Chapter 2

DISAMBIGUATING ANTHROPOMORPHISM: AN INTERDISCIPLINARY REVIEW

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I. ABSTRACT

I claim that anthropomorphism is neither a well-defined nor clearly fallacious fallacy or mistake. I argue that the causal and unexamined use of "anthropomorphism" as a serious term of criticism is untenable. I begin by reviewing the history of the concept and how it has come to have its present negative connotations while at the same time escaping any serious analysis. I ask what is the logical characterization of the fallacy that merits this status. I reject simplistic characterizations that assume that terms that apply to humans cannot apply to animals. I then propose a taxonomy of types of anthropomorphism and argue that only one type, categorical anthropomorphism, justifies the rhetoric associated with anthropomorphism. I explore and reject philosophical arguments for claiming that this sort of anthropomorphism is a general danger.

II. INTRODUCTION

It is widely believed that we should avoid anthropomorphism in our thinking about animals. In spite of this consensus, it is difficult to find any explicit discussion, let alone adequate analysis, of what anthropomorphism is. The use of the term "anthropomorphism" by scientists and philosophers is often so casual as to almost suggest that it is a term of ideological abuse, rather like political or religious terms ("communist" or "counterrevolutionary") that need no explanation or defense when used in criticism.
Anthropomorphism is generally treated by thinkers as an obvious mistake or fallacy of puerile sort. It is a term of criticism—regularly applied to those who support animal thought and animal rights. Its use is so deeply entrenched that even those thinkers who favor animal rights try to avoid being accused of it. Annette Bailey (1985), for example, felt obliged to say, "I see nothing at all anthropomorphic or in any other way absurd in saying that one may "break faith with" an animal, exploit its trust, disappoint expectations one has encouraged it to have." (p. 150, my emphasis.) And Mary Mosquey (1978), who is also sympathetic to claims of animal mentality, asserts, "There is nothing antithromorphic in speaking of the motivation of animals. It is anthropomorphic to call the lion the King of Beasts, but not to talk of him as moved, moved, by fear, now by curiosity, now by territorial anger." (p. 106).

Philosophers and scientists often approach anthropomorphism as an obstacle to be avoided or as a general problem to be overcome by those who wish to attribute cognitive or emotional states to nonhuman animals. Thus Donald Davidson (1975) claims that "Attributions of intentions and beliefs to animals smack of anthropomorphism" (p. 7). Contrary to this vague consensus, I will argue that there is a considerable amount of confusion about anthropomorphism. Is anthropomorphism: (1) a fallacious type of inference? (2) a bad explanation? (3) a false set of beliefs, or something else? If any one, or some combination, of these concepts, how exactly is it to be characterized? And under what conditions is a charge of anthropomorphism valid? What theory, if any, lies behind the charge of anthropomorphism? These are the questions I shall address.

I should make clear at the beginning that my subject is not going to be the issue much discussed by philosophers of whether there is a difference between humans and other animals. Of course there is; each species is unique. Moreover, the differences can be quite substantial. I will not question, for example, the widely debated assumption that only humans have significant language use. So lines of demarcation can be drawn between humans and other animals. No one should bother debating the question of whether other animals are just like humans. I am therefore not going to investigate whether humans are different from or superior to other animals—let's suppose for the sake of argument that we are—but rather the question of whether when we apply, as we commonly do in everyday life, terms to nonhuman animals that we apply to humans, universally as it seems, we commit some sort of fallacy, well articulated under the rubric anthropomorphism. The commonplace idea that anthropomorphism occurs when we see animals in human terms or apply human terms to animals is not much help here. To say that we are different or unique cannot be to deny that humans and other animals share many characteristics. The question that needs to be answered is: Which are the human terms that do not apply to animals?

Since there are many contexts in which the notion of anthropomorphism comes up, let me specify the scope and target of our inquiry. I will be primarily concerned with applications of the concept of anthropomorphism to explanations of animal behavior, as opposed to, say, its use in art history and criticism. In the animal context it is a term of negative criticism, and this contrasts with writing in the arts where "anthropomorphic" is a descriptive term, characterizing a figure or form, implying no mistake or negation of critical. The specific target of my inquiry will be appeals to the concept of anthropomorphism made by philosophers and scientists as a criticism of attempts to produce literal understandings or explanations of animal behavior. The most general description of this "mistake" is: relating to animals as if they were very similar to us. (This formulation is meant to include our emotional and sympathetic responses and actions, as well as explanations.)

My claim will be that this mistake or fallacy is neither well-defined nor clearly fallacious. As a term of logical criticism—and I will argue this is its most central function in the relevant literature—it often fails. I will try to show that there is much to sort out before one can pin down occurrences of ant-thropomorphism. There are many different conceptions of anthropomorphism and the common ones do not support their common rhetorical use. To substantiate these claims I will sketch a taxonomy of different cases and/or types of anthropomorphism. Anthropomorphism turns out to be a very complex as well as ill-defined topic. If nothing else, it should be obvious from the actual complexity of the concept that its causal and unexamined use as a serious term of criticism is simply untenable. The charge of anthropomorphism oversimplifies a complex issue—animal consciousness—and it tries to inhibit consideration of positions that ought to be evaluated in a more open-minded and empirical manner.

III. A Rhetorical History

It would be a mistake to ignore the historical roots of the concept of anthropomorphism. The unique way the charge of anthropomorphism functions as a negative criticism that needs no explanation itself calls for an explanation. We can understand this function better by briefly canvassing the history of the concept.

"Anthropomorphism" was originally a term used in the theological context for views of God that characterize Him in literal human terms. In particular, to view God as a person of sorts, with indefinitely amplified human powers and characteristics (loving, just, knowing) can be labeled anthropomorphic. That "anthropomorphic" in this sense carries a negative connotation can be seen from Paul Edwards (1967) definition: "Let us, without implying anything derog-
theory, refer to the belief that predicates can be applied literally to God as the ‘anthropomorphic’ conception of God and to the belief that predicates can be applied analogically to God as the ‘metaphysical’ conception of God” (p. 186, my emphasis). As Edwards tells us, “Among professional philosophers, belief in the metaphysical God has been much more common than belief in an anthropomorphic God. This metaphysical position is at least as old as Aquinas...” (p. 186). Given this background, it is not hard to see why the Western intellectual tradition “anthropomorphism” came to be a derogatory expression. It is, I suggest, no accident that, as P. J. Asquith tells us, Japanese paleontologists are singularly unconcerned about issues of anthropomorphism in their studies of primates. Cultural (and religious) history cannot be ignored in explaining this fact (see Asquith, 1986). Anyone can understand a God in personal terms, but only the educated can understand the metaphysical God. Moreover, the philosophers had powerful arguments against understanding God anthropomorphically. In addition, pagan religions tended to be anthropomorphic, so Christian doctrine was distanced from primitive forms of understanding, whether exemplified by uneducated belief or by pagan religions. Anthropomorphism in this context is perceived to be a vulgar mistake. This is one strand. Others wind through the history of science. Here, as in theology, a more primitive and uneducated form of thinking is to be replaced by a more sophisticated and educated style of thought. In discussing the rise of modern science, for example, Ernst Cassirer (1950) associates Spinoza’s rejection of Aristotelian causal explanations with the issue of anthropomorphism:

“When Aristotle said that God moves all things the same way as does a ‘mechanical object’... his very metaphor betrayed the highly dangerous origins of the Aristotelian concepts of form and purpose. The usage of these concepts in metaphysics and science revealed itself to be simply a case of anthropomorphism. Until this is destroyed there can be no truly universal interpretation of nature. (p. 123)"

In this context “anthropomorphism” refers to views of material nature, in particular causal relations, as at bottom conforming to human experience of causal action on the world. In the more particular domain of biology Cassirer again notes the rejection of anthropomorphism:

“It was the elimination and overcoming of all teleological considerations that Haeckel believed to be Darwin’s greatest act of emancipation, one comparable with the achievement of Copernicus. Now for the first time there was feasible a treatment of nature from which all the anthropomorphic factors of our mental habit of thinking were eliminated.”

“Anthropomorphism” is here used for a tendency of thought that must be eliminated from our explanations and theories because it embodies outmoded scientific approaches. We see that Cassirer associates anthropomorphism with the trends of thought that the rise of modern science had to overcome. It is not surprising that traditionally anthropomorphism does not stand for an intellectually respectable position to be taken seriously, but rather a well-known and unsophisticated fallacy or heresy. To go back to anthropomorphic ways of understanding the world would be like going back on the Copernican revolution, going back to the Dark Ages.

The history rehearsed so far associates the concept of anthropomorphism with outdated and refuted theories. There is another important strand of the history of science that helped to license the extension of the negative epithet, “anthropomorphic,” to the specific context of our understanding of animals. That strand involves the methodological presumptions sponsored by positivism. The story of the rise, and now fall, of positivism is both too complex and too familiar to be telling here. What is relevant for our topic is the antirealist polemic so common to the era of positivism and operationalism, philosophers that dominated conceptions of scientific methodology in the first half of the twentieth century. Positivism favored a very austere scientific methodology based on an unwillingness to postulate, in a realist frame of mind, the existence of unobservable entities; that is, genuinely explanatory entities not reducible to observational manifestations. Such structures derived from a commitment by many positivists to phenomenalism, the view that physical reality can be reduced to the direct objects of perception. Behavioralists, the refusal to countenance appeal to mental states in explanations of human behavior, is the familiar concommitant of positivism in psychology. References to mental states are meaningless or, at any rate, not acceptable in rigorous procedures of explanation. Even after such structures have been abandoned in explanations of human behavior, it is natural to retain them for explanations of other animals. Contrary to behaviorist dogma, I was always widely felt that human mental states are observable; we are aware of our own, and we can ask others what they think and feel. But nonhuman animals elude this escape from positivistic structures: we cannot verify animal mental states by any direct or indirect observation; so if we are not to postulate unobservables, we must reexamine reference to animal mental states for scientific explanations. [Mary Midgley has extensively explored this epistemological aspect of the rejection of animal mentality in animal studies (see especially Midgley, 1983, pp. 127–131).]

Even though in the last two decades robust realistic trends, countenance, postulation of unobservables, have displaced positivism in the philosophy of science, the heritage of positivism’s ideas about valid method remains potent. [Even thinkers who favor mentalistic explanations of animal behavior sometimes try to operate within parsimonious methodologies. For example, Mary Midgley (1978) sounds almost like a behaviorist when she argues, “Members of on species do in fact often succeed in understanding members of another we enough for both prediction and a personal bond. Nothing more is necessary” (124).] Many scientists’ ideas about methodology emanate from a time when positivistic scruples dominated. Philosophers too are prone to such scruples. Pit example, the philosopher Leslie Stevenson (1982) suggests that the “curious
pleasure that most of us seem to derive from such conceptual interpretations of the behaviour of our pets [that they have beliefs, for example] (and of our pre-linguistic infants) lends us, at least sometimes, into anthropomorphism which is unjustified by the strict canons of scientific objectivity..." (p. 17, my emphasis).

Talk of animal mental states is viewed from this perspective as unscientific, a violation of sophisticated methodological scruples about the proper form of explanation. In short, it is anthropomorphism—a naive, prescientific, unguided attempt to understand animals, just as it was earlier claimed to be a naive, prescientific attempt to understand nature or God.

Given its rhetorical history, it is reasonable to begin to suspect that as a concept, anthropomorphism functions more as a rhetorical device than a logical analysis. And given this history, it is easy to understand many of the rhetorical features of anthropomorphism: It is a term of negative criticism that associates a type of understanding with an invalid or fallacious mode of thought, long since hounded from respectable intellectual company.

[There are some ethnologists, Gordon Burghardt, for example, who have recently embraced as their methodology some version of what they call anthropomorphism. Burghardt (1990) argues for an anthropomorphic stance that he calls "critical anthropomorphism." What such definitions of anthropomorphism attempt to is an attempt to exclude the negative criticism so prominent in ordinary uses of anthropomorphism by means of stipulation. In short, the meanings of the terms "anthropomorphism," and "anthropomorphic" are changed in this usage. This may not be wise given the negative connotations of these terms as ordinarily used. What these ethnologists have in mind is to resurrect to limited respectability the kind of reasoning or inference that anthropomorphism refers to. Burghardt's notion, however, makes little attempt to defend the truth value of anthropomorphistic explanations. Rather, he is interested in the heuristic value of anthropomorphizing in stimulating the imagination of the trained ethnologist. So even if his proposal is sound, it is not a defense of anthropomorphism as ordinarily conceived.]

This history does not shed light on all of the rhetorical features of the concept of anthropomorphism. In particular, the association, very commonly charged by critics of anthropomorphism, of anthropomorphizing with unscientific thinking (or more generally, with a simplistic view of the animal's mind) and appeals to emotion has not been accounted for. For example, consider the kind of suggestive rhetoric Spinoza uses when he says, "It is plain that the law against slaughtering of animals is founded on vain superstition and womanish pity rather than on sound reason" (Ethics, Pt. 4, prop. 37, no. 1. Quoted by Midsley, 1978, p. 352). The contrast between reason and emotion, which is such a central feature of the rhetoric surrounding the debate over animal rights and animal minds is only partly accounted for by the points we have so far examined. I take it that the connection frequently made between animal rights views and emotions is part of the same rhetoric that conditions the charge of anthropomorphism thinking. In a review of objections to primate research made by the animal rights movement a group of scientists conclude, "This illustrates how well-intentioned legislation based on emotional rather than empirical arguments can negatively impact scientific inquiry" (King, et al., 1988, p. 1481). This denunciation of emotion and association of it with those who question such research is usually made automatically; in this case it is made in the same paragraph as the admission that "The campaign against primate research is actually based on the scientists' rationale for studying primates" (p. 1481). A similar accusation of emotionality and irrationality surely is carried by the charge of anthropomorphism.

IV. RHETORICAL COMPARISONS: THE PATHETIC FALLACY AND PERSONIFICATION

So far we have seen that the concept of anthropomorphism carries a double charge. In ordinary use it is treated partly like a fallacy, partly like a heresy (Vicky Hume (1987) anecdotally documents that the opposition to the way trainers talk about the animals they work with "suggests that modern injustices against anthropomorphism have as much of a heretical-bounding impulse behind them as any of the older ones... for example... one person in the audience said that what I was saying sounded a little, well, religious. I patiently worked at finding out what she meant by religious, and it turned out that she meant 'anthropomorphic'" (p. 10). And later: "Academic psychology's role in this situa- tion was, in the past, played by the Church... The nature of the offense of anthropomorphism—heresy—has not changed, only the institutions that perform the 'accommodations' (p. 265)."

Like terms for both fallacies and heresies, "anthropomorphism automatically carries a complicated and negative connotation. The rhetorical effect of the charge of anthropomorphism is to accuse some thinker of committing a mistake or fallacy that is well-known and exposed in the past, based on unenlightened, uneducated thinking, and perhaps caused by emotions. The charge not only convinces someone of a mistake in thinking or reasoning, but it also suggests in an undefined way an explanation of this mis- take—the cause or reason or motivation for making this mistake. So anthropomorphism is both a mistake and a mechanism, and this mechanism is associated, whether as cause or effect is not clear, with irrational emotion. Looking at this history helps to characterize the rhetorical meaning of the charge of anthropomorphism. But it does not fully explain why it has this meaning. Nothing said so far provides a sound argument that "anthropomorphism" is merely a vacuous rhetorical weapon; the rhetorical effect
could well be based on a logical reality. It will be urged, indeed, that the explanation for the way “anthropomorphism” functions is to be found, simply enough, in the fact that it refers to a blatant logical mistake: the category mistake of ascribing human attributes to something not human. Category mistakes are made when one treats an entity of one type as if it were an entity of a different type, as in Gilbert Ryle’s (1949) famous example of seeing the buildings of the university and yet asking where the university is. Many assume that anthropomorphism is the category mistake of ascribing human attributes to something not human. (That this is how people implicitly think of anthropomorphism explains why it would sound odd to accuse parents of anthropomorphizing their infants.

This leads to the critical question: Does the logical reality of anthropomorphism match the rhetorical effect? Stated more precisely: Can we characterize anthropomorphism analytically in such a way as to justify the rhetorical implications we have discovered? For us ask whether “anthropomorphism” is a valid charge in the animal context is to ask whether there is in fact an intellectual mistake, reasonably thought of as anthropomorphism, which matches this rhetoric. Let us ask this question concerning the simple definition of anthropomorphism broached a paragraph ago. Certainly it is an analysis of anthropomorphism; that is, it claims to tell us what anthropomorphism is and it justifies the rhetorical uses of the concept. If anthropomorphism is a blatant category mistake, then it is natural that it would be a criticism made causally and with the negative meanings we have explored. A criterion of an adequate analysis of anthropomorphism, however, is that it appropriately characterizes those cases where the charge of anthropomorphism is invoked; that is, cases of ascribing mental states to animals. This the category-mistake analysis fails to do.

To show this, let us compare the charge of anthropomorphism with more obvious category mistakes, in particular with two familiar literary concepts: the “pathetic fallacy” and “personification.” The Dictionary of World Literary Terms (Shipley, 1970) defines the pathetic fallacy (due to Ruskin) as “the presentation of the inanimate world as having feeling.” Standard examples range from “The red leaf, the last of its class/That dances as often as it can” to Pope, who sees all things as “. . . one stupendous whole, Whose body Nature is, and God the soul.” (p. 233). Clearly, the pathetic fallacy is closely linked to anthropomorphic and animistic capacities of thought. And like anthropomorphism, the pathetic fallacy is an unclear concept. The World Dictionary points out that “The usual meaning of the two terms that Ruskin wrings to special use make many suppose he is condemning where he best characterizes” (p. 234). The problem is that it is not clear whether there is anything wrong in such comparisons, and if there is, what it is. As one writer declares: “Pathetic fallacy reveals itself to be poetic truth” (Shipley, 1970, p. 234). In a poetic context, in which expressions are not to be taken literally, it seems difficult to specify in general even for the purposes of poetic criticism what is defective about such comparisons. Of course, some might be more effective or more “truthful” than others, but that does not convict the class of comparisons of being fundamentally mistaken.

Let us ask not what is wrong with such comparisons but rather what are the criteria for labeling such a comparison the “pathetic fallacy.” It is clear that the term is used in cases in which the object being treated as human is of such a different kind (a leaf, a rock, the earth) as to make it obvious that the object cannot literally have the characteristics attributed to it. The difference in kind between humans and (say) leaves grounds the charge (carried by the terminology “pathetic fallacy”) that applying terms for human feeling to leaves is an obvious mistake if taken literally. But that depends on the sort of difference there is between the two types of entities being compared.

If it is correct to say that species have natures (and I will grant it for the sake of argument) then human beings have a unique nature, perhaps equatable with the human genetic material each of us carries. Suppose further that humans turn out to be the only creatures we know with various capacities, such as full-blown language and a certain sort of self-consciousness. Does this then settle the question? Is it then a fallacy to view animals as having human characteristics? This obviously depends on what we mean by “human characteristics.” If we mean those characteristics that define the unique human nature, then the answer is yes. But which are those characteristics? If these characteristics are on the molecular level, then they have little to do with the sorts of comparisons in question between animals and humans. A biological answer to the question of how to define human nature, therefore, can hardly settle that issue. Surely it is an empirical question whether other animals, for instance, in fact have language. We have to look and see, and the same goes for the related question of whether they have the capacity for language. The idea of the “pathetic fallacy” is that a category mistake has been made. But just because humans are in a different category than other animals, it does not follow that to compare them with other animals is a category mistake. Quite the contrary. We share many features, physical, biological, and social, with other animals, and it remains an empirical question which, if any, mental characteristics humans have uniquely. And even if scientists conclude that there are some, that other animals only have (say) signaling systems, while human languages are much richer (in syntax, for example), they had to look and see; it is not an a priori conclusion they can make in any other way.

Many philosophers (e.g., Descartes, Jonathan Bennett) have written as if the main issue concerning animal mentality is whether humans are unique in the animal world. (Bennett 1988) writes: “I have a real topic; there are differences of kind, and it is a real question which of any of them obtain between humans and
other animals" (p. 197). And it seems a short step from arguing that humans have some unique property (or properties) to the conclusion that to think of animals as similar to humans is anthropomorphism. To put the position most tendentiously: if there is a difference in kind between persons (i.e., humans) and animals, is it not anthropomorphism to treat animals as if they were persons? That way of putting it brings out the intuition that the charge of anthropomorphism rises or falls on there being a distinction between humans and animals. We can formulate it this way:

(*) There is a difference in kind between humans and other animals if and only if anthropomorphism (i.e., thinking of animals as similar to humans) is a mistake.

But, as we have just seen, anthropomorphism and a difference in kind between humans and other animals are logically separate concepts. What is confusing is the Cartesian heritage concerning (**) Descartes thought he had established a special distinction that attributed to humans all real mentality and to animals (i.e., machines) none. So, if we understand anthropomorphism to be the attribution to animals of mental terms (thoughts, feelings, intentions), then under that understanding, and if the distinction mentioned in (*) is the Cartesian distinction, then (**) would be true.

To a Cartesian, the comparison between animals and humans might seem like comparing humans and a leaf, and thus to be a category mistake, at least with respect to comparisons concerning an inner mental life. But this Cartesian dogma has long been discarded by scientists in favor of an evolutionary story of biological continuity. In the contemporary context, therefore, it would seem that it is at least a genuine question as to what attributes, say, primate possess. And if so, it cannot be a mere category mistake to attribute the human mentality to them. For it is not obvious that the attributes that cannot literally apply to animals.

A use of language closely related to the pathetic fallacy can be called personification. (There is a different kind of personification associated with anthropomorphism that I will come back to in Section VII.) Here is an example of the type of personification I mean: Ingrid Newkirk (1988), in a forum on animal rights, says the following: "nature is cruel, but man is crueler yet" (p. 52). To describe nature as "cruel" could be considered a certain kind of anthropomorphism. And indeed the same is true of her use of "man." Both are better termed "personifications": treating an entity that is not a person as a person. Man is not a person, it is the set of human beings; both man and nature are abstractions. This leaves us with two questions: (1) Is this a mistake? (2) How does this relate to the charge of anthropomorphism in our relations to animals?

The answer to (1) is, not necessarily. Of course, if taken literally, it is a mistake. But it might be thought to be useful, if sloppy and dangerous, shorthand. No one literally thinks that man is cruel, but we do literally believe humans are cruel, and this is a way of saying that. So it is not mistaken to assert that "man is cruel," but it is a mistake to believe it literally.

The answer to (2) is that it is easy to draw a sharp distinction between this sort of personification and the application of human terms to animals, though some may think of anthropomorphism as the same in both cases: applying person terms to nonpersons, that is, treating nonpersons as if they were persons. We can state it so generally as to encompass both: treating something that is not a person as a person. But in the case of "nature" it is so clear that this entity is an abstraction that utterances using it cannot be taken literally. When we look at what is being treated as a person we can draw a distinction. In one case it is an abstraction, in the other case it is a living nonhuman animal. It would be an obvious category mistake to take the first case literally. The second case is entirely different: we have a living subject which literally shares many properties with human persons, and as worse we are misapplying analogical reasoning. In the first case the mistake is clear and different from the alleged mistake in the second case. It could be argued that man and nature do not even literally exist.

These two cases differ in several ways. (1) The animal case surely involves two entities of the same biological and physical type. (2) The animal case clearly involves an inference from the animal's behavior and appearance to the application of human terms. No such inference is being made in the abstraction case. A literal comparison between nature and humans cannot be made so begin with. (3) In the animal case it seems that what we are doing is postulating mental states as causal entities to explain the animal's behavior. This is not paralleled in the case of personified abstract entities. "Nature is cruel" does not explain.

In both examples, pathetic fallacy and personification, real category mistakes would be made were they to be taken literally. But the category-mistake model of anthropomorphism does not appear to apply to the cases in which the charge is commonly made, since clearly they differ in fundamental ways from real category mistakes such as would be exemplified by literal readings of personification and examples of the pathetic fallacy. So here the rhetoric matched the analysis, but the analysis is not plausible.

V. A LOGICAL FRAMEWORK FOR ANALYZING ANTHROPOMORPHISM

There are three questions we need to answer to give a logical characterization of anthropomorphism:

1. What is it? That is, what sort of mistake is it?
2. When does it occur? Under what conditions do we make this mistake?
3. Why is it a mistake?
Different answers to these questions yield different conceptions of anthropomorphism. I believe that thinkers do often have different conceptions of anthropomorphism without being aware of that fact. To resolve the issue of whether there is a match of rhetoric with logic, we not only need to provide a clear and consistent set of answers to these three questions, but our answer must be such as to justify the negative rhetoric that infers the charge of anthropomorphism.

With respect to what anthropomorphism is, I propose that there are two broad categories: interpretive anthropomorphism and imaginative anthropomorphism. Before explaining these it will be useful to define the class of extended mentalistic predicates: predicates referring to mental states and processes, cognitive and emotional, as well as verbs of action (e.g., “hurt,” “play”) and predicates of moral character and personality (loyal, brave, sneaky). Call these M-predicates.

I intend that interpretive anthropomorphism refer to all of the usual cases of ascribing M-predicates to animals on the basis of their behavior. Interpretive anthropomorphism, then, refers to cases of inference, from animal behavior to M-predicates, where these include descriptions of the animal's physical behavior in terms of intentional actions (the deer are playing, the chimp is trying to solve the puzzle). So the sort of thing anthropomorphism is in these cases is an inference from the animal's behavior described in terms of bodily movements, and also could be considered an interpretation of the animal's behavior or an explanation of the animal's behavior based on positing the truth of the ascribed M-predicates. The variations do not matter since the inference (or interpretation) is meant to be a sort of explanation. Since the charge of anthropomorphism always assumes that a mistake has been made, we can say that anthropomorphism on this conception is a fallacious inference. Interpretive anthropomorphism is simply the intended target of criticism by philosophers and scientists when they claim that anthropomorphism is a mistake to be avoided in explanations of animal behavior. Like any other fallacy, we need an account of the conditions under which it is committed and an account of why it is a fallacy.

By imaginative anthropomorphism I mean the productive activity of representing imaginary or fictional animals as similar to us. Examples of such representations are the animal characters in animations, books, drawings, movies, and stories that are treated in the story as similar to us, not only in having M-predicates, but in behaving in a similar way, for example, speaking, and so on. This form of thought is obviously intertwined with interpretive anthropomorphism, and while not directly targeted by philosophers and scientists concerned about scientific explanations of animals, it can just as properly be called anthropomorphic. It, too, sometimes elicits complaints from critics. In a review of John Crompton's novels about social insects a critic notes of Crompton's tendency to make insects talk, "Superficially, this smacks of anthropomorphism, anathema to today's nature writers" (Kendrick, 1988). Humans obviously have an enormous ability to treat representations as personlike, whether of raisins, trees, or little engines that could; all that is required is to paint on a human face. It is plausible that some of the dispute and suspicion of interpretive anthropomorphism comes from our ability and desire to produce such representations.

Before returning to interpretive anthropomorphism, I want to consider the suggestion that there is a third main type of anthropomorphism. It might be suggested that in addition to anthropomorphic inferences and representations there are anthropomorphic beliefs; that is, a set of beliefs about animals that amount to anthropomorphism. I want to resist this suggestion. It is true that there are beliefs, or propositions held, about animals that link animals and M-predicates, and that these propositions are denied by tough-minded thinkers—for example, that bees have a language, that dogs have beliefs, that chimps have self-awareness. But anthropomorphism is a particular kind of mistake, it is not just false belief. And the mistake, if it is one, has to be one based on misinterpreting animal behavior. As Jonathan Bennett (1988) says, "Descartes must be granted this much. We attribute mentality to others on the basis of their behavior, and no other basis looks even remotely plausible" (p. 199). Bennett in fact leaves out the important biological evidence of physical constitution and evolutionary history, without which I do not think we would even know how to describe the behavior. But the point still stands that we always make an inference in ascribing M-predicates, and the inferences that elicit charges of anthropomorphism are always based on the animal's behavior. Vicki Hearne's (1987) defense of "anthropomorphic" descriptions of animals is clearly based on behavior, in particular on how animals respond to us: "trees don't answer in the way animals do, and most of animate creation doesn't answer as loyally and with as much respect for the details of the human landscape as dogs, cats and horses do" (p. 264).

Ultimately, if some beliefs, such as those mentioned, are to be considered anthropomorphic, it must be because they have been mistakenly inferred from the behavior of such animals. If behavior is all we have to go on, then such beliefs cannot in themselves be absurd, or known a priori to be false. They must be defeasible as explanations of the animal's behavior.

With a view toward clarifying the way philosophers have talked about anthropomorphism, I propose making a further distinction, subdividing interpretive anthropomorphism into categorical and situational anthropomorphism. Categorical anthropomorphism is applying M-predicates to creatures to which they do not apply under any of the behavioral circumstances in which the creature is ever situated. Categorical anthropomorphism is almost like making a category mistake; relative to the type of creature, it is always a mistake to ascribe a particular M-predicate, a mistake of interpretation. By contrast, situational anthropomorphism happens when we, as we sometimes do, misinterpret an animal's behavior in ways that could correctly apply to that animal, but which do not apply in the situation in question. An observer might, for example, interpret a
chimpanzee's show of teeth as a sign of anger when it is (let us imagine) a sign of affection. Situational anthropomorphism is relative to the situation; the M-predicate chosen, while mistaken, is not categorically inapplicable to the animal in question. Categorical anthropomorphism, on the other hand, occurs when one ascribes on the basis of behavior an M-predicate that never applies to this sort of creature. The concept of categorical anthropomorphism articulates the idea that there are inherently misguiding ways of taking about animals, inherently misguiding expressions.

We can further subclassify categorical anthropomorphism in terms of the conditions under which it is committed. (1) Species type: application of mentalistic predicates could be counted as anthropomorphism depending on the species of animal. What would be anthropomorphism concerning a chimpanzee might not be concerning a worm. (2) Predicate type: application of mentalistic predicates could be counted as anthropomorphism depending on the predicate. I have in mind applying the wrong types of predicates, out of the extended set of mentalistic predicates, for example, predicates of moral character, to a given creature. While perhaps it can be said that a horse is trying hard to win the race, perhaps it cannot be said that he is weighing.

So, to answer whether any use of mentalistic predicates is anthropomorphism we need to consider both the creature and the predicate applied. A clear example of a claim involving both predicate and species comes from Peter Carruthers (1989) who claims, "certainly the most anthropomorphic of us would be prepared to ascribe second-order beliefs to toads and mice; and many of us would have serious doubts about ascribing such states to even higher mammals such as chimpanzees" (p. 261). Clearly there is a range of potential targets for the charge of categorical anthropomorphism, as well as a range of positions available to critics of anthropomorphism. The most extreme critical position seems also to be the common one; I will call (on analogy with hard determinism) hard anthropocentrism (hard centrist) for short these critics of anthropomorphism who regard the application of any M-predicate (perhaps with the exception of pain and other sensations) to any nonhuman animal as categorical anthropomorphism. Carruthers (1989) even denies that other animals have experiences. ]] Hard anthropocentrists see categorical anthropomorphism as a universal problem. Hard anthropocentrists are committed to a sharp division between humans and other animals in which, perhaps excepting pain and other sensations, it is always a mistake of categorical anthropomorphism to attribute M-predicates to animals and never a categorical mistake to ascribe them to humans. Hard anthropocentrism seems to be the standard position among tough-minded philosophers and scientists, certainly among those who freely make the charge of anthropomorphism.

It is important to keep in mind that I have defined anthropocentrism relative to the charge of anthropomorphism. Anthropocentrists are not just those who believe as a matter of empirical fact that certain M-predicates do not truly apply to certain animals. In addition they must hold that to ascribe the relevant M-predicates, on the basis of the animal's typical behavior, is to commit a mistake of categorical anthropomorphism. Donald Davidson, for example, is anthropocentric in my sense only when he suggests that those who are inclined to ascribe thoughts to animals on the basis of their purported behavior are anthropomorphic (not just wrong). To claim, for instance, that it is anthropomorphic to ascribe self-consciousness to a chimpanzee is, presumably, to say more than merely that the ascription is false. For otherwise, the disagreement might just be empirical, one about which conscientious investigators could disagree, and about which they could change their minds. Anthropomorphism, with its rhetorical implications, needs not enter in. Consider, for example, those who believed on the basis of his performances, and before the mechanism of cue transmission was discovered, that Clever Hans could add numbers. Such observers were mistaken about Hans' mathematical comprehension, but there was not anything necessarily anthropomorphic about their reasoning.

Some of us are less extreme than hard anthropocentrists, but we too would hesitate to apply mentalistic terms in some cases, for example, to individual insects or to the hive in the case of social insects. So most of us think it can be categorical anthropomorphism to apply most M-predicates to some species, for example, worker ants. Also there are some M-predicates that we would hesitate to apply to any nonhuman animals [e.g., Wittenstein's (1953, p. 174) famous example of a dog believing that his master will come the day after tomorrow]. Thus there are a whole range of positions open to the anthropocentrists concerning where to draw the line, relative to species and predicate, in making the charge of anthropomorphism. Call these positions less hard than hard anthropocentrism, modest anthropocentrism. Most of us are at least modest centrists about some species and certainly about some predicates; most of us think that it is possible to make the mistake of categorical anthropomorphism in some cases, for example, attributing intentions to an army ant hive.

VI. SITUATIONAL ANTHROPOMORPHISM

Situational anthropomorphism as I have defined it is a misinterpretation of an animal's mentality based on the animal's behavior and some sort of analogy to human behavior. In particular, it is the ascription of an M-predicate that could be true of the animal, but in fact is not. In short, a factual mistake is made. As long as the basis for the inference is in part a perceived similarity between the animal's behavior and human behavior, this is rightly considered a sort of anthropomorphism.
The description I have given of situational anthropomorphism agrees with Mary Midgley's (1978) description of anthropomorphism per se:

Now people obviously sometimes do attribute to animals feelings and motives that they do not have, treating animals as if they were people. And this is called anthropomorphism. The ordinary use of the word, however, implies that the speaker is one of few; there are other feelings the animal share here, and we can often raise them. Thus the sentimental dog owner attributes affection to his pet when bystanders attribute greed. (p. 344)

Midgley's description could be taken to refer to categorical anthropomorphism (of the predicate type). I do not think she means to say that affection cannot be attributed to any dog, however, but rather that this dog is not truly affectionate, or at least this example of affection is not motivated by affection. There are several different kinds of causes of situational anthropomorphism. Before spelling out the distinctions I have in mind, it will be useful to characterize the common feature of all interpretive anthropomorphism, both situational and categorical: the form of explanation. We attribute M-predicates to nonhuman animals by way of an explanation. We explain animal behavior as we would explain our behavior if we (humans) were in similar circumstances: (1) We recognize similar circumstances can include: sensory stimulation, behavior, bodily attitude, history, social setting. Of course, it is not easy to define "similar circumstances." I will call this interpretation the "anthropomorphic inference." Clearly the analogy between humans and animals must be quite elastic. Consider elephants. Eltringham reports that he has "often seen a mother fall back and offer a helping trunk to enable it to scramble up a steep bank." (1962, p. 62). Here we clearly feel an analogy between the trunk and a human arm, so the anthropomorphic inference is based on the elephant's trunk and human arms equally to be appendages directed to helping.

In all cases of situational anthropomorphism we are misinterpreting animal behavior when we treat it as understandable by analogy with our behavior. The intuitive characterization of situational anthropomorphism is that it is like the sort of mistake a naive observer can make about an alien culture. A head shake that in her culture means "yes" means "yes" in the alien culture. Situational anthropomorphism is thus a kind of anthropological misinterpretation. In this regard Asquith's (1958) contrast between Japanese and Western primatologists is illuminating. "The Japanese approach primate studies from a cultural rather than a biological point of view" (p. 65). The Japanese would be concerned to avoid errors of situational anthropomorphism whereas Western animal scientists are focused on avoiding categorical anthropomorphism.

Case (1). The first distinction to make is between misinterpreting a unique particular bit of behavior and misinterpreting a type of behavior. Most scientific interest in animal behavior focuses only on types of behavior. Indeed, while most of us look at our own behavior as a series of unique actions having a dramatic structure and a unique context that explains what we did and why we did it, we see animal behavior as a series of types of behavior from a relatively small set of types. But there is no obvious reason for denying that animals can act in ways that merit consideration as unique acts, just as we regard our own actions. So, it is theoretically possible to misinterpret a particular bit of behavior and ascribe an M-predicate that could apply (relative to species and predicate) but does not. This yields the first type of situational anthropomorphism.

Let us look at an example. Vicki Hearne (1987) tells the story of a police tracking dog. Rinnie, who was dispatched to track down the kidnapper of a supermarket worker: "After taking a good sniff, the dog calmly and without hesitation, walked around the car to where the victim was talking to the police officers, and bit him in the seat." Rinnie's handler was "chagrined . . . and the dog was disgraced" (p. 26). As the story turned out, the woman had robbed the supermarket and faked the kidnapping, and the dog was correct after all. Rinnie's behavior struck observers at the time as a sign of some sort of instability or aggression. We could say then, that this particular bit of behavior, which Hearne obviously takes to show that the dog somehow understood that the victim was responsible, was misinterpreted as (say) a feeling of hostility. This is (case 1) situational anthropomorphism if the interpretation is based on an analogy with human behavior. But this is not clear since we are not dogs and we rarely bite other people. So it is not clear here whether the interpretation is based on an anthropomorphic inference.

Take a clearer example of this subcategory of situational anthropomorphism. In the movie, Lassie Come Home, Lassie swims across a large river and drops herself up on the shore exhausted to return to her master. In reality we learn that the dog that played the part was trained to behave as if he were exhausted (in fact, exactly as a human would behave if he crawled out of a river on his hands and knees) to a series of hand commands from his handler. I take it that our tendency to misperceive or to perceptually misinterpret the behavior of Lassie is one sort of example of anthropomorphism played upon by animal trainers in the entertainment business.

To look at the Lassie example as a general lesson about anthropomorphism would be mistaken. It says nothing about whether a dog could swim across a river and drag himself up on the shore exhausted, that is, feeling exhausted. It's true as well that the dog playing Lassie only "acts"—it is a fiction and so the dog is not "really" doing any of the things we see on the screen. But what does this really prove? That dogs do not, in fact, do any of those things? It only shows that we can be hoodwinked. Nonetheless, tough-minded thinkers would like to suggest that animals behave in their various instinctive ways that we for some reason—due to our anthropomorphic programming—systematically misinterpret along human lines. Just as the dog pawing along the ground is not "exhausted," so dogs and
other animals behaving in ways similar to humans are not really the other traits or do not really have the mental states we anthropomorphically attribute to them in real life.

Case (2). Focusing now on types of behavior, a second type of case would be to anthropomorphically mistake one type of behavior for another, perhaps equally intentional, conscious, or whatever. It is not that no M-predicate applies, but rather that we attribute the wrong M-predicate, and so do because of an anthropomorphic interpretation.

Consider examples from the elephants. Trunk greetings could be signs of affection or attempts to gain information. Eltringham (1982) says, "In greeting each other, the trunks are extended and the tips touch rather like two people shaking hands, except that more information, in the form of scents, is exchanged than is the case with a handshake." (p. 65). But perhaps elephants do not have our concept of a greeting, and the correct understanding has to do with the exchange of information. So there are at least other possible interpretations.

Or consider what are called "talar gestures." Cynthia Moss (1988) tells us that when an elephant dies the other members of the family attempt to cover up the corpse:

They stood around Tim's carcass, touching it gently with their trunks and feet. Because it was rocky and the ground was wet, there was no loose dirt, but they used their feet and trunks and when they managed to get a little earth up they sprinkled it over the body. ... By nightfall they had nearly buried him with branches and earth. Then they stood vigil over him for most of the night and only as dawn was approaching did they reluctantly begin to walk away, heading toward the safety of the park. (p. 73)

It is difficult to resist concluding that the elephants mourn their dead and are sad about it (especially given the way it is described: "stand vigil," "sprinkled dirt," "reluctantly begin"). But perhaps, although they can be said to be sad in other circumstances, it may be the case that they fear the dead and are trying to get rid of her. I do not suggest that this is a better or even very good explanation, but only that it might possibly be a better one. Further observation might determine which is the better hypothesis.

Case (3). In a different category, and more difficult to imagine, would be cases where we anthropomorphically ascribe M-predicates when the true explanation is really very different from human mentality. Here I am thinking, not of reductionist answers, that argue away the animal's mentality but rather of the possibility that the animal's mentality is very different from our own, though in some sense on the same level. Moss (1988) suggests something like this when after describing the exuberant behavior of elephants when they meet family members she says:

After 15 years of watching elephants I still feel a tremendous thrill of a "sneaking a greeting ceremony... I have no doubt ever in my most scientifically rigorous moments that the elephants are experiencing joy when they find each other again. It may not be similar to the human experience, completely, but it is a positive experience and it plays a very important part in their whole social system. (p. 125)

Moss suggests that we be anthropomorphic and yet allow for the real limitations of our anthropomorphism; the suggestion is that elephant behavior does indicate joy, but a joy very different from our own. I think sense can be made of this, but it implies that an ordinary anthropomorphic response to elephant greetings would be at least partially mistaken.

[An example that baffles our anthropomorphic intuitions while making clear the possibility of, as it were, alien M-predicates concerns the way elephants respond to elephant skeletons. Moss (1988) says: "They seem particularly interested in the head and tusks. They run their trunk tips along the tusks and lower jaw and feel in all the crevices and hollows in the skull. I would guess they are trying to recognize the individual." (p. 27). But she also tells of "Agatha of the AA [family who] stops and feels and gently moves her mother's skull, even though it is several years after Annabella's death and Agatha passes the spot frequently" (photo caption, n.p.). It seems that something very meaningful is going on for the elephants and it is on the M-predicate level if anything is. But it is so alien to us that anthropomorphic intuition is baffled.)

Case (4). To explain the next category, I need to first introduce the concept of a P-predicate. P-predicates ascribe the kinds of properties favored by behaviorists and others inclined to nontamentalistic sorts of explanations of behavior. A P-predicate will be a predicate relating to a physical level of description; examples would be bodily processes (including sensory responses) described physiologically, operant conditioning schedules, and so forth. Assuming for the sake of the example that animal training operates on the nontamentalistic level, the training in the Lassie example counts as a P-level explanation of what is really going on. Lassie does not feel exhausted; Lassie is responding to his handler's cue.

Even common sense explains some human behaviors in terms of P-predicates. We have automatic reflexes and bodily processes that are not intentional, and so not to be explained by M-predicates. This generates another possible type of situational anthropomorphism, type (4): It is possible to miss an example of animal behavior that calls for explanation by M-predicates because we anthropomorphically assume that it is to be explained by P-predicates, again projecting human experience too strongly onto the potentially alien experiential world of the animal. A possible example is the elephant rumen rumble. Some observers think the rumen rumble is a form of intentional call. Eltringham (1982) thinks not: "Elephants certainly have noisy digestive systems but it is doubtful that intestinal chortlings have any direct function in communication." (p. 66). Perhaps so, but again, this could be a prejudice in favor of sounds produced with the vocal chords, a kind of reverse anthropomorphism. Since our tummy rumbles do not mean anything, the elephants' do not either.
Types (1)-(6) are conditions under which situational anthropomorphism could occur. Before indicating a final category, which shades into categorical anthropomorphism, it will be useful to ask why situational anthropomorphism is a mistake. I have sketched examples where mistake of the types specified are possible. Here, we see that mistakes are a danger. When anthropomorphic inference to be the final judgment, we would or could be mistaken because there is an alternative explanation. In the Lassie case a P-predicate explanation is correct, in the Rintie case, perhaps a different M-predicate explanation is correct. This is true in the other cases as well. There are alternative explanations, difficult to formulate perhaps, that might be better or more nearly correct. In several of these cases it might be difficult to even say what would count as investigating the alternative explanation or gaining evidence of its truth. But on the assumption that we can indicate what would count, we can see what would be dangerous about resting with the anthropomorphic explanation. Still, nothing said so far implies that in cases of potential situational anthropomorphism a mistake is necessarily made, that to make the anthropomorphic inference is in itself a blunder. We have only seen how it is possible that such an inference goes wrong.

Does the logic of situational anthropomorphism match the rhetoric? Surely not. Mistakes can be made this way, but as we saw earlier, anthropomorphism is supposed to be a fundamental and obvious mistake. It is not just proposing the wrong explanation, but proposing the wrong type of explanation. Yet nothing said so far implies there is in principle anything wrong with the proposed explanations involved in situational anthropomorphism; they may be wrong in particular cases, as might any other hypothesis. Therefore more observations and tests may be called for to be responsible. But equally the charge of anthropomorphism in these situations needs to be backed up by suggested alternative hypotheses to be a responsible charge.

As other writers have pointed out, the criterion of anthropomorphism thinking wants to generalize particular mistakes into a universal mistake. Midgley (1978), for instance, alludes to this generalization in anthropomorphism: "It is a much more extreme position to say that we would be wrong, not just in attributing affection to this dog, but in attributing to any dog any feeling or motive whatever" (p. 344). Only if such a generalization can be made will we have a mistake worthy of the rhetoric that inflates the meaning of the charge of anthropomorphism. How is this generalization to be made?

The most typical way is to claim that the M-predicates in the anthropomorphic explanation could not apply. But this is not situational anthropomorphism. The difference is easier to see if we look at the final type of situational anthropomorphism:

Case (5). This type of situational anthropomorphism occurs when we anthropomorphically ascribe an M-predicate explanation when a P-predicate one is

in order. A potential example of this type comes from Eltingham's (1982) explanation of the coordination of elephant sleeping: "No one individual appears to decide when bed-time has arrived but all lie down or stand still within a few minutes, even if they appear to be out of sight of one another. I could not resist the conclusion that, in some way that I could not detect, they were able to communicate their intentions to each other" (p. 11). One can imagine alternative explanations to the one Eltingham favors: perhaps the elephants somehow coordinate their eating so that they all feel sleepy at the same time; perhaps they emit some sort of pheromone that causes them to feel sleepy; and so forth. Surely there are alternative explanations, and probably explanations at a lower P-level, to the idea that the elephants engage in intentional communication in this case. But none of this is to say that the analogy that plays a role in Eltingham's thinking is necessarily wrong, nor is it to say that there are not other cases in which elephants engage in intentional communication. The M-predicate, "communicate intentions," could apply to elephants, I assume; perhaps it does not in this case. And this is what all the cases of situational anthropomorphism, (1)-(5) have in common. They are all mistakes about particular cases of application of M-predicates. They are potential misapplications of an M-predicate whose application to these animals is not wrong in principle. But many thinkers would resist the elephant case and many of the other cases of attributions on the grounds that they are wrong in principle, that the M-predicates could not apply to the animals in question. And that is categorical anthropomorphism.

Does the existence of situational anthropomorphism imply the validity of categorical anthropomorphism? Critics might think so. Their thought is that under the influence of anthropomorphic thinking we suffer from an illusion; we always mistake animal behavior as we do in the Lassie case, or perhaps Eltingham is doing in taking a physical process for communication of intentions. Consider sled dogs. They seem extremely "loyal" and "devoted" to their trainers and will make incredible efforts for them; these are the M-predicates we are inclined to apply. Yet, it seems that sled dogs have a strong innate desire to pull and to run in a pack. Perhaps all the trainers do is to shape their behavior to the behavior they need to get from the dogs in order to run races. The trainer is the alpha leader and the dogs are the pack who behave instinctively. The generalization is that an animal's behavior, which has a functional and/or evolutionary (P-level) explanation, is systematically misinterpreted by humans in terms of commonsense explanations of human behavior.

Can the Lassie parallel be extended to the sled dogs? Is there an illusion like that created by Lassie? Are we misled in some systematic way by their palling? For example, are the dogs not really loyal? Are they just behaving in ways that descend from their wolf pack behavior? To make a serious case here, one would have to look at what we mean by loyalty. And clearly what we mean by loyalty is systematically constituted by the very sort of behavior that these dogs exemplify.
pulling till they drop, defending their master, returning to their home base by themselves, affection (even if doglike in form), not doing what other people want (not obeying orders of a stranger), and so forth. Some dog behavior is even so paradigmatic of loyalty it is hard to believe that loyalty is solely a human-centered concept as opposed to one in which animal behavior has always con-
stituted a paradigmatic example. The only way the tough-minded argument can work concerning loyalty is by assuming that there is nothing like a primitive version of our mentality lying behind dog behavior. This amounts to viewing dogs as like automatons that are programmed with blind instinctual behaviors that happen to be useful to us, and which we misperceive as flowing from a mentality similar to our own. We misinterpret the behaviors as exemplifying loyalty almost as we misinterpret Lassie’s crawling up the bank as exhibiting feelings of exhaustion. Since this assumption is logically equivalent to categorical anthropomorphism, it cannot be used in a noncircumstantial way to argue that the existence of particular (actual or situational anthropomorphism) logically implies the existence of a general mistake (categorical anthropomorphism). Cate-
gorical anthropomorphism needs to be motivated independently.

VII. CATEGORICAL ANTHROPOMORPHISM

To hold that certain M-predicates could not in principle explain animal behavior or be properly ascribed to certain animals is to shift to categorical anthropomorphism. Categorical anthropomorphism occurs when, for a certain predicate and species, the anthropomorphic inference is mistaken in principle. Consider this example: When prairie dogs meet they greet each other with an apparent kiss. The anthropocentricist will argue: Surely it is a mistake in principle to think that prairie dogs really kiss, that they kiss as we kiss, with similar intentions, thoughts, emotions, and so forth—that what they do can literally be said to be a kiss. And it is not just a question of prairie dogs having mere emotions, it is that anthropomorphism to think that superficial behavioral similarities are to be under-
stood as caused by underlying mentality of a familiar sort.

Generalized anthropomorphism is the usual theme of philosophers who have worried about animal mentality. Most philosophers have tended to think there is a sharp division between humans and other animals—
either humans have minds and animals do not, or humans are rational and animals are not, or humans use language and animals do not—but such that it is a mistake in principle to apply various M-predicates to animals. And always this division is a hierarchy, with humans at the top and animals underneath separated by a gulf. Thus philosophers have not been concerned with getting the animals’ mentality right, that is, to avoid the anthropomorphic error of mistaking the ex-
pression of one mental state for that of another; nor have they been concerned to

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ban anthropomorphic interpretations to make room for another sort of mentality, alien to our understanding. Rather, they have aimed to ban anthropomorphic interpretations in order to deny to animals any sort of mentality. Of course, each philosopher draws his line at a slightly different point. Davidson (1957) worries about anthropomorphism in connection with ascription of any thought to ani-
mals; others might draw the line more or less extremely. It would be fair to sum up this tradition, however, as one that supposes the dangers of an-
thropomorphism are quite general; that is, the charge of categorical an-
thropomorphism is made in the case of most M-predicates and most species. In short, when philosophers have been concerned about anthropomorphism, they have tended to adopt ways of speaking that make them sound like hard anthropocentrists.

Having already described the sort of mistake categorical anthropomorphism is supposed to be, I will focus here on the reasons why attribution of M-
predicates to animals (i.e., the anthropomorphic inference) is thought to be the mistake of categorical anthropomorphism. I will examine not only the few dis-
cussions of anthropomorphism by philosophers but in addition other potential objections that I believe implicitly lie behind the categorical rejection of an-
thropomorphic inferences.

A. Anthropomorphic Inference Is Connected with Falseness

It is safe to say that most references to anthropomorphism in the scientific
and philosophical literature occur in discussions of whether animals think or have certain M-states. As I have maintained in preceding sections, the question of whether animals think and the issue of anthropomorphism, though related, are logically distinguishable. Those who fail to see this tend to assert that it is anthropomorphism to ascribe M-states to animals. On the contrary, an ascription of M-states to animals is not necessarily anthropomorphism even if it is false.

The idea that anthropomorphism is simply false belief or assertion can be
spelled out at two points in the anthropomorphic inference. Some may argue that accepting ascription forms in anthropomorphism because it is based on false premises or assumptions. Others have the idea that it is anthropomorphism because it draws a false conclusion. I shall argue that neither of these is an-
thropomorphism in the proper sense.

Consider, first, the idea that the anthropomorphic inference is based on a
false assumption, an assumption of similarity between the animals in question and humans. The question is: Why is this a false similarity? Human physiology and human behavior have both evolved from that of other animals, so it is not obvious that the analogies that ground the anthropomorphic inference are not a valid basis for it. Indeed, it appears that in attacking the assumptions underlying the inference the centrist who charges anthropomorphism gives a circular argument. In his early book on animal behavior, Rationality, Jonathan Bennett (1964) suggests as much:

It beg[s] the question to say that it is merely "sentimental" or "anthropomorphic" to credit bees with rationality. If "It is anthropomorphic to credit bees with rationality" means "To credit bees with rationality is to be mistaken," then this is true but unhelpful. On the other hand, it means "To credit bees with rationality is wrongly to liken them to humans." Then it beg[s] the question. (p. 11)

The very point at issue is whether it is mistaken to draw the anthropomorphic inference, so an argument needs to be given by the centrist as to why the general analogy is mistaken, and mistaken, not just in this case, but in principle. It is difficult to see how such an argument would go. Whether or not the analogy is a good one seems to be an empirical question, and as such, the claim that it is not a good analogy, even if sustainable, would not ground a charge of anthropomorphism but merely one that the inference is mistaken.

Consider some particular assumptions that underlie anthropomorphic inferences. For example, we assume that the elephants who appear to gesticulate each other know each other and have appropriate social relations. For such social relations would seem to be required for the application of our concept of a greeting. Whether such assumptions are true is an empirical question, however, and hence the assertion that they are not true does not justify the charge of categorical anthropomorphism, which holds that the anthropomorphic inference is wrong in principle. Sometimes thinkers reason that if the conclusion of the anthropomorphic inference is false, even empirically false, then the inference is guilty of categorical anthropomorphism. This way of thinking equally misses the charge of anthropomorphism to rule out what might be a reasonable empirical dispute. Consider the Clever Hans example again. It is conceivable that there was another and smarter horse called Clever Shmans; a horse that, as far as anyone could tell from his behavior, could add numbers and did not use cues from spectators. How could it be asserted that to accept the claim of Shmans' ability is anthropomorphic? It is possible that we might argue on empirical grounds that Shmans cannot add. For example, it might be claimed that there is something missing in a horse's brain that is required in the human brain to understand numbers. If such evidence were found, however, it would not support a charge of anthropomorphism against those who accepted the ascription of numerical ability on the basis of Shmans' behavior.

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B. Anthropomorphic Inference Has Suspect Origins

One of the most interesting reasons for being a hard centrist can be located in the general role that anthropomorphic inferences play in human cognitive development. The connection of anthropomorphism in literal thinking about animals to imaginative anthropomorphism and of imaginative anthropomorphism to imagination and childhood provides a motive to question anthropomorphic inference and to see it as categorical anthropomorphism.

Children invest dolls and other objects with personalities as part of normal cognitive development. They see personalities everywhere. Even when we grow up we still easily see human forms in clouds, cracks, cars, and so on; indeed, much visual art is based on our ability to see human forms in vague lines and shapes. Clearly humans have a capacity to perceive objects as having personalities. It is not just a capacity to imagine; it is a sort of imaginative representation of a perceived object. As children we often accept these representations as real.

When this capacity is exercised on animal representations, I think we have imaginative anthropomorphism, which must be separated from our more general capability to imagine personalities in things. Without this distinction the acceptance and enjoyment of nonhuman entities as fictional persons in itself would be anthropomorphism. But if someone enjoys Kermit the Frog or the Little Engine That Could, is that anthropomorphism?

One is inclined to say that just to accept these characters is not anthropomorphism, because to accept them requires no beliefs at all. Instead it may be like treating them as or seeing them as people. I need to be facilitated in that perception; they have to constantly look and act like people. But I don't have to believe that frogs are persons in order to understand the character of Kermit the Frog any more than I have to believe that trains are persons in order to understand the Little Engine That Could.

To apply the concept of anthropomorphism to fiction, we can crudely divide fiction up into the realistic (R) and nonrealistic (non-R). Imaginative anthropomorphism could then be said to be involved in those fictions that have animal characters but are implicitly labeled R (or not labeled non-R). Or it could be said that anthropomorphism resides in the viewer and defined: a viewer is guilty of anthropomorphism when in reacting to a non-R animal fiction he or she

(+) Fails to be clearly aware that it is non-R

You know when you read the Little Engine That Could that there cannot be such a train; we are pretending that such a train is trying to climb the hill. But a very small child might not know that there could not be such a train. To understand and engage the story it is not necessary to know it is possible. It is only necessary to pretend.
The closer something gets to human form and behavior, the easier it becomes to pretend it is a person. But whereas we have to pretend that a train could be a person or personlike, the worry about Disney's Bambi might be that it encourages young viewers to think that it is merely a fiction; they do not have to pretend that it is possible, they believe in an unreflective way that it is possible, just as I believe that the background events and characters in some novels are possible. Thus there are (very roughly) two levels of beliefs and pretense in our response to fiction:

1. That these particular individuals and events exist
2. That these individuals and events are possible

In The Old Man and the Sea by Ernest Hemingway, I don't pretend that the events are possible or that certain kinds of creatures exist. But I do pretend that I read the story about a man who could not imagine that the artist父子 writers make it easier to pretend, or if you will, present a world in which there is a talking train, and we pretend that that world exists. But a young reader might think that it was our real world. According to the suggestion in (2), that would be anthropomorphism.

To summarize these thoughts about representations and imaginative anthropomorphism, we can say that fictions are anthropomorphic when they represent animals as more human than in fact they are. But spectators are not taken in by such representations, nor are they influenced by them. Even children know that raisins aren't really like the California raisins and that trains are not alive. Spectators are guilty of anthropomorphism only when they accept that the false nearness to humans is possible. When dogs talk in Richard Adams' movie The Plague Dogs, this is anthropomorphic, but viewers are not taken in. In Disney's Bambi most of the other details of forest life, in contrast to The Plague Dogs, are entirely misrepresented. If viewers are taken in, and accept the fiction as realistic, they are guilty of anthropomorphism.

Our general capacity to understand such anthropomorphic representations makes suspect the way we understand real animal behavior. The hard core may wish to suggest that common sense explanations, in terms of M-predicates, are too closely allied to childish anthropomorphism, indeed dependent on those imaginative capacities, that we all grow up with and which we regularly apply in imaginary fictions. Just as we can easily imagine a Bambi on-screen as a pre-adolescent human child, so when we see a real deer there probably is a certain amount of imaginative goings on in how we relate to and understand the deer. It seems likely that imaginative representations play an important role in how we understand animals commonsensically. Surely these imaginative capacities are often misused, and just as rarely they do not provide the sort of foundations we hope to have for scientific explanation.

That we are able and inclined to see personality in some animals, at least,
Disambiguating Anthropomorphism

Quine (1960) does not use the term. He does, however, suggest that all ascriptions of propositional attitudes to fellow humans as well as to nonhuman animals involve projection, and he insinuates that projection is not in general an adequate method, and in the cases of animals, absurd.

Casting our real selves thus in several roles, we do not generally know how much reality to hold constant. Quantifiers arise. But despite them we find ourselves assigning beliefs, wishes, and intentions even to creatures lacking the power of speech, such as our dramatic vultures. We project ourselves even into what from his behavior we imagine a mouse's state of mind to have been, and dramatize it as a belief, wish, or striving, verbalized as seems relevant to us in the state thus figured. (p. 210)

A Quinian hard centrist would do no doubt base his or her case on the quarries emphasized by Quine.

Like most of the ideas associated with the charge of anthropomorphism, projection has not been analyzed by those who casually invoke it to explain our thinking about animals. It therefore requires careful scrutiny. These are three points in particular that need investigation: (1) How is projection connected to anthropomorphism? (2) What is wrong with projection? Why does it lead to falsehood? (3) Does the anthropomorphic inference depend upon projection? If it plausibly to hold that projection is the mechanism that underlies anthropomorphic inferences I will argue for two points. First, it is not clear that, if it is construed in a non-question begging way, projection necessarily delivers falsehoods. Second and more important, it is not at all obvious that anthropomorphic inferences depend upon projection. Projection is a red herring. Imaging what I would do or think in the animal's situation may be an unreliable method—but how unreliable and why? It is clear that if this is how I reason about what you will do or are thinking, I will get it wrong some of the time. But translated to the animal case, that would only yield situational anthropomorphism. Presumably what Quine and others have in mind is that it is always wrong or even entirely absurd. The hard centrist's claim is that projection yields categorical anthropomorphism.

There is another ambiguity. In Quine's (1960) view, projection underlies attribution of all propositional attitudes. For instance, "in indirect quotation we project ourselves into what, from his remarks and other indications we imagine the speaker's state of mind to have been, and then we say what, in our language, is natural and relevant to us in the state of mind thus figured" (p. 218). But is projection supposed to underlie how I know in general that other people have M-states? Or is it only supposed to underlie how I arrive at beliefs about particular pretending to be a mouse or a gorilla" (p. 201). But as another influential philoso-

C. Anthropomorphic Inference Involves Invalid Methods

In addition to the hard centrist's worry about the cognitive schemes with which we perceive and understand animals, philosophers have raised a related objection. Some of them have characterized the anthropomorphic inference in such a way as to make it dishonest or even absurd. They have suggested that at bottom the inference requires a process of "projection." Johnathan Bennett (1988) associates this view with Quine:

Some philosophers hold that we have no good standards governing our moves to conclusion about thoughts from premises about nomoontical behavior... Quine, for instance, says that when we attribute beliefs to other animals we are speaking in a "dramatic idiom," imagining ourselves in the animal's shoes, so to speak, and saying on its behalf what we imagine we would think or be prone to say if we were feeling at a cut up time or longingly as a troubador with our boon. (p. 200)

Bennett does not himself accept this view: "Despite recent skeptical literature tending the other way, I unabashedly concede that many animals have beliefs and wants, and that this is anthropomorphism—not a "dramatic" way of pretending to be a mouse or a gorilla" (p. 201). But as other influential philoso-

Although Bennett associates the idea of projection with anthropomorphism,
common assumption in the philosophy of mind that on the basis of what I think and feel in particular circumstances, I ascribe to other humans thoughts and feelings in similar circumstances. I argue from my own case. If this is the role of projection, and projection is essentially defective when applied to animals, then any anthropomorphic inference that projection underlies becomes categorically anthropomorphism.

If projection works at all in the case of fellow humans, why can it not work for animals? Is it really such a mechanism of the imagination that enables each of us to overcome the required counterfactual ("if I were her"); why cannot the same mechanism overcome the counterfactuals involved in thinking about animals ("if I were Linus")? By hypothesis, I can abstract from sex, age, cultural, and physical differences to persons; why can I not go farther and abstract from greater physical differences? To deny that we can successfully project ourselves onto animals assumes that animals are too different from us for me to reason validly in this way. That assumption begs the very question at issue. Part of the absurdity of projection comes from the difficult counterfactual on which projection is supposed to be based. But if it is not absurd to reason this way in some cases, why does it become categorically impossible as soon as we reason about other animals?

Quine (1960) objects to projection because he views it as unscientific; he implies that the method of projection allows any answer and that it violates his strictures on evidence and explanation, which are purely behavioral. "In the strictest scientific spirit we can report all the behavior, verbal and otherwise, that may underlie our imputations of propositional attitudes. . . ." (p. 219). To Quine's credit, this is why he is also suspicious of ascription of propositional attitudes to humans. But this is a standard that has been rightly displaced in scientific theory and practice. On behavioristic grounds commonsense explanations of our actions and reactions, and our social activities would be just as defective as are such explanations extended to animals.

The Quinean position has a further problem. In so far as we are to take seriously the idea that one can know from how Quine knows that projection, this mechanism of the imagination he claims structures our thinking about animals, it actually how we arrive at our ascription of mental predicates. Perhaps this is how Quine thinks about other people and perfume, other animals, but how does he know that anyone else does it this way? How could he have evidence for the truth of his own claim? Is this in fact an example of an invalid projection?

If in fact, anthropomorphic inference does not depend on projection, then this whole case collapses. And indeed, I do not see any clear reason to suppose that this mechanism must underlie all anthropomorphic inferences and plenty of reason to deny it. For instance, much that is counted as paradigmatic of anthropomorphism cannot be plausibly understood as projection. If I find a baby elephant cute, how am I projecting myself?

No doubt we sometimes reason this way, at least about fellow humans, but when we do there is an important requirement. Consider a chess example: I may ask, what would I do in the situation of my opponent? Equally, I may reason: I would do X, but Karpov is the type who will do Y. Even to think, "suppose I were Karpov," do I not have to know what Karpov is like, how he differs from me? In short do I not need a theory of Karpov, a model representing him? And in the case of animals ("suppose I were that elephant") do I not need some theory of the animal, a modeling of what it is like to be the animal? But if so, projection loses its alleged function, for it only works if I already have some basis for understanding. Take the simplest example: next door a deer is munching on my neighbor's grass. I immediately think that deer must be hungry. I have not arrived at this thought by thinking: If I were to eat my neighbor’s grass, I would be hungry. If I went next door and started to munch on the lawn, I would perhaps have a nervous breakdown or be suffering from a drug reaction. My reasoning was, rather, based on how I represent deer, as creatures who make grass a regular part of their diet.

We should contrast making ascriptions to the other based on understanding how the other responds mentally to a given situation with making them based on how I would respond in the other's situation. What I think is absurd in the projection argument is the idea that I can only reason from my own case, that I know about myself and only about myself from the inside, and must somehow project myself onto the outside world to form any further inferences about people or animals. Such a picture has been convincingly shown to be a failure, however compelling it may seem if we accept the idea that each of us is an isolated Cartesian ego. On the one hand, the philosophical literature on the "other minds" problem demonstrates the thorough inability of the argument from analogy (the philosopher's version of projection) to avoid total scepticism about other humans' mental states. On the other hand, the private language argument, stemming from Wittgenstein (1953), has shown that we could not learn about our mental states from our own case. In particular we could not, I think, learn what our states are if we did not already know that other people have such states. It is not that one could never justifiably reason from analogy or by projection, but that this cannot be offered as the basis for how one knows that other humans have minds. Just as we do not make up our own language first and translate it into the public language, so we do not identify our own mental states first and then translate them into public discourse about mind. Instead, it is from learning the public language that we learn about M-states and that we have the M-states that others have. But if the projection mechanism is not the foundation for our general understanding of other humans, why insist that it is for our general understanding of other humans, why insist that it is for our general
understanding of animals? (And it says less is to reduce the projection objection to saying that projection can lead to situational anthropomorphism.) We suppose that projection must be the mechanishm except for a commitment to the discredited view that "I know from my own case?"

A general dilemma reinforces this rejection of the claim that projection underlies the anthropomorphie inference. In so far as projection is understood as requiring an impossible thought ("if I were that deer"), and for that reason provides an invalid basis for anthropomorphic inferences, why suppose that those who ascribe M-predicates to animals are engaged in entertaining it? This convicts the person who ascribes thoughts to animals not just of irrationality, but of impossible thoughts. Moreover, it is not as if anyone has any direct evidence that other people who ascribe thought to animals are reasoning this way. If there is nonsense in the thought that contains projection, the nonsense is Quine's, not that of those who do attribute M-predicates animals. They may be wrong, but they cannot be doing the impossible when they infer the animal's M-state from its behavior.

The projection model of how we reason about others gains credibility only if there are no other conceivable possibilities. Yet other possibilities are conceivable. Rather than reasoning from our own cases, we could be born with an innate tendency to develop a theory of mentality that de-clops in parallel with our development of linguistic competence. We learn the theory primarily in application to people, but in addition we learn to apply it to higher animals on the basis of some of the same behavioral criteria that we apply in the human case. We learn such things as when we cry we are sad, when we strike out we are angry, when we romp around with each other we are playing, when we ignore food we are not hungry, and so forth. This theory may be mistaken if extended to nonhumans—and certainly it would be if we ignored the differences between us and them—but the question here is only whether we can think about animals without using the dubious mechanism of Quinian projection, and surely we can. If we "project" anything in thinking about animals it is human characteristics that we project upon them (rather than our individual qualities). This is projection in an entirely different and unproblematic sense. It may be incorrect, but it is far from impossible or even absurd. We have only to assume that animals are members of the class of creatures that have roughly similar responses to our own.

D. Anthropomorphic Inference Based on Inadequate Evidence

Finally I want to consider the claim that the charge of anthropomorphism is justified because of the inadequate evidence on which the anthropomorphic inference is based. Projection if characterized as projecting M-predicates onto animals, may not be an incoherent notion, but there are those who would claim that it is nonetheless inherently defective as a way of arriving at explanations of animal behavior. The particular concern I have in mind comes from the power of projection, or to use the terminology of John Bishop, "personification," to apply to any behavior or form that resembles our own. This indiscriminate explanatory potential opens up the anthropomorphic inference to the criticism that it engages in an unwarranted inductive leap.

To make this into an argument that the anthropomorphic inference amounts to categorical anthropomorphism, that is, a categorical mistake, it must be argued that the evidential base of the inference is inherently defective. It fails to be adequate to the sort of inference it supports and it fails in a systematic way. Such an argument is made by John Bishop (1980) in the course of discussing whether or not it is appropriate to give "rational" explanations of animal behavior; that is, explanations "in which phenomena are accounted for as the outcome of the agent's practical reasoning from his beliefs and intentions" (p. 1). For Bishop the question of whether animals think is primarily the question of attributing practical reason to animals: Do animals act for reasons; do they behave as they do because they have goals and beliefs? He grants the plausibility of Hume's inference: "aspects of dumb animal behavior bear striking phenomenological similarities to the kind of intelligent human behavior which counts as the very paradigm of intentional action— if such human behavior is explained as the outcome of practical reasoning, then the similar behavior of languageless behaviors may justifiably be similarly explained" (p. 4). Bishop maintains, however, that Hume's inference—which is really just a subspecies of anthropomorphic inference—is merely a prima facie argument. We must beware, says Bishop, adhering to Davidson's concern to avoid anthropomorphism, of what is "no more than habitual anthropomorphism about certain dumb animals" (p. 4). According to Bishop the Humean argument ignores the possibility of what we may call the "personification challenge": one can argue validly from the similarity between a deer creature's and a human's behavior to the conclusion that the former as well as the latter is the outcome of practical reasoning; only if one can exclude the possibility that the similarity results from anthropomorphic projection (p. 4, my emphasis).

If the personification challenge (PC) can be rejected, then Hume's inference is satisfactory. Bishop contends, however, that the PC has yet to be overcome. It is important to clarify what it means to describe Hume's inference as only providing a prima facie case that rational explanations apply to animal behavior. Bishop wishes to argue not that Hume's inference is mistaken, but that it could be mistaken. This leaves room for the success of arguments, like Davidson's, that we cannot attribute beliefs to animals. Thus, although anthropomorphic inferences are compelling, they could still be wrong. If this is Bishop's point, no conclusion I have drawn in this paper is inconsistent with it. Anthropomorphic inferences are at bottom inductive in that they apply a theory (the theory of M-
predicates) to explain animal behavior. And just as this theory could be incorrect as an explanation of human behavior, it could be incorrect as an explanation of animal behavior. But Bishop needs something stronger than this logical point. He needs to show a particular way could be mistaken; not mistaken in this or that case (situationally anthropomorphism) he is mistaken in general, yet not in such a way as to undermine our attribution of M-
predicates to each other.

Bishop introduces the personification challenge by observing that there is a difference between behaving as if for a reason and actually acting for a reason. This is a distinction we make among human actions, but how does it apply to the present problem? It’s not clear whether or not animals have reasons and when they do not, and what their reasons are when they have them. These are the problems of understanding situational anthropomorphism. The mistake involved in Hume’s inference must rather be this: Possibly animals never have reasons, although they behave as if they have reasons. Why would we think this? What reason can be given for making such a distinction between human and nonhuman animals? We need an argument that establishes a category of creatures that never have any reasons (or beliefs and desires). It appears that Bishop thinks that our anthropomorphic inferences are based on a mental faculty that we project onto entities devoid of intentions the appearance of intentional action. But how would we know that these entities do not have intentions? Is there some fact of the matter that we have determined is misrepresented by “personification”? Surely we cannot say that we have direct access to the minds of dumb animals and we have found that they are empty.

Bishop’s worry concerns our ability to make necessary distinctions on the basis of an animal’s behavior. “But information-bearing belief-like states may play a role in the modification of a system’s behavior without its being true that the system acts for a reason. That kind of fiendish missile which modifies its track towards the moving target in accordance with information received through heat sensors provides an apt example of such a system” (1980, p. 6).

Davidson (1988), too, is concerned about such missiles:

someone might easily have no better or alternative way of explaining the movements of a heat-seeking missile than to suppose that the missile wanted to destroy an airplane and believed it could do so in the way it was observed to move. This satisfaction observer might be justified in attributing a desire and belief to the missile; but he would be wrong. (p. 477)

Does this just repeat the point that our inferences to M-predicates for animals are inductive in character, as are our inferences to M-predicates in humans, or is there a further problem concerning our capacity to make these inferences for animals? What is analogous to the missile in the case of animals? An argument that would do the required job goes like this: For all we know, animals are machines, and machines cannot act for a reason. Therefore, for all we know animals cannot act for a reason. We know that animals are not machines, however, and anyway, why could a machine not act for a reason?

Maybe what is wrong with the fiendish missile is not that it is a machine but that it is such a simple machine. It modifies its movement, not because it has any recognizable states analogous to desires, needs, or beliefs, but because of a simple feedback loop. But in that case, we need not worry. Hardly any living organisms are this simple. Certainly a buzzard, to take an analogously behaving entity, does not merely and mechanically respond to the information it receives visually. [Richard Jeffrey (1985) doubts that even bees are analogous to David-son’s heat-seeking missile.] And on the neurological level at which we can analyze the causal mechanisms of a buzzard’s vision, we can also analyze human vision as a confluence of complex causal processes.

What is wrong with the missile is that it is nothing but a system whose behavior is directly controlled by a simple modality of external information. A system that is thus controlled cannot be considered to have reasons for its behav-
ior. This casts light on the nature of the PC. The fiendish missile is similar to a thermostat. Yet we would never attribute beliefs and desires to a house, whereas we might, momentarily, to a missile in flight, which looks like a bird. Hume’s inference, then, may be acceptable as long as we make sure that we have not misperceived the entity in question, as we might a missile but would not a house. Are we misled by the physical appearance of nonhuman animals in the way that we may be momentarily misled by the physical appearance of a missile? Surely not. Many animals have actual nervous systems, not something that imitates a nervous system. The buzzard really has an eye; the missile has some-
thing that looks like an eye. I am wrong if I think that the missile is a bird; I am not wrong if I think that the bird is a lot like me physically. More important is the perception of intentional action. I may mistakenly think the missile has inten-
sions, desires, and so forth. This mistake could be put to rest by more observation of the missile’s behavior, and therefore does not seriously challenge Hume’s inference. Hume’s inference gets off the ground only for creatures that appear on more than momentary inspection to behave like us.

What becomes of the personification challenge? There is a large class of entities, including humans, dumb animals, and machines, whose behavior can lead us to anthropomorphically infer that they act as a result of practical reason. Not all of these entities, however, do so. The challenge is this: Can we tell the difference? How do we know, for instance, that all animals are not just like the missile? The answer is that Hume’s inference is designed to make just this distinction. We do have to conclude entities that cannot go wrong in their behavior, entities that cannot recognize, at least sometimes, that they are going wrong, and so forth. Why should we think that it is impossible to satisfy such criteria?

If it is a mistake to explain animal behavior as the result of beliefs and desires, the mistake must result from a failure of common sense to realize the
requirements of abstract philosophical theories concerning belief or action, for instance. Davidson's requirement that to have a belief one must be a language interpreter. No argument for animal thought can be so decisive as to rule out the possibility that abstract philosophical theory may show beliefs or desires to require some condition that dumb animals do not satisfy. Our basic beliefs about human mental states are, in the same way, open to attack. Thus the possibility that animals do not have thoughts turns out to be similar to the possibility that commonsense views about human mentality, so-called "folk psychology," will prove incorrect (see Stitch, 1983).

Do such possibilities show that our anthropomorphic thinking is guilty of the charge of categorical anthropomorphism? Not yet, for it has not been shown that our capacity to personify dogs can fail while our ability to personify each other can retain its validity. Still, for some thinkers there will be this difference: We can imagine that our theory (M-predicates) is entirely misapplied to animals, whereas, and contrary to the trendy rejection of folk psychology, we cannot imagine that they're being wrong in application to us. What I have argued is that no one has shown that we can imagine the former except by imagining the latter.

VIII. CONCLUSION

The concept of anthropomorphism is intimately tied to the negative criticism that it regularly implies. The idea that anthropomorphism names a widespread fallacy in commonsense thinking about animals is largely a myth, however, and the use of the term as a critical cudgel ought to be given up. It cannot stand for what it is supposed to. We have found that people commit no simple category mistake when they reason according to what I have termed the anthropomorphic inference. With the more complicated account of anthropomorphism developed above, we can say anthropomorphism exists, namely, situational and imaginative anthropomorphism. But we have found no adequate argument for the idea that commonsense thinking about animals instances the more fundamental mistake anthropocentrism commonly supposes it does, categorical anthropomorphism. Without a plausible defense that attributions of mental states to nonhuman animals is a categorical fallacy, the most basic assumption of critics of anthropomorphic thinking is shown to be untenable.

IX. REFERENCES


