Povinelli and Vonk (2006) are justified and suggest exciting new avenues of future empirical research.

The essays in this volume represent the current state of play in the field at its highest level. For this reason, I believe, the volume will be of value to both philosopher and scientific researcher alike. In addition, I am hopeful that the essays, by virtue of raising new and exciting ideas and reinvigorating important old debates, will come to serve as a welcome invitation and a useful springboard for future philosophical reflections on the nature, the existence, and our knowledge of animal minds.

CHAPTER I

What do animals think?

Dale Jamieson

1. Introduction

You may have noticed that the title of this essay is ambiguous. Asking what animals think could be part of an inquiry into animal public opinion, focusing perhaps on such questions as what apes think about the Endangered Species Act or whether frogs prefer Tom Waits to Leonard Cohen. Or if you read the right punctuation into the title you might see it as an exclamation of surprise: “What! Do animals think?” What I am actually concerned with in this essay is how we should think about specifying exactly what it is that a particular animal thinks on a particular occasion. Some would say that I am concerned with the problem of content as it applies to non-human animals.

The first response to the question of what animals think may be to say that they think thoughts. This is harmless, so long as we do not succumb to the temptation of reading psychology or ontology directly off of the language. However, it is downright harmful if, after assimilating thinking to having a thought, we go on to suppose that having a thought is the same as having a propositional attitude. At the outset, anyway, I want to leave open a wide range of possibilities including whether animal thinking implies having propositional attitudes; and if it does, the meaning, status, and nature of these propositional attitudes. For these reasons, unless I say otherwise, I will use expressions such as “thinking” and “having a thought” in neutral, common-sense ways, and I will take believing and desiring as examples of thinking, and beliefs and desires as examples of thoughts.

Why should we be interested in what animals think? I am interested in this question because of how it relates to other questions. In earlier work I have argued that a plausible theory of value is one which distinguishes

Thanks to Beatrice Longuenesse for her comments on an earlier draft, and especially Robert Lurz for his probing questions, not all of which I have been able to answer.
things of primary value from things of derivative value. This is not a distinction in the degree or extent of value, but in the source of value. What is of primary value are those creatures who we take to be animate and sentient, and this includes many non-human as well as human animals. We owe moral duties to such creatures, but exactly which moral duties depend on the creature’s interests, and this in turn is associated with the character of the creature’s psychological life. In order to know what our duties to animals are, it is not enough to know that they think, we must also know something about what they think.

An additional reason for being interested in what animals think is because it is unsatisfying to be told that we have good reasons for supposing that animals think even though we know very little about what they think. This is a little like being told that Sean is beautiful by someone who has never seen Sean. In both cases the claim could be both true and justified. There may be inductive reasons for the claim, a highly credible authority may testify that the claims are true, or the claims may follow from a well-confirmed scientific theory. Nevertheless in the normal case we expect there to be an association between the general or abstract claim, and more specific claims that bear on it directly. When this is not the case it is somewhat disconcerting.

For both of these reasons my question is important. Many of the considerations I adduce are not new, but they have not often been systematically brought to bear on the question that I am asking. Moreover, I believe that some of the most important lessons of the philosophy of mind of the second half of the last century have faded, and that there is some point in being reminded of them. As we shall see, answering my question turns out to be surprisingly difficult, and may lead us to question some conventional views about what we are doing when we attribute thoughts to human as well as non-human animals.

Before beginning in earnest, I want to clarify the language that I will be using and confess to some simplifications. I will sometimes use "humans and animals" to mark the same distinction as that between human and non-human animals. I will also assume, unless I note otherwise, that humans are language-users and non-humans are not.

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2 There are of course important questions here about the role of justification and correctness in these "takings," some of which I discuss in Janieon (2002), Essay 4.
3 While there are analogies between these two cases there are also dissimilarities. It is natural to suppose that Sean’s beauty supervenes on properties that are in principle observable, while the claim that animals think is a generalization from particular instances of animal thinking.

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2. The Problem

The fundamental problem we face is that most people are committed to the following pair of propositions:

1. Many animals think.
2. Exactly what animals think on particular occasions cannot reliably be characterized.

There are many reasons that figure in the widespread endorsement of (1). For many or most cases, when it comes to anticipating, explaining, and modifying their behavior, supposing that animals think works about as well as supposing that humans think (it seems equally natural to attribute to Grete the dog and Riki the infant the desire to play – perhaps with each other). Many animals behave in ways that are similar to humans, and there is also remarkable physiological and neurological similarity and continuity between us and at least many of them. It would be surprising, perhaps even the biological equivalent of the Immaculate Conception, if we were nature’s only minded creatures. A further consideration comes from evolutionary theory. Some influential accounts of the evolution of mind appeal to the sorts of environmental and social problems that our ancestors would have faced relating to the pressures of group living and the need to engage in cooperative hunting and foraging. Since the ancestors of many other animals faced similar problems in similar environments, it is plausible to suppose that the same evolutionary forces that selected minded human ancestors selected minded ancestors of other closely related animals as well. Finally, attributing mental states to animals is generally part of an outlook that recognizes them as morally significant. While most people are not animal rights activists, they do think it matters morally how animals are treated, and a commitment to (1) coheres with this commitment. While these considerations may or may not, singly or together, with or without further commitments, constitute a full justification for (1), they are certainly important in explaining why the commitment to (1) is so ubiquitous.

The ground of our belief in (2) is less obvious, but it is brought out clearly in the following passage from Stich (1983/1989).

Suppose... that Fido is in hot pursuit of a squirrel... A moment later we see Fido craning his neck and barking excitedly at the foot of an oak tree... To
It may be replied that knowing the causal roles that black holes play constitutes reliably characterizing them, but this is not plausible. I may know that it was Kelly who broke up my marriage, but if I know nothing else about Kelly (even Kelly's gender), then surely I have not reliably characterized Kelly when I say that Kelley is the person (?) who broke up my marriage, even though I certainly know that Kelly exists.  

But suppose that we were to agree that in specifying Kelly's causal role (at least with respect to my marriage) I have reliably characterized Kelly, and thus Kelly's existence has been verified. If we were to say this, then it seems just as plausible to say that animal thinking is also verified since it seems plausible to say that on particular occasions we know the causal role of what an animal thinks in producing the animal's behavior (think, for example, of Fido). If knowing something's causal role is sufficient for reliably characterizing it, then we can reliably characterize what an animal thinks on many particular occasions, and thus, on this view, we are entitled to say that animals think.

Whichever way we go on the question of whether knowing something's causal role is sufficient for reliably characterizing the thing in question has unwelcome consequences for the eliminativist. For the eliminativist claims that (2) (with some further assumptions) is sufficient for rejecting (i), but my arguments show that either (2) fails to be sufficient for rejecting (i), or many other important beliefs will have to be rejected as well.

There is of course more to say. For example, an eliminativist could attempt to sever the analogy between (3) and (4), and (i) and (2), perhaps because the logic of the sentences is not analogous or because thoughts are not like physical objects. However, given that verificationism is generally down on its luck, I will put these possible rejoinders aside and move on to other views that might be thought to be more plausible.

Davidson's version of eliminativism is more sophisticated. While his arguments can be reconstructed in a number of different ways, this gets to the heart of what he is asserting:

(i) In order to think, a creature must have a full range of propositional attitudes.

(ii) Having a full range of propositional attitudes rests on having language.

(iii) Animals do not have language.

(iv) Therefore, animals do not have a full range of propositional attitudes.

(v) Therefore animals do not think.

The intuitive core of Davidson's argument is that ascribing a single belief to something requires ascribing "endless" further beliefs to it (as we saw in the Fido case), and having "endless" further beliefs requires such a sophisticated ability to make discriminations that only language is complex enough to do the trick.

Premise (i), which expresses Davidson's commitment to holism, is controversial, but I will not challenge it here. Instead I will focus on premise (ii).

On the face of it, (ii) is not very plausible. It does not seem difficult to imagine languageless creatures who have propositional attitudes. Nevertheless, Davidson argues that this is wrong. Languageless creatures do not have propositional attitudes because (a) language is required for a belief to have content and identity; and (b) one must be able to have beliefs about beliefs in order to have any beliefs at all, and having beliefs about beliefs requires language.

There are at least two reasons why the first argument (a) for supposing that (ii) is correct seems implausible. First, while it may be plausible to suppose that having a representational system is necessary for a belief to have content and identity, it is not obvious that the representational system must constitute a language. Davidson has arguments that are supposed to show that only a language has the associative and expressive power required for having propositional attitudes, but again these are controversial. Moreover, even if it is true that propositional attitudes require a representational system with the associative and expressive power of a language, why must this be a language that is deployed publicly and interactively rather than occurring simply as a language of thought? It would be consistent with this view to suppose that many animals have languages of thought that play a role in determining the content of their thinking, but that these thoughts are not expressed publicly in language. Finally, and more controversially, even if we suppose that language is required for an organism to have propositional attitudes, why must it be the organism rather than the organism's interpreter who is the language-user? On this view (related to the interpretivism that I will discuss in section 3.4), propositional attitudes can be thought of as co-creations between the organisms...
to whom they are attributed and the language-users who attribute them.

Davidson's second argument (b) for supposing that having propositional attitudes rests on having a language is also implausible. This argument supposes that one must be able to have beliefs about beliefs in order to have any beliefs at all, and that having beliefs about beliefs requires language.

Davidson's idea is that if I believe that P, then I would be surprised to discover that not P. If I am surprised to discover that not P, then I come to believe that my original belief was false. This involves having the second-order belief that my first-order belief was false, which involves having the concept of belief.

One can question almost every claim and step in the argument. On the face of it, it seems implausible to suppose that having a first-order belief requires having a second-order belief, and that having such a second-order belief is required for surprise. Animals often behave in ways that are described both by ordinary people and scientists as surprised, and this doesn't seem to require second-order beliefs. It is easy to imagine Grete expressing surprise that the bone which she previously buried in some particular place is not there when she returns to dig it up. She expresses her surprise through barking, running in circles, general agitation, looking up at her guardian, and so forth. While it seems plausible to say in such a case that Grete is surprised that her bone is not there, this attribution does not seem to make essential reference to Grete forming a second-order belief that her first-order belief about the location of the bone was false. Attributing surprise to Grete in this case seems to make reference only to her behavior, expectations, and state of the world.

Even if we supposed that first-order beliefs do require second-order beliefs, it would seem that some animals satisfy this criterion. Although I cannot pursue this point here, it has been persuasively argued that deception, play, and self-recognition (attributed to various apes, monkeys, canids, and cetaceans) all involve second-order beliefs.

In order for Davidson's view to be convincing, it must be shown that several options that on their face seem plausible are not really options at all. Most of us would want to distinguish the following: Grete having a belief that we don't know how to interpret, Grete having a belief about bones that is different from our belief about bones, and Grete and us sharing a belief about bones. However, if Davidson is right, these distinctions collapse: they are not viable, at least as ordinarily understood.

Eliminativism is a view that is implausible on the face of it, and embracing it requires accepting implausible philosophical doctrines such as verificationism, or arguments that are very difficult to defend. It is not surprising that, except for some hold-outs, eliminativism has been in retreat since the seventeenth century.

3.2. Wet Eliminativism (weaken (1))

A second approach is to embrace a weaker form of eliminativism. Rather than rejecting (1) outright, this view accepts (1) in some weaker form while rejecting it in another stronger form. As Stich concludes in an earlier article (1979, p. 28): "Do animals have beliefs? To paraphrase my young son: 'A little bit they do. And a little bit they don't.'"

The idea here is that something belief-like goes on with many animals and that is why we find it natural to say that they have beliefs: they behave in a goal-directed way, they discriminate between various stimuli, and so on. But the fact that these apparent beliefs cannot be reliably characterized indicates that they are not beliefs in the same sense in which humans have beliefs. Hence animals "a little bit" have beliefs and "a little bit" do not, and animal thinking is "a little bit" eliminated and "a little bit" not.

Wet eliminativism seems ambiguous between two general views. On one of these views, having a belief comes in degrees. Humans and other animals both have beliefs, but humans have beliefs to a greater extent than other animals. On the second general view it is only humans that have beliefs. Animals have states that are similar to beliefs in some respects, but they are not beliefs at all.

The first of these two general views of wet eliminativism is itself ambiguous between two readings: is it the having of beliefs that comes in degrees, or is it the beliefs that are matters of degree? The first of these readings borders on the unintelligible. Suppose that we are untroubled about saying that both Grete and I believe that Paula is at the door. It would then be strange to suppose that while Grete and I have a belief in common, I have it to a greater extent than she does. Of course, I may hold the belief more strongly than Grete does (or vice versa); there is no mystery about degrees.

99 See, e.g., Tinkelpaugh (1918).
100 See, e.g., Allen and Bekoff (1997), Tomasello et al. (2003), and Whiten and Byrne (1997).
of belief in this sense.\textsuperscript{13} We may even assign a metric (perhaps related to the probability calculus) and say that my degree of belief is .9 while Grete's is .8. However, it doesn't follow from our having different degrees of belief in this sense that our having of the belief we have comes in degrees. On the second reading of this view it is the belief (rather than the having) that comes in degrees. On this reading both Grete and I have the belief that Paula is at the door in the same sense, but my belief is more of a belief than Grete's belief. While it may seem plausible to suppose that Grete's belief that Paula is at the door is in some ways different from my belief that Paula is at the door, it is not easy to see how such differences would be mapped onto a scale such that my belief is more of a belief than Grete's belief. In any case it seems strange to say that while Grete and I share a belief, my belief is more of a belief than her belief.

The second general view that a wet eliminativist may hold is that although animals do not have beliefs, they have states that are similar to beliefs in some respects. While this view may be plausible it cries out for development. The challenge is first to identify the respects in which animal states are similar to human beliefs, and then show why these are not sufficient for classifying the animal states as beliefs. Since this goes against the widely shared intuition that humans and animals have beliefs in the same sense (if not exactly the same beliefs), the wet eliminativist has a serious burden of proof to discharge in this case.

There is a third general view that a wet eliminativist could hold. On this view animals have states that are similar to the states that we have when we have beliefs, but whether or not a state counts as beliefs on a particular occasion depends on how similar it is to a belief state that we would be in on such an occasion. So, for example, it is true that Grete believes that Paula is at the door on a particular occasion on condition that Grete is in a state sufficiently similar to the state that I am in when I too believe that Paula is at the door. This view moves away from eliminativism by sometimes embracing (1), and on those occasions generally rejecting (2).

An obvious problem for this view is to provide a well-motivated account of what makes an animal state sufficiently similar to a human belief state on a particular occasion to count it as a belief. One response is to say that similarity on an occasion is determined by context. For example, if we're interested in explaining Grete's behavior, then we might say that our states are similar enough on this occasion for it to be true that Grete believes that Paula is at the door. If on the other hand the context is one in which we are interrogating Grete's entire "worldview," then on this occasion the similarities would not be sufficient for it to be true to say that Grete has this belief (or presumably, any beliefs at all).

Something has gone badly wrong. Context may be powerful enough to affect how to specify a belief correctly (as we will see in section 3.4), but it is not powerful enough to transform a non-belief state into a belief, or a non-believer into a believer (and presumably back again). Either Grete's state is a belief or it is not and either she is a believer or she is not, whatever wooly (or non-wooly) questions I may be asking. What has gone wrong is supposing that attributing beliefs to animals is really a disguised way of comparing their states to ours. It is not. Suppose that we weren't around, either because we had never evolved, or because we had decided to take a permanent vacation from the planet. What, then, would we say about Grete's states?\textsuperscript{24} Whether an organism has beliefs depends on the organism and its environment, not on the relations between its states and ours.

In this discussion of wet eliminativism, I have followed Stich in focusing on belief as an instance of thought. To some extent our intuitions are affected if we focus on thinking rather than thought, and on specific forms of thinking rather than thinking in general. For example, it may seem more plausible to suppose that thinking comes in degrees rather than that specific forms of thinking (such as believing or desiring) come in degrees. Humans think to a greater extent than animals, it might be supposed, because humans engage in more types of thought (including higher-order thought) than other animals. However, even if this is plausible it would not imply that with respect to a particular form of thinking that is shared by humans and other animals (e.g., believing or desiring) humans have this form of thinking to a greater extent than other animals, much less that it would be the only form of thinking worthy of the name. Thus, this view is consistent with the full-throated endorsement of (1). Nor would this view, even if true, help to explain why (2) seems false with respect to humans but true with respect to animals. However intuitive wet eliminativism may appear, it seems to do little to resolve the tension between (1) and (2).

\subsection*{3.3. The brute content view (weaken (2))}

The brute content view resolves the tension between (1) and (2) by weakening (2), and claiming that in principle if not in practice we can reliably characterize what animals think on particular occasions. On this view there

\textsuperscript{13} See Jeffrey (1983).

\textsuperscript{24} Of course, answers can be given, and philosophers being what they are, counterfactuals loom. When the question of whether a Springer Spaniel believes that Paula is at the door is supposed to turn on heavy-duty metaphysics, you know that something has really gone badly wrong.
is some fact of the matter about exactly what animals think on particular occasions, though empirical circumstances or general difficulties about knowledge of other minds may stand in the way of our knowing exactly what it is. Such considerations may help to explain why many people find (2) plausible. However, despite difficulties that may arise in practice, in principle we can reliably characterize what animals think.

One version of the brute content view is the brain-writing view. On this view there is a “language of thought” or some other system of mental representation encoded in the nervous systems of all those creatures (human and non-human) who have thoughts. There are different theories about how nervous systems encode representations and about the exact structure of the system of mental representation that the nervous system instantiates. What these views share is the idea that an animal’s brain is (metaphorically speaking) a text. If we cannot on a particular occasion reliably characterize what an animal thinks it is only because we cannot (yet) read the text. The information is there, in the animal’s brain, and in principle can be reliably characterized.

A second version of the brute content view is one that I shall call Fregelian. Like the brain-writing view this view holds that there is some fact of the matter about what an animal is thinking on a particular occasion that can, in principle, be reliably characterized. Unlike the brain-writing view, which holds that what an animal thinks can in principle be read off from the animal’s brain, the Fregelian view holds that what an animal thinks can only be approached through the animal’s mind. While both views could be materialist in their ultimate ontologies, their proximate ontologies are different, as are their views about how we can come to know what an organism is thinking.

Returning to Stich’s example of Fido helps us to see what these views have in common, how they are different, and how they attempt to resolve the tension between (1) and (2). When we last checked in, Stich was puzzled about what exactly Fido believed when, after chasing a squirrel up an oak tree, he sat at the foot of the tree barking. After posing some apparently unanswerable questions, Stich’s puzzlement turned to skepticism about whether there was any fact of the matter about what exactly Fido believed. The mistake enters, according to the brute content view, when puzzlement

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65 This term is drawn from Dennett (1975). I am greatly indebted to his discussion there and elsewhere.
66 The term “language of thought,” as well as the brain-writing view itself, was brought to prominence by Fodor (1975).
67 This may be an unhappy name for this view. I call it thus because it can be seen as a version of a view in which sense determines reference.
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turns to skepticism. There is some fact of the matter about what Fido believes, even if Stich on this occasion does not know what it is. On the brain-writing view, the belief is constituted by mental representations in Fido’s brain that in principle could be read off if we were smart enough to do so and had the proper equipment. According to the Fregalan view, our ignorance may be more immediately intractable (new, shinier equipment will not help), but nevertheless there is some fact of the matter about what Fido believes that is present in Fido’s mind, which we can discover in much the same way in which we discover what is present in the minds of humans. Since introspection is the epistemological gold standard for such views, in practice it may be difficult for us to know what Fido is thinking, but in practice it may also be difficult for us to know what our boss is thinking on a particular occasion. However, in principle in both cases the contents of thought can be reliably characterized, using roughly the same means. Thus the relation between (1) and (2) seems to be basically the same in both humans and other animals.

There are several reasons why people find brute content views plausible. First, standard realist views in most domains hold that there can be a robust distinction between what is the case and what we are currently in a position to know. And whatever discomfort there may be between holding (1) and (2), if we have good general reasons for supposing that animals think, then the fact that in practice our access may be poor on particular occasions is no reason to give up our belief that they think, especially if we have reason to think that in principle their thought can be reliably characterized. Second, many people seem to accept a particular model of our knowledge of other minds that may provide to explain the residual differences between our knowledge of other human minds as opposed to our knowledge of animal minds. On this model people tell us what they think, while we infer the thoughts of animals and other languageless creatures. The fact that we can make these inferences about animals is grounds for weakening (2), even though we are better at grasping the content of human minds than we are with animal minds. Finally, in our own case we have a strong intuition that part of what it is for us to be minded is that we can determine the
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interpretivist's answer, in varying degrees of complexity and sophistication, is that we're interested in making others intelligible and in living with them productively. If this is what we're up to, then all sorts of things will bear on our attributions: background knowledge, appreciation of context, specific information about the human or animal, familiarity with his or her way of life, and general knowledge about the relation between mental states and behavior. On this view attributions may be true or false, but the truth-makers will be connected to some idea of success. In short, content attributions are one way among others of making ourselves and others intelligible; they aren't just about corresponding to what's in the mind or brain, they have important pragmatic dimensions as well.

The core of interpretivism is the idea that there is a deep connection between what an organism thinks and what thoughts an interpreter would attribute to the organism. This characterization is both vague and rough, and there are many complications that I will put aside here, including these: What is the nature of the "deep connection"? Is it only organisms that can think? What are the relevant characteristics of the interpreter? What are the standards of correctness that apply to the interpreter's attributions?

Three features of interpretivism are especially important for our purposes. The first is the contrast between interpretivism and the brute content view. Rather than content being written in the brain or dancing before the mind's eye, it is the product of an interaction between an organism and an interpreter. Second, while much of our thinking about the mind privileges the first-person point of view, interpretivism privileges other points of view. It is from the second- or third-person perspective that we answer questions about what an animal is thinking on a particular occasion. Finally, interpretivism resolves the tension between (1) and (2) in a way that is so simple that it will strike some people as a cheat. Since our reliably characterizing what an animal thinks on an occasion is "deeply connected" with supposing that it is minded, accepting (1) implies rejecting (2) (on at least most plausible interpretations).

It is worth distinguishing two different strands of interpretivism, although I will not go into detail about them. Dennett's interpretivism is an expression of empiricist skepticism about "inner" entities such as content and qualia. He admits to beginning with a "tactical" choice, declaring his "starting point to be the objective, materialistic, third-person world of the physical sciences." He doesn't claim to refute those who take the first-person perspective as the starting point, simply saying that "we beg the question against each other." Nevertheless Dennett does not think his choice is arbitrary: "we can see more and better if we start here." Davidson on the other hand is a transcendental philosopher. He sees some sort of a priori connection between the content of a thinker's thoughts and an interpreter's attributions. His interpreter is not Dennett's happy-go-lucky guy in thrall to science, but rather what Davidson calls a "fully informed" interpreter. While Dennett's interpreter is scientific and in principle willing to give up folk psychology at the end of neuroscience, Davidson thinks there are embedded norms and anomalies in our understandings of ourselves and others that are resistant to scientific reduction.

Here, my interest in interpretivism is in how it resolves the tension between (1) and (2) rather than in the details of any particular account. For an interpretivist, the question of whether an animal thinks is deeply connected to the question of whether we can attribute thoughts to the animal on particular occasions. An interpretivist thinks we can. The question is how.

Ideally, we would know all of the discriminations an animal would make on all possible stimuli. We would also know whether variances in response were due to discriminations on stimuli, or changes in state through time or circumstance. Of course, we could never know all of this and even if we did, there would still be indeterminacy about what particular state to attribute to the animal. For example, Grete's behavior of walking to the door can variously be explained by mutually adjusting beliefs and desires. If we fix a desire, for example that Grete wants to urinate, then we can specify a belief (e.g., that on the other side of the door is a place in which it is appropriate for her to urinate) that will make the behavior intelligible. But if we fix a different desire (for example that Grete wants to play with Jethro), then we will have to adjust Grete's beliefs accordingly in order to explain the behavior. This story about the interactions between contents and attitudes ramifies. While not anything goes, attributions answer to various pragmatic concerns, including those involving other attributions, and not only to what is known about the organism's body, behavior, and

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23 I have been helped here by discussions with Mikhail Diogenes.
24 See Byrne (1989) and Child (1990) for good discussions of interpretivism (though, unfortunately, they do not agree on the name of the view, much less on how best to characterize it). For the views of the godfather of interpretivism, see Quine (1960).
16 Davidson (1981/1986), p. 321. It may seem surprising to enlist Davidson on the side of those who endorse (1), especially in light of the discussion of his eliminativist views in section 5.1. Philosophers often have inconsistent strands in their thoughts, or fail to follow where their ideas lead. I agree with Jeffrey (1987) that Davidson fails to draw the correct conclusions about animal thought from his interpretivist view. For further discussion, see also Jamieson (2002), Essay 6.
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have. It may be replaced by a view in which we see ourselves as corrigible, self-interpreting creatures who sometimes know the minds of others better than we know our own, and sometimes are known better by others than we know ourselves. We may come to see ourselves as relentless story-tellers, constructing and reconstructing narratives in a constant attempt to make sense of ourselves and others, in a world in which our lives are thoroughly enmeshed with the material and social realities that govern our existence.

Whatever is true about Fido, he is not a relentless story-teller, constantly engaged in the project of trying to make sense of himself. What, if anything, follows from this? Less than one might think. Perhaps, Fido's first-person privilege is even thinner than yours or mine (should he or anyone else care). What certainly would not follow is that there is nothing that it is like to be Fido, or that Fido lacks a tendency towards coherence in action and belief. Indeed, a rich literature in animal behavior shows how many creatures revise their behavior in light of experience and novel circumstances. 17

But what can an interpretivist say about the really hard case, the "choose a number" game? There are two ways an interpretivist might approach what is going on here.

One way would be to weaken interpretivism and allow that there are some thoughts that are not subject to the interpretivist account as I have developed it. The trick, on this approach, is to quarantine these thoughts; try to show that rather than being central cases of thinking, they are in fact derivative: nothing more than some aimless spinning on the part of creatures who for a few moments have some respite from the struggle for survival and have nothing better to do. It would not be surprising, after all, if some kinds of thoughts are endemic to particular creatures. Perhaps creatures with language can have thoughts that languageless creatures cannot, just as creatures with sonar may be able to have thoughts that creatures without sonar cannot. The "choose a number" game is closed to rats and infants just as the NBA is off-limits to those under six foot six. However, this should not lead us to think that some special importance attaches to either. Just as we may play the "choose a number" game when we have nothing better to do (or when we are doing philosophy), so humpback whales may privately entertain the songs that they might like to sing. What would be a mistake is to take these peculiarities as central to thinking, or even perhaps as central to the thinking of the creatures who have them. On this view some idea of a "subjective" perspective may persist, but the idea that it has much freedom in fixing content or is at all paradigmatic of

17 For references, and a defense of this claim, see Hurley (2009).
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thinking may fade. We may come to see endemic phenomenology as rare and indeterminate, at least with respect to a wide range of attributions.

The second approach is perhaps more elegant but even less plausible. This approach imagines a time in which the first-person point of view has disappeared. People continue to self-report, but they no longer see such information as substantially different in kind from other reports about the world. Once our intuitions about the "choose a number" game are exposed to the clarifying solvent of advanced neuroscience and philosophy, they begin to cloud, and then disappear.

Interpretivism in any version is not a view that is immediately plausible to everyone. However, it is a way of resolving the tension between (1) and (2), and there is a case for it being more plausible than the other alternatives that we have canvassed. In the end, philosophical consistency always does seem to exact a price.

4. CONCLUDING REMARKS: CONTENT REVISITED

In this essay I have identified a tension in our thinking about animal minds and reviewed some ways of trying to resolve it. If we are tempted by interpretivism, or find none of the approaches plausible, then perhaps we should rethink, not just the problem with which we began, but the very way in which we have come to portray the mind in philosophical discourse.

For the most part I have avoided the word "content" in this essay, yet in the philosopher's sense of the term it is the problem of content that I have been addressing. But what exactly is the problem of content? What is content anyway? The idea of content is a metaphor that infuses the way in which philosophers think about mind and language. Like all metaphors, it drags along its own presuppositions and associations like uninvited houseguests. In my opinion, we have not done enough to subject this metaphor to scrutiny, and, as it might be said, the unexamined metaphor is not worth deploying. One thing we can say for sure is that whatever mental content is like, it is not like the contents of a can of tomatoes. So with that remark I end — along with the advice that if you don't like any of the answers to my question that are on offer, perhaps you should find some new metaphors.

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We quite naturally attribute mental representations in order to explain actions. The cat is scratching at the door because he wants to come in the house and believes that scratching at the door will get him into the house. The dog is following me because she wants some of my food and believes that by following me she can get some of my food. Some of our attributions of mental representations are without doubt fanciful (does my car really not like to start on cold mornings?), but some of these attributions are accurate. For example, some, if perhaps not all, of the actions of adult human beings are properly explained by their desires and their beliefs about how to achieve those desires. What about the behavior of (non-human) animals? Are belief-desire explanations the right explanations of their actions? I argue that some (non-human) animal behavior is properly so explained, and thus that some animals truly have beliefs and desires. There are two strands of evidence which separately support this conclusion. First, behavior that is appropriately explained in terms of mental states such as beliefs and desires is behavior directed at a goal relative to which the agent is able to learn; and since human behavior meets this criterion, I argue, we should expect, on evolutionary grounds, that some animal behavior meets this criterion as well. Second, I show that a number of different scientific observations of animal behavior strongly support the hypothesis that animals engage in goal-directed behavior, behavior that is organized around a goal with respect to which they are able to learn and, hence, behavior that is justifiably explained in terms of their having beliefs and desires.

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