establish that reasoning is essentially the same in both animals and humans. When, a hundred years earlier, Descartes rejected the use of arguments by analogy to establish that animals have reason, the sort of argument he rejected began with certain observed similarities between humans and animals in order to conclude that animals reason.¹² Descartes said that such a style of argument,

“which is very obvious, has taken possession of the minds of all men from their earliest age” (CSMK III 365; AT V 277). Thus one might expect Hume’s argument by analogy to run in the same fashion, beginning with claims about *human* understanding, pointing out some behavior in which animals resemble us, and concluding that animals must also resemble us in their reasoning. And at first glance, Hume does appear to be arguing in this way in the *Treatise*. In “Of the reason of animals,” he writes, “’Tis from the resemblance of the external actions of animals to those we ourselves perform, that we judge their internal likewise to resemble ours; and the same principle of reasoning, carry’d one step farther, will make us conclude that since our internal actions resemble each other, the causes, from which they are deriv’d, must also be resembling” (T 1.3.16.3; SBN 176-7).

However, if this is the order of argument in the *Treatise*, then the first *Enquiry*’s discussion of animal reason looks very puzzling, for there he appears to be arguing in the opposite direction. Animals clearly learn from experience, he says, and he cites some examples: horses learn what heights they can safely leap, and dogs learn to fear the sight of a whip (EHU 9.2-3; SBN 105). Furthermore, animals clearly do not use “any process of argument or reasoning” to make such inferences. Indeed, Hume says that it is “impossible” for them to do so, due to their “imperfect understandings” (EHU 9.5; SBN 106). Since animals cannot be using reason to make inferences from experience, and since we make similar inferences, we humans must also make inferences from experience on the basis of custom alone and not through reasoning. Thus Hume concludes:

Animals, therefore, are not guided in these inferences by reasoning: Neither are children: neither are the generality of mankind, in their ordinary actions and conclusions: Neither are philosophers themselves, who, in all the active parts of life, are, in the main, the same with the vulgar, and are governed by the same maxims. (EHU 9.5; SBN 106)

He then reiterates his view that causal inferences must be due only to custom, saying that “Were this doubtful with regard to men, it seems to admit of no question with regard to the brute creation; and the conclusion being once firmly established in the one, we have a strong presumption, from all the rules of analogy, that it ought to be universally admitted, without any exception or reserve” (EHU 9.5; SBN 106). Clearly, then, Hume’s argument by analogy in the *Enquiry* goes in the opposite direction from the sort of argument that Descartes considered to be the “obvious” one, for Hume is

drawing a conclusion about *human* reasoning from a claim about what must be going on in animal reasoning.

But there is no good reason why Hume would reverse the direction of the argument in the *Treatise* and the *Enquiry*, especially given the similar remarks he makes in the two works concerning the role of the argument. In the *Enquiry*, just before presenting the argument by analogy, Hume writes that

Any theory, by which we explain the operations of the understanding, or the origin and connexion of the passions in man, will acquire additional authority, if we find that the same theory is requisite to explain the same phenomena in all other animals. We shall make trial of this, with regard to the hypothesis, by which we have, in the forgoing discourse, endeavoured to account for all experimental reasonings; and it is hoped, that this new point of view will serve to confirm all our former observations. (EHU 9.1; SBN 104-5)

Likewise, in the *Treatise*, he says that showing a resemblance between human and animal reason “furnishes us with a kind of touchstone, by which we may try every system in this species of philosophy” (T 1.3.16.3; SBN 176), for

when any hypothesis . . . is advanc’d to explain a mental operation, which is common to men and beasts, we must apply the same hypothesis to both; and as every true hypothesis will abide this trial, so I may venture to affirm, that no false one will ever be able to endure it. The common defect of those systems, which philosophers have employ’d to account for the actions of the mind, is, that they suppose such a subtlety and refinement of thought, as not only exceeds the capacity of mere animals but even of children and the common people in our own species Such a subtlety is a clear proof of the falshood, as the contrary simplicity of the truth, of any system. (T 1.3.16.3; SBN 177)

Thus in both works, the argument by analogy is supposed to play the same role, that of confirming Hume’s account of beliefs concerning matters of fact as derived from custom rather than from the observation of a “real connexion among objects” or from some kind of abstract reasoning (T 1.3.16.8; SBN 178). And if the roles of the arguments are meant to be the same, then surely the arguments themselves should not be substantially different.

Thus, although some of Hume’s remarks in the *Treatise* suggest that he is drawing a conclusion about animal reason on the basis of similar behaviors

between animals and humans and an already-established account of human reasoning, he in fact gives *other* reasons for taking animals to reason as humans do. For example, he says that it is simply “evident” that animals “are endow’d with thought and reason as well as men” (T 1.3.16.1; SBN 176). And, as in the *Enquiry*, he appeals to the fact that the only possible explanation of animals’ causal inferences is their reliance on custom, since “beasts certainly never perceive any real connexion among objects” and “they can never by any argument form a general conclusion, that those objects, of which they have had no experience, resemble those of which they have” (T 1.3.16.8; SBN 178). Again, his point is that it is just obvious that animals’ causal inferences could only be made on the basis of custom. And, since analogical reasoning requires positing the same explanation for humans, Hume claims that serves as “a strong confirmation, or rather an invincible proof” of his system (T 1.3.16.8; SBN 178).

In addition to the fact that Hume’s form of argument is simply not as transparent in the *Treatise* as it is in the *Enquiry*, the discussion of animal reason in the *Treatise* differs from the *Enquiry*’s discussion in another way. Having claimed that when we see “other creatures, in millions of instances, perform like actions, and direct them to like ends, all our principles of reason and probability carry us with an invincible force to believe the existence of a like cause,” Hume says in the *Treatise* that “The resemblance betwixt the actions of animals and those of men is so entire, in this respect, that the very first action of the first animal we shall please to pitch on, will afford us an incontestable argument for the present doctrine” (T 1.3.16.2; SBN 176). But it turns out that it is not really true that any action at all will reveal a resemblance between animals and humans. For Hume goes on to distinguish two sorts of animal actions: those “which are of a vulgar nature,” and “those more extraordinary instances of sagacity” (T 1.3.16.5; SBN 177). He writes that “As to the former actions, I assert that they proceed from a reasoning that is not in itself different, nor founded on different principles, from that which appears in human nature” (T 1.3.16.6; SBN 177). But what of the second sort of action? Curiously, Hume says nothing more about them here. He does elaborate on this category of actions in the first *Enquiry*, however, in a passage I shall discuss in the next section, and it turns out that they are a type of actions which animals do *not* share with humans. Thus, if one were to “pitch on” an example from this second category of actions, one would not in fact be afforded an “incontestable argument” for the doctrine that “beasts are endow’d with thought and reason as well as men” (T 1.3.16.1; SBN 176), if that means that beasts’ reason is just like human reason. “Pitching on” an

example from the second category would, in fact, show a *difference* between humans and animals.

4. Reason and Instincts

In the previous section, I suggested that because of the distinction Hume makes between two sorts of animal actions, he is not entitled to claim that “the very first action of the first animal we shall please to pitch on, will afford us of an incontestable argument for the present doctrine” (T 1.3.16.2; SBN 176). The two sorts of animal actions depend on two sorts of reasoning: first, animals perform actions which depend on inferences based on experience; second, they perform what Hume calls “more extraordinary instances of sagacity,” which generally pertain to an animal’s self-preservation and propagation of the species (T 1.3.16.5; SBN 177). As we have seen, animals’ reasoning in the first type of action is just like humans’ reasoning. But what goes on in the second kind of action is quite different, and, unlike the first type, does not serve as grounds for inferring anything about human reasoning.

In both the *Treatise* and the first *Enquiry*, Hume gives the same example of this second type of action: a bird which chooses the location and materials of her nest and then sits on her eggs for the appropriate amount of time (T 1.3.16.5; SBN 177 and EHU 9.6; SBN 108).¹³ Hume says that such knowledge is derived “from the original hand of nature,” and that we call such knowledge “instincts” (EHU 9.6; SBN 108). Hume says that although we may marvel at such knowledge, “our wonder will, perhaps, cease or diminish, when we consider, that the experimental reasoning itself, which we possess in common with beasts, and on which the whole conduct of life depends, is nothing but a species of instinct or mechanical power” (EHU 9.6; SBN 108). In other words, Hume maintains that the particular instincts of animals are no different from the ability, shared by humans and animals, to reason on the basis of experience. To use the helpful vocabulary introduced by Barbara Massey and Gerald Massey in their paper “Genetic Inference,” animals and humans share “generalized cognitive instincts,” which include the ability to make causal inferences, while only animals have “specialized cognitive instincts.”¹⁴ Yet Hume thinks these instincts are, at root, the same kind of thing.

Hume’s claim that reason is itself an instinct might seem peculiar, given the obvious differences between the two sorts of instincts: the generalized cognitive instinct of reason is just the ability to relate ideas in various ways, whereas specialized cognitive instincts comprise knowledge of particular matters of fact needed for the animal’s survival and reproduction. Moreover, Hume himself contrasts the two. He does so in a passage from the second

Enquiry in which he is entertaining the proposal that our notions of justice and property might be “a simple original instinct in the human breast, which nature has implanted for . . . salutary purposes” (EPM 3.40; SBN 201). He argues, first, that no one has ever heard of such an instinct; but he also points out that the notion of property takes many different particular forms: there is “possession acquired by occupation, by industry, by prescription, by inheritance, by contract, etc”; and the notions of inheritance and contract are themselves complex legal concepts that still have not been clearly defined. Hume says that if these notions were known through instinct, we would have to have “ten thousand different instincts” (EPM 3.41; SBN 201), which he finds most implausible, for instincts in humans are “simple” (EPM 3.42; SBN 202). He then writes, “All birds of the same species in every age and country, build their nests alike: In this we see the force of instinct. Men, in different times and places, frame their houses differently: Here we perceive the influence of reason and custom” (EPM 3.44; SBN 202). Once again, then, we get the nest-building example as an example of instinct, and it is contrasted with human reasoning.

But we can read this passage in two ways, one of which results in a contrast between reason and instinct, and one of which makes the passage consistent with Hume’s claim in the first *Enquiry* that reason, too, is just another instinct. The key, I think, is to notice that in the *Enquiry* Hume characterizes instinct as a “mechanical power” (EHU 9.6; SBN 108; see also EHU 5.22; SBN 55). Despite Hume’s analogies between his own method and Newton’s, he says almost nothing about mechanics, so it is not transparently clear what he means when he characterizes instinct as a mechanical power. Nonetheless, I hazard the suggestion that Hume is indicating a certain regularity in the operation of instinct. In “Of Liberty and Necessity” in the first *Enquiry*, Hume considers the typical view of bodily interactions:

It is universally allowed that matter, in all its operations, is actuated by a necessary force, and that every natural effect is so precisely determined by the energy of its cause that no other effect, in such particular circumstances, could possibly have resulted from it. The degree and direction of every motion is, by the laws of nature, prescribed with such exactness that a living creature may as soon arise from the shock of two bodies, as motion, in any other degree or direction than what is actually produced by it. (EHU 8.1.4; SBN 82)

Of course, Hume himself does not endorse the view that interactions between bodies occur through necessity; rather, he argues that our idea of necessity is

derived from the uniformity we observe in the constant conjunctions of objects (EHU 8.5; SBN 82). If Hume interprets mechanical interactions in terms of constant conjunction, then to say an instinct is a mechanical power is to say that it is a procedure which we have experienced always to operate in the same way.¹⁵

Is this true of reason? In one sense, no, for we can employ reason to tackle all sorts of different problems; the effect of reason when employed to draw conclusions in cooking is quite different from its effect when employed to draw conclusions in gardening. In that respect, it differs from animals' instincts. That is the point of Hume's nest-building example, for Hume believes that while reason can produce different effects, the instinct of nest-building in birds always produces exactly the same nest. Thus, if we are considering the effect that is produced, we can draw a distinction between instinct and reason.

Yet if we consider experimental reason more generally, without considering the specific materials with which it is concerned or the effect which it produces with those materials, we can see that it always use the same general procedure, that of drawing conclusions based on past experiences. So, to the extent that reason is a procedure that follows certain general rules of operation, it too can be classified as an instinct.

Hume does not think that humans lack specialized instincts altogether, but the examples he gives are not of specialized *cognitive* instincts, but specialized *passional* instincts: hunger, thirst, resentment, love of life, attachment to offspring, benevolence, and kindness to children (T 2.3.3.8; SBN 417 and EPM 3.40; SBN 201). He does speak of nature having taught us the use of our limbs (EHU 5.22; SBN 55), which would seem to be an example of a matter of fact needed for our survival and thus an example of a specialized cognitive instinct.¹⁶ Still, even if he does attribute some cognitive instincts to humans, he clearly thinks that animals have more of these instincts than humans. We might then ask why animals, but not humans, have these specialized instincts. Or, as the Masseys put it, "How is a priori knowledge of matters of fact possible for *animals* when it is not possible for *human beings*?"

The Masseys say that for Hume "it is clearly an empirical matter whether human beings or any other organisms possess a priori knowledge of matters of fact."¹⁷ That is, they suggest that for Hume, it is enough to point out that animals do seem to possess innate knowledge of matters of fact, and that humans do not. And, indeed, Hume's methodology does not require him to go any further than that. As he says in the second *Enquiry* when considering why humans have sympathy, "We must stop somewhere in our examination of causes; and there are, in every science, some general principles, beyond which we cannot hope to find any principle more general" (EPM 5.17, n19; SBN 219-20, n1).

Hume could, then, simply observe that animals do seem to have specialized instincts, while humans do not.

Yet there may be more that Hume can say about this question. In his essay “The Stoic,” he writes of nature that

having endowed [man] with a sublime celestial spirit, and having given him an affinity with superior beings, she allows not such noble faculties to lie lethargic or idle; but urges him, by necessity, to employ, on every emergence, his utmost *art* and *industry*. Brute-creatures have many of their necessities supplied by nature, being clothed and armed by this beneficent parent of all things: And where their own industry is requisite on any occasion, nature, by implanting instincts, still supplies them with *art*, and guides them to their good, by her unerring precepts. (ES 146-7)

And in “Of the Immortality of the Soul,” Hume comments on the powers of humans relative to those of animals: “The powers of men are no more superior to their wants, considered merely in this life, than those of foxes and hares are, compared to *their* wants and to *their* period of existence” (ES 593). His view thus seems to be that humans have reason rather than specialized instincts because humans have many more needs and wants than animals; creatures with more limited needs can make do with instincts specifically tailored by nature to meet those needs.

This view also seems to be implicit in Hume’s argument against explaining our notions of property by invoking particular instincts; his claim there is that such an explanation would entail that there would have to be *too many* instincts. We have already seen his assertion that there would have to be “ten thousand different instincts”; he asks rhetorically, “Can we think that nature, by an original instinct, instructs us in all these methods of acquisition?” (EPM 3.41; SBN 201-2). As he puts it, “I need not mention the variations, which all the rules of property receive from the finer turns and connexions of the imagination, and from the subtilties and abstractions of law-topics and reasoning. There is no possibility of reconciling this observation to the notion of original instincts” (EPM 3.46; SBN 203). In other words, original instincts simply do not come in the massive quantities that would be needed if all our human activities were governed by instinct.

But this is not yet a satisfactory answer. Why *couldn’t* we have thousands of different instincts? Hume was not the first to have to face this question. Descartes in fact has a view similar to Hume’s, insofar as Descartes holds that humans have reason, a “universal instrument” (CSM I 140; AT VI 57), while

animals perform their actions through the purely mechanical “disposition of their organs” (CSM I 141; AT VI 59).¹⁸ As Descartes puts it,

For whereas reason is a universal instrument which can be used in all kinds of situations, these organs need some particular disposition for each particular action; hence it is for all practical purposes impossible for a machine to have enough different organs to make it act in all the contingencies of life in the way in which our reason makes us act. (CSM I 140; AT VI 57)

Thus for Descartes, reason is the only possible explanation of the tremendously wide range of abilities of humans, because the complexity and sheer number of human abilities would make it impractical for God to have designed humans with particular instincts for each. Hume, too, might hold that in endowing humans and animals with different numbers of instincts, nature is simply acting in the most efficient and practical way, although he never explicitly offers this as an explanation for why humans have reason instead of particular instincts.

5. Animals and Demonstrative Reason

Although Hume thinks that animals possess more specialized cognitive instincts than humans, there is one type of reasoning which he evidently think animals lack: in no text does Hume attribute demonstrative reasoning to animals.

But is this simply a failure on Hume’s part to mention a form of reasoning in which animals might engage, or are there reasons why Hume might think animals cannot engage in such reasoning at all? Tom Beauchamp has claimed that demonstrative reason is a “higher intellectual function” which animals lack, and that this constitutes a difference in kind between human and animal reason.¹⁹ However, Beauchamp does not explore what this function is or why animals might lack it. We saw in section 2 that for Hume, demonstrative reasoning is a process of relating certain ideas via a chain of ideas, such that the relation between any two ideas is known through intuition, where that means that the relation is one of which we can be absolutely certain. We also saw that the only relations of which we can be so certain are resemblance, contrariety, degrees of quality, and proportions in quantity or number, and that only the last type requires *chains* of ideas, since the first three are “discoverable at first sight” (T 1.3.1.2; SBN 70). Thus if animals cannot engage in demonstrative reasoning, it could be because they do not even have the ideas involved in such relations; or, if they do

have the ideas, it could be that they cannot perceive, and hence intuit, relations in quantity or number; or, if they can intuit such relations, they might be unable to sustain a chain of such intuitions in their minds.

The first possibility is that animals might lack the *ideas* involved in the relations involved in demonstrative reasoning. Since such reasoning is mathematical, the ideas involved are those based on the unit. Thus Hume might say that, despite having the same impressions as humans, animals do not form the idea of the unit, and thus cannot use it to engage in mathematical demonstrations. But this account is not open to Hume, for he asserts in the *Treatise* not only that every simple idea has a corresponding resembling impression, but that every simple impression has a corresponding idea (T 1.1.1.5; SBN 3). If an animal perceives one object, then it must form the idea of “one.”

Does Hume think, then, that animals are unable to intuit relations in quantity or number? Hume emphasizes that the minds of animals, like the minds of humans, operate by the principles of association of contiguity, resemblance, and causation (T 2.1.12.7; SBN 327), but perhaps he thought that animals were not capable of the *philosophical* relations, which involve actively choosing to compare two ideas (T 1.1.5.1; SBN 13). He does assert that “their thoughts are not so active as to trace relations, except in very obvious instances” (T 2.2.12.4; SBN 397). However, Hume does not claim here that animals’ minds are utterly inactive, and thus the possibility remains that animals might be able to make some limited comparisons between quantities.

When Hume says that animals do not engage in a process of reasoning to make inferences about matters of fact, he explains it thus: “For if there be in reality any arguments of this nature, they surely lie too abstruse for the observation of such imperfect understandings; since it may well employ the utmost care and attention of a philosophic genius to discover and observe them” (EHU 9.5; SBN 106).²⁰ Hume’s suggestion here is that animals cannot engage in reasoning as traditionally conceived because they lack sufficient powers of *observation* and *attention*. Perhaps this is the limitation preventing them from engaging in demonstrative reasoning, too.

In a footnote, Hume says that “the reason of the difference between men and animals will be easily comprehended” if we consider how it is that *humans’* reasoning abilities can vary so much (EHU 9.5, n20; SBN 107). He then lists nine ways (and he says the list is not exhaustive) in which one person’s reasoning can be better than another person’s. For example, “one man may very much surpass another in attention and memory and observation.” Some people can think for longer periods of time than others before getting confused. Some are less hasty than others in forming generalizations from particular cases. Some people have wider experience than others,

enabling them to reason by analogy more effectively than others. Some people are freer than others from bias or passion. Human understanding, then, falls on a continuum.

Hume's suggestion is that the same considerations which show why human reasoning varies so much will also show the differences between human and animal reasoning. Thus he wants to put animals on the same continuum: animals have the same abilities as humans, but their powers of observation and attention fall so far short of humans' that it is impossible for them to engage in demonstrative reasoning. Presumably, then, the difficulty with demonstrative reasoning is precisely that it involves *chains* of ideas, and animals simply lack the attention required to sustain such thinking. Even if they are able to intuit simple relations of quantity, they cannot pursue the kind of sustained thinking required to construct a chain of such intuitions, and thus they cannot engage in demonstration.

If we ask why this is so, Hume is not forthcoming with an answer. However, his remark in "The Stoic" that "brute-creatures have many of their necessities supplied by nature, being cloathed and armed by this beneficent parent of all things" (ES 146) suggests that perhaps he thought animals simply do not *need* to engage in demonstrative reasoning. It would be superfluous for nature to confer a faculty on animals that would then "lie lethargic or idle" (ES 146). Such an explanation still leaves unexplained why some humans have better mental capabilities than others, but, as we shall see in the next section, Hume also maintains that humans can improve upon the abilities that nature has conferred upon them.

6. The Improvement of Reason

We have so far seen two ways in which animal and human reason are different: animals have particular instincts but limited reason, and this limited reason manifests itself in an inability to engage in demonstrative reasoning. Moreover, Hume evidently holds that animals, but not humans, are permanently limited in their reasoning abilities. That is, while both humans and animals can learn from experience, evidently only humans can *get better* at learning from experience.

We have already seen some of the ways in which Hume thinks one person's reasoning can be better than another person's (EHU 9.5, n20; SBN 107). Although he does not explicitly say so, Hume holds that these differences in ability can be lessened or even eliminated through human effort. In the section on miracles in the first *Enquiry*, for example, he points out that humans are often moved to accept as true claims that are surprising or wondrous

(EHU10.16; SBN 117). Yet he clearly thinks we should resist this route to belief-formation; instead, he advises us, “a wise man . . . proportions his belief to the evidence” (EHU 10.4; SBN 110). So he must think it is possible for humans to improve in the way they form their beliefs. He also advises the study of history as a way to “improve the understanding” (ES 565), presumably because a wider acquaintance with historical facts gives one a broader experience on which to base causal inferences and arguments by analogy.

But while Hume evidently thinks that humans can improve their reasoning abilities, he clearly does not think that animals can do so. In his essay “On the Dignity or Meanness of Human Nature,” Hume contrasts humans with non-human animals. Of humans, he writes,

[W]e see a creature, whose thoughts are not limited by any narrow bounds, either of place or time; who carries its researches into the most distant regions of this globe, and beyond this globe, to the planets and heavenly bodies; looks backward to consider the first origin, at least, the history of human race; casts his eye forward to see the influence of his actions upon posterity, and the judgments which will be formed of his character a thousand years hence; a creature, who traces causes and effects to a great length and intricacy; extracts general principles from particular appearances; improves upon his discoveries; corrects his mistakes; and makes his very errors profitable. (ES 82)

The situation is quite different for animals. Hume writes,

On the other hand, we are presented with a creature the very reverse of this: limited in its observations and reasonings to a few sensible objects which surround it; without curiosity, without foresight; blindly conducted by instinct, and attaining, in a short time, its utmost perfection, beyond which it is never able to advance a single step. (ES 82)

Thus while human reasoning about matters of fact can be continually improved, animal reasoning simply cannot be improved beyond a certain point.

Again, we might wonder what accounts for the difference here. Hume suggests in his essay “Of the Rise and Progress of the Arts and Sciences” that emulation and the desire for praise and glory lead humans to strive for excellence (ES 135-6). That is, one reason humans try to become wiser is because they admire the wise, and they want to be admired themselves. Perhaps, then, animals are not motivated in the same way, and that is why

they cannot become wiser with effort. Unfortunately, this explanation is not consistent with the text, for Hume explicitly says in the *Treatise* that animals both emulate other animals of their species, and are moved by praise from humans (T 2.1.12.4; SBN 376).

Why, then, can animals not improve in their abilities to make inferences concerning matters of fact? Perhaps, again, Hume would exhort us to “Observe with what exact proportion the task to be performed and the performing powers are adjusted throughout all nature” (ES 593). Animals have many fewer needs and wants than humans, and thus can make do with a set of specifically-tailored instincts and a more limited ability to learn from experience. Humans, on the other hand, have so many more “necessities” that they need a superior ability to learn from experience in order to succeed in “fencing against the miseries of [their] present condition” (ES 593). Moreover, they may find themselves in circumstances where the ability originally conferred by nature is inadequate, and so they need a further ability to get better at forming beliefs on the basis of experience.

7. Reason as a Virtue

At the beginning of this paper, I said that I agreed with Owen’s account of Humean reasoning as a process of the imaginative linking of ideas. Hume’s account, then, is a naturalistic, descriptive account. Yet in saying that humans can and should improve their reasoning abilities, Hume is also making a normative claim. As we have seen, he points out that people tend to believe surprising or wondrous stories,²¹ but he clearly thinks that we should strive to improve our imaginations so that beliefs are not formed on the basis of surprise but simply on the basis of relations like causation. Moreover, as we have seen, Hume thinks that we can get better at our ability to make inferences concerning matters of fact, too. The question now is, why should we? On what grounds can Hume claim that some methods of belief-formation are better than others?

Owen suggests that Hume would say that the use of reason (rather than, say, reading tarot cards) is a Humean virtue. For Hume, a virtue is any character trait which we humans approve of for its usefulness or agreeableness to oneself or others, where that approval derives from the sympathy we feel with those affected by the trait. Thus, when a trait has beneficial effects (through being either useful or agreeable) on either the possessor of the trait or those around her, we too appreciate the beneficial effects; our approval in this case stems from sympathy with the feelings of those affected.²² As he puts it in the *Treatise*, “When the natural tendencies of [a man’s] passions leads him to

be serviceable and useful within his sphere, we approve of his character, and love his person, by a sympathy with the sentiments of those, who have a more particular connexion with him" (T 3.3.3.2; SBN 602).

Hume points out that of course there are many things besides character traits that we find useful or agreeable to ourselves or others, and indeed that we approve of such things. For example, a sharp knife is useful, and a beautiful painting is pleasing. But he insists that the sharpness and the beauty in these cases are not virtues. He writes,

We ought not to imagine, because an inanimate object may be useful as well as a man, that therefore it ought also, according to this system, to merit the appellation of *virtuous*. The sentiments, excited by utility, are, in the two cases, very different; and the one is mixed with affection, esteem, approbation, etc, and not the other. In like manner, an inanimate object may have good colour and proportions as well as a human figure. But can we ever be in love with the former? There are a numerous set of passions and sentiments, of which thinking rational beings are, by the original constitution of nature, the only proper objects: And though the very same qualities be transferred to an insensible, inanimate being, they will not excite the same sentiments. (EPM 5.1, n17; SBN 213, n1)

According to Hume, then, the sentiments excited by the good traits of inanimate objects are simply different from those excited by human character traits. For a trait to count as a virtue, the approval we feel for it must derive from our experiencing, through sympathy, a feeling of the latter sort.

Owen's claim is that reason is a Humean virtue since the reasonable person is happier, better off, and more useful to society;²³ for example, in the opening section of the first *Enquiry*, Hume says philosophy will benefit society by helping the politician, the lawyer, and the general (EHU 1.9; SBN 10).²⁴ There is other evidence, too, that Hume thinks that the use of reason is both useful to oneself and to others, and agreeable to others as well. Comparing a fool with a wise man, Hume writes in the second *Enquiry*: "Business, books, conversation; for all of these, a fool is totally incapacitated, and except condemned by his station to the coarsest drudgery, remains a *useless* burthen upon the earth" (EPM 6.16; SBN 240). Later he writes that "Eloquence, genius of all kinds, even good sense, and sound reasoning, when it rises to an eminent degree and nice discernment; all these endowments seem immediately agreeable, and have a merit distinct from their usefulness" (EPM 8.7; SBN 263). In this latter quotation, Hume seems to be speaking not merely of

the useful and agreeable quality of reason (as opposed to some other method of belief-formation), but of the useful and agreeable qualities of reasoning *well*.

As we have seen, Humean animals have reason, and it seems plausible to suggest that animals' use of reason can be useful, both to the animals themselves and, where those animals interact regularly with humans, to us.²⁵ But should animal reason be considered a Humean virtue? Some commentators have evidently thought Hume would answer "no." For example, Knut Tranöy writes that "Hume takes it to be self-evident that men and animal differ in that the former have morality while the latter do not."²⁶ But the phrase "having morality" has several possible senses. It could mean that the creature can make moral judgments. It is this sense of morality on which commentators have focused, correctly pointing out that Hume thinks animals cannot make moral judgments, either about others' actions or about what they themselves should do. Whether this inability should be traced to a defect in animals' reasoning or to a defect of sentiment has occupied the bulk of such commentators' work.²⁷

But there is another possible sense of "having morality." Even if an animal cannot make moral judgments itself, its actions might nonetheless be subject to moral evaluation by *us*.²⁸ Humean virtues are those character traits which inspire approval, through sympathy with those affected in a certain way by the traits' usefulness or agreeableness. But this account does not require that the actions exemplifying those traits must result from moral judgments. Hume does say that virtuous actions must be produced by virtuous motives (T 3.2.1.7; SBN 479), but motives themselves may well be involuntary. Consider Hume's claims in his discussion of virtuous natural abilities:

I wou'd have any one give me a reason, why virtue and vice may not be involuntary, as well as beauty and deformity. These moral distinctions arise from the natural distinctions of pain and pleasure; and when we receive those feelings from the general consideration of any quality or character, we denominate it vicious or virtuous. Now I believe no one will assert, that a quality can never produce pleasure or pain to the person who considers it, unless it be perfectly voluntary in the person who possesses it. (T 3.3.4.3; SBN 608-9)

And if this is true of human actions and traits, it could just as well be true of animals' actions and traits. Thus an animal's action could inspire moral approval in us, even if the animal did not act as a result of a moral judgment about what it ought to do.

One might object, however, that Hume's incest example in *Treatise* 3.1.1 explicitly rules out the possibility that animals' actions or character traits could ever be characterized as virtuous or vicious. Some commentators have read the incest example in this way. For example, David Fate Norton asserts that "In *Treatise* 3.1 [Hume] had established that animals and inanimate objects are not morally charged."²⁹ Antony Pitson, too, cites the example in support of his claim that "Hume is quite clear that the actions of animals cannot be considered as virtuous or vicious."³⁰ A closer look at the incest example is therefore warranted. The example occurs in Hume's discussion of his opponent's claim that morality consists in certain relations, and that moral judgments involve reasoning (through identifying which relations obtain). Hume points out that his opponent's position would require ascribing the "same morality" to humans and to animals. As he puts it,

According to this system, then, every animal, that has sense, and appetite, and will; that is, every animal must be susceptible of all the same virtues and vices, for which we ascribe praise and blame to human creatures. . . . Animals are susceptible of the same relations with respect to each other, as the human species, and therefore wou'd also be susceptible of the same morality, if the essence of morality consisted in these relations. Their want of a sufficient degree of reason may hinder them from perceiving the duties and obligations of morality, but can never hinder these duties from existing (T 3.1.1.25; SBN 467-8)

Because Hume had already suggested that incest in animals has "not the smallest moral turpitude and deformity" (T 3.1.1.25; SBN 467-8), he is clearly providing a *reductio* of his opponent's view: if moral good and evil were a matter of whether or not certain relations between people or things obtained, then, since animals engage in some of the same relations as humans (namely, incestuous relations), such animals, like incestuous humans, should be judged to be immoral. But no one makes such a judgment about animals, so morality must consist in something other than relations, and it must be judged through some faculty other than reasoning.

However, although Hume presents incest as a case in which animals are exempt from moral evaluation, we should not take that to mean that animals are *always* exempt from moral evaluation. According to Hume, his opponent holds the mistaken view that "every animal must be susceptible of all the same virtues and vices" as humans. But Hume's denial that animals have all the same virtues and vices as humans does not commit him to the

claim that animals have *no* virtues and vices like humans'. The passage thus leaves open the possibility that animals might, in other cases, be open to moral approval or disapproval, even if they themselves are not motivated by a moral sense or moral principles.

Let us take it, then, that Hume's account of morality allows that animal reason could be virtuous. According to Hume's account of virtue, two criteria would have to be satisfied for it to be so counted: (a) the sentiment excited in those affected by the utility of animal reason (either the animal itself, or other animals, or humans) must be like that excited by the utility of a human character trait (rather than that excited by the utility of an inanimate object), and (b) a human observer must be able to share that feeling through sympathy. Moreover, since in criterion (a) it is clear that those affected could be either animals or humans, we must consider those cases separately.

Let's consider, first, a case where those affected by animal reason are humans; suppose that a horse trainer benefits from the ability of a horse to learn to come to the barn when it is feeding time, saving the trainer the bother of having to go get the horse. Will a human affected by the utility in this case feel the sort of sentiment typically reserved for the utility of human character traits, or will the feeling be more like that excited by the utility of a sharp knife? In the footnote quoted earlier, Hume says that "there are a numerous set of passions and sentiments, of which *thinking rational beings* are, by the original constitution of nature, the only proper objects" (EPM 5.1, n17; SBN 213, n1; my emphasis). Since animals in Hume's view are certainly "thinking rational beings," we should conclude that the feeling excited by their reasoning is *not* like the feeling excited by the usefulness of an inanimate object; in other words, criterion (a) is satisfied. And since the creature affected in this example is a human, a second human observer can surely come to share this feeling through sympathy; so criterion (b) is also satisfied. Thus it seems that animal reasoning *should* be classed as a virtue in such cases.

What about cases where those benefited by animal reason are other animals? In such cases, to determine whether (a) is satisfied, we must settle whether *animals* can feel the passions and sentiments which *humans* typically feel when they observe the utility of a thinking rational being. If not, then there is no feeling to be communicated by sympathy to a human observer; that is, criterion (b) won't be relevant. Therefore there will be no judgment at all by the human observer concerning the virtue of the animal action. But if so, then to determine if criterion (b) is met, we must ask whether Hume thinks a sentiment felt by a *non-human* animal can be shared through sympathy with a *human* observer.

Hume does not explicitly address whether animals respond in the same way as humans to the utility of a thinking being. However, in “Of the love and hatred of animals,” he writes: “As animals are but little susceptible either of the pleasures or pains of the imagination, they can judge of objects only by the sensible good or evil, which they produce, and from *that* must regulate their affections towards them” (T 2.2.12.3; SBN 397). This implies that animals *are* capable of judging that something is useful to them. Thus, Hume would say, when an animal is immediately benefited by the reasoning displayed by another animal, it will feel love towards the reasoning animal. Of course, if the benefit is not immediately apparent, the animal will not feel any affection, because it lacks the imaginative capacity to follow out the train of ideas which would lead it to conclude that the action was beneficial.

So let us assume that animals, just like humans, feel pleased when they are positively affected by another animal’s ability to reason. Can a human observer come to share that emotion through sympathy? The texts suggest that Hume would say no, for in the second *Enquiry*, he emphasizes that we feel this sympathy with other *humans*: he calls it a “warm concern for the interests of our species,” a feeling we extend to our “fellow-creatures” (EPM 5.39; SBN 225). Thus, Hume evidently thinks we cannot sympathize with another animal’s pleasure.

However, we should note a certain qualification in Hume’s account of sympathy. Hume thinks that we naturally sympathize when we contemplate the effects of a trait on those affected by the trait—so long as those affected either resemble us, are close to us in time or place, or are related to us by blood (T 2.1.11.5-6; SBN 318).³¹ Yet Hume thinks that sympathy can be “corrected” by judgment, so as to extend it to people in remote places or distant times, people for whom we do not naturally sympathize. And if Hume’s analogical argument showing the similarities between animals and humans is successful, he will have established that animals are much more like us than usually thought. So doesn’t it follow that we could and perhaps should extend sympathy to animals, too, just as we can extend it to people of more remote times and places? If so, then when animal reasoning positively affects other animals, we too can appreciate its utility, and morally approve of it. Animal reasoning, then, would count as a virtue, just as human reasoning does.

One might think that Hume could not possibly allow any extension of the principle of humanity to animals, given his account of how extensive sympathy works. Hume says that the reason we extend sympathy to those less near to us, such as Marcus Brutus, is that “We know, that were we to approach equally near to that renown’d patriot, he wou’d command a much higher degree of affection and admiration” (T 3.3.1.16; SBN 582). In the second *Enquiry*,

he compares the way judgment corrects sympathy to the way judgment can correct a distant object's appearing smaller, writing that "The same object, at a double distance, really throws on the eye a picture of but half the bulk; yet we imagine that it appears of the same size in both situations; because we know, that, on our approach to it, its image would expand on the eye, and that the difference consists not in the object itself, but in our position with regard to it" (EPM 5.41; SBN 227-8). In other words, we only correct and extend sympathy when we realize that if we actually *were* closer to the person, we would be sympathetic. And, Hume might say, we simply *never* are sympathetic towards animals, so there is no reason to correct that natural response. But this simply does not seem plausible. Surely the emotions of animals are frequently communicated to those who are close them—the owner of a dog which displays joy in running around on a sunny day may come to share that joy. To argue that humans never display Humean sympathy towards non-human animals would surely be inconsistent with Hume's empiricist methodology.

Thus, Hume should admit that sympathy might sometimes extend beyond the limits of our own species and that it is not, strictly speaking, a sentiment only of *humanity*. The upshot, then, is that animal reasoning that benefits humans or other animals should be counted as a virtue, just as beneficial reasoning in humans is a Humean virtue. And since Hume does, in general, want to emphasize the similarities between animals and humans, taking animal reason to be a virtue would surely be in the spirit of Hume's views on animal reason.

NOTES

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1 For the sake of brevity, I shall henceforth refer to non-human animals simply as "animals."

2 References to Hume's works will use the following abbreviations: "EHU" = David Hume, *An Enquiry Concerning Human Understanding: A Critical Edition*, ed. Tom L. Beauchamp (Oxford: Clarendon Press, 2000); "EPM" = David Hume, *An Enquiry Concerning the Principles of Morals: A Critical Edition*, ed. Tom L. Beauchamp (Oxford: Clarendon Press, 1998). These citations are followed by section and paragraph number, as well as page references to *Enquiries concerning Human Understanding and concerning the Principles of Morals*, ed. L.A. Selby-Bigge, 3rd ed., revised by P. H.

Nidditch (Oxford: Clarendon Press, 1975), abbreviated as "SBN." "T" = David Hume, *A Treatise of Human Nature*, ed. David Fate Norton and Mary J. Norton (Oxford: Oxford University Press, 2000). These citations will be followed by book, part, section, and paragraph number, as well as page references to Hume, *A Treatise of Human Nature*, ed. L. A. Selby-Bigge, 2nd ed., revised by P.H. Nidditch (Oxford: Clarendon Press, 1978). "ES" = David Hume, *Essays Moral, Political and Literary*, ed. Eugene F. Miller (Indianapolis: Liberty Classics, 1985); "DNR" = David Hume, *Dialogues Concerning Natural Religion*, ed. Richard H. Popkin, 2nd ed. (Indianapolis: Hackett, 1998).

3 Indeed, most commentators who have looked at Hume's views on animals have been more interested in explaining the moral differences between humans and animals than in examining his views on animal reason. See Denis Arnold, "Hume On the Moral Difference Between Humans and Other Animals," *History of Philosophy Quarterly* 12 (1995): 303–16; Antony E. Pitson, "The Nature of Humean Animals," *Hume Studies* 19 (1993): 301–16; Michael J. Seidler, "Hume and the Animals," *Southern Journal of Philosophy* 15 (1977): 361–72; and Knut Erik Tranöy, "Hume on Morals, Animals, and Men," *The Journal of Philosophy* 56 (1959): 94–102. Recent papers which do address Hume's views on animal reason include Tom L. Beauchamp, "Hume on the Nonhuman Animal," *Journal of Medicine and Philosophy* 24 (1999): 322–35; Barbara D. Massey and Gerald J. Massey, "Genetic Inference: A Reconsideration of David Hume's Empiricism," in *Inference, Explanation, and Other Frustrations: Essays in the Philosophy of Science*, ed. John Earman (Berkeley: University of California Press, 1992), 72–83; and Susan G. Sterrett, "Too Many Instincts: Contrasting Philosophical Views on Intelligence in Humans and Non-Humans," *Journal of Experimental and Theoretical Artificial Intelligence* 14 (2002): 39–60. In her 1994 Presidential Address to the American Philosophical Association, Margaret Wilson dismissed Hume's comments on animal reason with the remark that "there is less here than meets the eye" (Margaret Dauler Wilson, "Animal Ideas," *Proceedings and Addresses of the American Philosophical Association* 69 [1995]: 19).

4 David Owen, *Hume's Reason* (Oxford: Oxford University Press, 1999), 197.

5 Owen, 63.

6 In what follows, I am indebted to David Owen's discussion of Humean intuition and demonstration, 93–8.

7 Owen, 91.

8 Owen, 84.

9 Owen, 84.

10 Owen, 97.

11 In fact, at EHU 4.2 (SBN 25), Hume characterizes matters of fact as propositions the contraries of which do not entail a contradiction. He does not explicitly assert that the contrary of a demonstratively known proposition does entail a contradiction. However, Cleanthes makes such a claim in the *Dialogues Concerning Natural Religion*, and his views here are in every other respect identical to the views

Hume puts forward in the first *Enquiry*: “I shall begin with observing that there is an evident absurdity in pretending to demonstrate a matter of fact, or to prove it by any arguments *a priori*. Nothing is demonstrable unless the contrary implies a contradiction. Nothing that is distinctly conceivable implies a contradiction” (DNR 55).

12 See Descartes’s 1646 letter to the Marquess of Newcastle (CSMK III 304; AT IV 576) and his 1649 letter to Henry More (CSMK III 365; AT V 276–7). These and subsequent references to CSM and CSMK give the volume and page number for *The Philosophical Writings of Descartes*, vols. 1 and 2, trans. John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge: Cambridge University Press, 1984 and 1985), and vol. 3, trans. John Cottingham, Robert Stoothoff, Dugald Murdoch, and Anthony Kenny (Cambridge: Cambridge University Press, 1991). References to AT give the volume and page number for *Oeuvres de Descartes*, 12 vols, ed. Charles Adam and Paul Tannery (Paris: Vrin/C.N.R.S., 1957–1976; reprint, Paris: Vrin, 1996).

In both letters, Descartes observes that animals have organs similar to those of humans, and that since humans have sense-perceptions, animals could be expected to, too. For further discussion of Descartes’s handling of such arguments by analogy, see Gerald J. Massey and Deborah A. Boyle, “Descartes’s Tests for (Animal) Mind,” *Philosophical Topics* 27 (1999): 87–146.

13 One might wonder whether perhaps this second type of action is, in fact, fundamentally different from actions learned through experience. In the first *Enquiry*, Hume says that instinct “teaches” the bird its nesting and egg-incubating behavior (EHU 9.6; SBN 108), and in the *Treatise* he says that animals “discover” what to do for their self-preservation (T 1.3.16.5; SBN 177). Such language might seem to suggest that even animals’ “extraordinary instances of sagacity” are learned skills, and thus that all of an animal’s behavior is ultimately based on observation and experience. One might object, then, that Hume’s distinction between two types of animal action is merely a distinction without a difference.

However, although “discovery” of knowledge *can* involve observation and experience, it does not have to. Surely an innatist could claim that innate knowledge must be discovered, without being committed to the claim that the knowledge is learned through experience. For example, writing in the Fifth Meditation about the innate ideas of triangles and God, Descartes says, “Some of the things I clearly and distinctly perceive are obvious to everyone, while others are discovered only by those who look more closely and investigate more carefully; but once they have been discovered, the latter are judged to be just as certain as the former” (CSM II 47; AT VII 68). An innatist may well claim that some initial stimulus is required for the innate knowledge to be discovered. But this process is nonetheless different from that by which creatures “gradually, from their birth, treasure up a knowledge of the nature of fire, water, earth, stones, heights, depths, &c., and of the effects which result from their operation” (EHU 9.2; SBN 105).

14 Massey and Massey, 75 and 79.

15 In the *Dialogues Concerning Natural Religion*, Cleanthes characterizes the world as a machine, and what he has in mind in doing so is the “curious adapting of means to ends, throughout all nature” (DNR 15), which Philo later glosses as “order, arrangement, or the adjustment of final causes” (DNR 17). If this is what Hume finds distinctive about mechanism (rather than its regularity), then instinct is mechanical in the sense that it is a means to achieve a certain end. On this reading, too, reason will count as an instinct, since reason is a means to achieve a *variety* of ends. But it can also be contrasted with instinct, since instincts are means to achieve *particular* ends.

16 My thanks to Susan Sterrett for pointing out the importance of this passage.

17 Massey and Massey, 76.

18 Of course, Descartes’s view of animals is otherwise radically different from Hume’s.

19 Beauchamp, 327.

20 Of course, Hume has established in section 4 of the *Enquiry* that no one, not even a philosophic genius, can use reasoning, as traditionally understood, to establish an inference concerning matters of fact (EHU 4.18; SBN 35).

21 On Hume’s account of belief formation, this is presumably because the passion of surprise imbues the story with a greater degree of vivacity, making it more believable.

22 What about one’s approval of one’s *own* useful or agreeable character traits, where no one else is affected? In such a case, it does not seem that sympathy has space to operate, since sympathy involves coming to feel the same passions as others. Perhaps Hume could say that this is a limiting case of sympathy.

23 Owen, 212.

24 Owen, 220.

25 It may also be agreeable, but I think it is easier to find examples in which it is useful.

26 Tranöy, 95.

27 Denis Arnold argues that because animals lack the sentiment of humanity, which is required for morality, they cannot act morally, although he allows that if non-human animals do turn out to have a “species-wide sentiment akin to the sentiment of humanity,” then they could be moral agents (Arnold, 313). Tom Beauchamp asserts that the moral sense is a “psychological ability to judge morally” which is “distinct from both reason and sense-perception,” and which “appears to be entirely lacking in nonhuman animals” (Beauchamp, 328). Michael J. Seidler also reads Hume as claiming that the primary difference between humans and animals is that humans, but not animals, have a moral sense (Seidler, 368–9). Another camp sees the Humean moral sense as relying on the ability to take a general point of view and, thus, as depending fundamentally on reason.

On this view, animals lack a moral sense because their reason is too limited for them to develop the general point of view (Pitson, 303–4; Tranöy, 100).

28 Tom Beauchamp draws a distinction between making moral judgments and being subject to moral evaluations by others (Beauchamp, 328). Beauchamp identifies being judged morally with being a moral agent, writing that “When we judge morally, Hume thinks we are judging a mental quality in an individual—in particular, a passion, desire, or principle that motivates the individual’s action” (Beauchamp, 328). Because Beauchamp thinks Hume allows that animals “have some of the qualities constituting virtues,” he allows that Humean animals are “in some degree moral agents, however minor the degrees may be” (Beauchamp, 328). As will become clear, I agree with Beauchamp that animals can have Humean virtues, though I think more argument is needed to establish this than Beauchamp offers. However, I disagree with Beauchamp’s conclusion that animals can be “moral agents,” since Hume holds that the motives of actions (for humans as well as animals) may themselves be involuntary.

29 David Fate Norton, introduction to David Hume, *A Treatise of Human Nature* (Oxford: Oxford University Press, 2000), 179.

30 Pitson, 305. Pitson says that his point is not “that Hume would deny the very possibility of an animal possessing virtue”; after all, Hume’s example in the first *Enquiry* of how we may conceive of a virtuous horse shows that the two ideas are not inconsistent (Pitson, 309). But, Pitson continues, “it is equally clear . . . that Hume no more believes that there *is* such a thing as a virtuous horse than that our ability to join together the ideas of gold and mountain establishes the existence of any golden mountain” (Pitson, 309). I see no evidence in Hume’s works for grouping animal virtues with golden mountains, and in what follows, I use ordinary examples of human and animal interaction to show that it is not difficult to explain at least one example of an animal virtue on Humean principles.

31 For a helpful paper on Humean sympathy and extensive sympathy, see Kate Abramson, “Correcting *Our Sentiments* About Hume’s Moral Point of View,” *Southern Journal of Philosophy* 37 (1999): 333–61.