

Animals, Thoughts and Concepts Author(s): Hans-Johann Glock Source: *Synthese*, Vol. 123, No. 1 (Apr., 2000), pp. 35-64 Published by: Springer Stable URL: http://www.jstor.org/stable/20118266 Accessed: 15-10-2017 17:52 UTC

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at http://about.jstor.org/terms



Springer is collaborating with JSTOR to digitize, preserve and extend access to Synthese

ANIMALS, THOUGHTS AND CONCEPTS

ABSTRACT. There are three main positions on animal thought: lingualism denies that non-linguistic animals have any thoughts; mentalism maintains that their thoughts differ from ours only in degree, due to their different perceptual inputs; an intermediate position, occupied by common sense and Wittgenstein, maintains that animals can have thoughts of a simple kind. This paper argues in favor of an intermediate position. It considers the most important arguments in favor of lingualism, namely those inspired by Davidson: the argument from the intensional nature of thought (Section 1); the idea that thoughts involve concepts (Sections 2-3); the argument from the holistic nature of thought (Section 4); and the claim that belief requires the concept of belief (Sections 5-6). The last argument (which Davidson favors) is uncompelling, but the first three shed valuable light on the extent to which thought requires language. However, none of them precludes animals from having simple thoughts. Even if one adopts the kind of third-person perspective on thought Davidson shares with Wittgenstein, the result is a version of the intermediate position, albeit one enriched by Davidson's insights concerning intensionality, concepts and holism (Section 7). We can only ascribe simple thoughts to animals, and even that ascription is incongruous in that the rich idiom we employ has conceptual connections that go beyond the phenomena to which it is applied.

Can animals without language have thoughts? It is common to suggest that the answers to this question are sharply divided. On the one hand there are "human exceptionalists", who believe that we are unique in having thoughts; on the other there are supporters of "continuity across species", who regard the differences between humans and animals as merely a matter of degree (Jamieson 1998). In fact, however, philosophical opinion on animal thought is more nuanced, in at least three respects.

For one thing, there is a spectrum of views. At one end we find lingualists like Davidson, who deny that non-linguistic animals have any thoughts. The other, mentalist, end is occupied by empiricists like Hume, who think that the thoughts of animals differ from those of humans only in degree, due to their different perceptual inputs. Oysters don't have thoughts about bicycles, simply because they cannot perceive bicycles. In one sense, it is also occupied by those cognitive psychologists who explain even simple animal behavior by reference to a rich variety of complex thoughts and calculations, except that these thoughts are held to be in a language of thought, not in a public language. In addition to these two extremes, how-

教

Synthese **123:** 35–64, 2000. © 2000 Kluwer Academic Publishers. Printed in the Netherlands.

ever, there is an intermediate position, adopted by a coalition (rare, some might say) of common sense and Wittgenstein. It maintains that animals are capable of having thoughts of a *simple* kind, namely those that can be expressed in non-linguistic behavior.

A second complication arises because of the various dimensions of the concept of thought. Even if we leave aside thought as the capacity for reasoning and confine ourselves to so-called propositional attitudes, we have to distinguish between two parameters, namely the kind of propositional attitude on the one hand, and the kind of "propositional content" on the other. One question is, what intentional verbs can be applied to animals; another question is, what that-clauses can follow these intentional verbs. Concerning the first parameter, it is possible to grant that a dog can know, believe or see that p, but to deny that it can think or hope that p. Concerning the second, Wittgenstein famously suggested that a dog can believe that its master is at the door, but not that its master will return the day after tomorrow.¹

Finally, there are diverse views on the semantic status we should accord to ascriptions of thoughts to animals. Even those who are prepared to accept that some such ascriptions are neither conceptually incoherent nor empirically false, often insist that they cannot be taken literally, but must be regarded as figurative, metaphorical or secondary. In a similar vein, Bede Rundle has suggested that ascribing thoughts to animals is a mere description or redescription of behavior, whereas ascribing thoughts to humans can be a genuine explanatory hypothesis, to be confirmed by what the subject is prepared to divulge (1997, ch. 4). On either view, to say that an animal believes that p may be no more than a *façon de parler*.

Inevitably, this paper ignores numerous aspects of the various problems that emerge. I shall remain silent on the question of whether there are animals that have a language and are hence capable of complex thought. For ease of presentation, I shall use "animals" to exclude humans and assume that all animals are dumb, i.e., incapable of linguistic communication. Equally, I shall not separately address the question of animal intelligence or animal perception. Even with respect to propositional attitudes, I shall confine myself to the conflict between lingualism and the intermediate position. More specifically, I shall take most of my cues from Donald Davidson.

There are various reasons for this restriction. Davidson is the most important contemporary proponent of lingualism. His claim that "a creature cannot have a thought unless it has a language" (Davidson 1985, 477; 1984, 163) is famous among philosophers, infamous among zoologists and pet-owners. Furthermore, his work has the virtue of combining several in-

teresting arguments in favor of lingualism and hence can serve as a foil for recent points made by other lingualists such as Dummett and Rundle. Last, but not least, Davidson shares certain methodological assumptions with the intermediate position, which should make for a more fruitful comparison.

For one thing, both are rightly unimpressed by the charge that to draw any qualitative distinction between humans and animals is deplorably anthropocentric or insufficiently naturalistic. There is no gainsaying the fact that there is both biochemical similarity and evolutionary continuity between us and certain non-linguistic animals. But it does not follow that they must approximate to our mental life. Although it is probable that our closest evolutionary ancestors without language shared many of our other mental capacities, these ancestors are extinct; and there is no guarantee that the biologically closest extant species is mentally close to us. It so happens that the chimpanzees share 98% of our DNA. However, it does not follow that they share 98% of our mental life, simply because small biochemical differences may lead to significant differences in terms of our mental vocabulary.² That vocabulary captures neither genetic nor neurophysiological differences, but differences in the kinds of capacities we humans are interested in. To that extent, our mental concepts themselves may be anthropocentric; yet it does not follow that it is anthropocentric to insist that these concepts preclude application to non-linguistic creatures (see Davidson 1985, 473).

The second methodological similarity is that both Davidson and the intermediate position approach thought from a third-person perspective. They do not appeal to phenomena – whether mental or neurophysiological – that cannot be manifested in behavior, even in principle. Both hold in effect that one cannot attribute beliefs to creatures which are totally incapable of manifesting these beliefs, Davidson because he cannot make sense of the notion of a belief as a private attitude completely detached from behavior and its explanation (1984, 170; 1985, 476), Wittgenstein because he insists that we can ascribe a thought that p to a creature a only if something counts as a thinking that p rather than that q. The difference is that, unlike Wittgenstein, Davidson insists that even for simple beliefs, the required behavior must include linguistic behavior.

This third-person perspective contrasts with a less austere approach that posits mental faculties and processes which are unreflected in behavior and often lie beyond human consciousness. Interestingly, this kind of approach has recently been used both to defend a form of lingualism, notably by McDowell (1994), and to develop a version of mentalism, for example by Peacocke (1992). I shall not attempt to defend the third-person approach against this alternative here.³ But it is important to note that it

is not tantamount to behaviorism: thoughts can be ascribed on the basis of behavior, without therefore being reducible to behavioral dispositions (Davidson 1985, 476). Furthermore, the third person perspective is adopted not just by common folks, but also by cognitive ethology and comparative psychology in their scientific investigations of animal mentality.

In any event, my aim here is more modest. I want to show that even from a third person perspective, Davidson's ingenious reflections point in the direction not of radical lingualism, but of a modified intermediate position. Davidson takes his cue from Norman Malcolm, who relates the following story.

Suppose our dog is chasing the neighbor's cat. The latter runs full tilt toward the oak tree, but suddenly swerves at the last moment and disappears up a nearby maple. The dog doesn't see this maneuver and on arriving at the oak tree he rears up on his hind feet, paws at the trunk as if trying to scale it, and barks excitedly into the branches above. We who observe this whole episode from a window say, 'He thinks that the cat went up that oak tree'. (Malcolm 1972–1973, 13)

Malcolm claims that we would be right to say this, and Davidson acknowledges that it is *prima facie* plausible. Nevertheless, he insists that strictly speaking Malcolm's dog cannot believe anything, because he does not possess a language (Davidson 1984, 155; 1985, 474–6, 478).

An immediate objection to Davidson is this: animals must be capable of having thoughts because we have no better way of explaining and predicting their behavior than by attributing thoughts to them (e.g., Bennett 1976, §§7–8; Fodor 1975, ch. 1). According to Davidson, this provides a pragmatic justification for our attribution of thoughts to animals, but it does not show that animals can have thoughts. In attributing thoughts to animals, we merely treat them *as if* they were capable of acting for reasons (beliefs and desires), just as one might explain the movements of a heatseeking missile by ascribing to it the desire to destroy an airplane. In this way,

we can continue to explain the behavior of speechless creatures by attributing propositional attitudes to them while at the same time recognizing that such creatures do not actually have propositional attitudes. We will be bound to acknowledge that we are applying a pattern of explanation that is far stronger than the observed behavior requires, and to which the observed behavior is not subtle enough to give point. (Davidson 1985, 477–8)

This account treats thought-attributions to animals as useful fictions.⁴ However, Davidson himself concedes that animal behavior is much closer to human behavior than the movements of heat-seeking missiles, and that we know of no better way of explaining the behavior of animals than by attributing thoughts to them. But these concessions invite an objection Davidson ignores.

38

We regard attributing thoughts to animals not just as *convenient*, as he would have it, but as entirely *justified*. For, unlike attributing desires and beliefs to complex missiles, such attributions are not based on *technological ignorance* but on a *biological insight*, namely that the life and behavior of animals shows them to have both wants and perceptual capacities. Davidson might reply that the alleged insight is merely an illusion of Aristotelian folk-biology, since animal behavior could be fully explained by reference to physiological processes, if our knowledge of physiology were sufficiently advanced. However, this invites the question of why human behavior should resist such explanation. Davidson has a well-known response: human action defies mechanical explanations because it must be understood as based on propositional attitudes. But he could not invoke that response in the present context without presupposing that animals, unlike humans, *lack* propositional attitudes, which would beg the question at issue.

Nevertheless, there may be a kernel of truth in Davidson's suggestion that the pattern of explanation we employ with respect to animal behavior in some sense outstrips the explanandum, because it is originally tailored to the explanation of the more complex behavior of linguistic creatures like ourselves. In order to assess this issue, we need to look at Davidson's case for denying thought to animals. Davidson points out that such a view has been held by rationalists and pragmatists, but complains that there has been a dearth of arguments in its support (Davidson 1985, 477). By contrast, he discusses a wealth of related arguments. I shall focus on the following:

- the argument from the intensional nature of thought (Section 1);
- the fact that thoughts involve concepts (Sections 2–3);
- the argument from the holistic nature of thought (Section 4).
- the claim that belief requires the concept of belief (Sections 5-6).⁵

According to Davidson, the first three arguments point in the right direction but are inconclusive, which is why he favors the last one. I am inclined to reverse this assessment. While Davidson's favorite argument is uncompelling, the arguments he regards as inconclusive shed valuable light on the extent to which thought requires language, precisely because they point to three respects in which our practice of thought-attribution is richer than the animal behavior we explain by it.

At the same time, I want to show that these arguments do not preclude animals from having simple thoughts. As a result, I shall opt for a version of the intermediate position, but one enriched by Davidson's insights concerning intensionality, concepts and holism (Section 7). We can only ascribe simple thoughts to animals, and even that ascription is incongruous in that the rich idiom we employ has conceptual connections that go beyond the phenomena to which it is applied.

1. THE INTENSIONAL NATURE OF THOUGHT

One problem with attributing thoughts to animals is that without verbal responses we cannot make the fine distinctions between different thoughts (beliefs, desires) expressed in the same non-verbal behavior. Thoughtattributions to humans create intensional contexts: if we substitute coreferential terms within the content-clause, this may lead from a true attribution (e.g., "Sarah believes that Cicero was Roman") to a false one (e.g., "Sarah believes that Tully was Roman"). In the case of animals, by contrast, substitution of co-referential expressions often leads from attributions which we commonly regard as true to attributions which are absurd or unintelligible. The oak tree that the cat went up also happens to be the oldest tree in sight and the same tree the cat went up last time the dog chased it. But does Malcolm's dog believe that the cat went up the oldest tree in sight, or the one it went up last time? Equally, a dog can know that its master is at the door. But does it also know that the president of the bank is at the door? "We have no real idea how to settle, or make sense of, these questions?" (Davidson 1984, 163; see 1985, 474). The reason, one might add, is that the dog can think neither that its master is the president, nor that he is not.⁶

One response to this failure of intensionality is to hold that in the sentence

(1) The dog thinks that the cat went up that oak tree

the expression "that oak tree" occurs transparently (in Quine's terminology). Accordingly, (1) is paraphrased so as to avoid problems of intensionality, e.g., as

(1') The dog thinks, with respect to that oak tree, that the cat went up it.

Davidson retorts (1985, 475):

But such constructions, while they may relieve the attributer of the need to produce a description of the object that the believer would accept, nevertheless imply that there is some such description; the *de re* description picks out an object the believer could somehow pick out. In a popular if misleading idiom, the dog must believe, under some description of the tree, that the cat went up that tree. But what kind of description would suit the dog?

There is an important step in this passage. Initially, Davidson insists that there must be some description of the object "that the believer would accept". Trivially, that requirement cannot be met by a creature without language; but to insist on it begs the question in favor of lingualism. Davidson seems to recognize this. In the remainder of the quote, he does not insist that there be a description which would be *accepted* by the believer, but merely that there be a description which "would suit" him in the sense that "it picks out an object the believer could somehow pick out".

This weaker requirement is reasonable. If Malcolm's dog could not distinguish the oak tree from among other objects (e.g., the pine tree or the garden fence), we might still explain his behavior by reference to the oak tree, just as we might explain the convulsions of an oyster by reference to its being pricked with a needle. But (1') would no longer be appropriate. For transparent constructions like "with respect to" or "of" require an anaphoric referent in the subsequent content-clause, an "it" which the now disabled dog could not distinguish from other things.

However, it remains an open question whether that weaker requirement might not be met by non-linguistic creatures on account of their possessing certain *discriminatory capacities*. The dog believes something of the tree "under some description", namely one that expresses those features by which the dog recognizes the tree and distinguishes it from other objects.⁷ Presumably to exclude this kind of response, Davidson continues as follows:

But what kind of description would suit the dog? For example, can the dog believe of an object that it is a tree? This would seem impossible unless we suppose the dog has many general beliefs about trees: that they are growing things, that they need soil and water, that they have leaves or needles, that they burn. There is no fixed list of things someone with the concept of a tree must believe, but without many general beliefs there would be no reason to identify a belief as a belief about a tree, much less an oak tree.

This passage raises two objections: a general one concerning the holistic connections between thoughts, which will be discussed in Section 4, and a more specific one concerning concepts to which I turn now. Consequently, the force of the argument from intensionality depends on the arguments from concepts and from holism. The original argument questions whether there is a that-clause which would capture the content of an animal's thought. This question now gives way to the question of whether such clauses would not be implying to much conceptual sophistication and to the question whether they would not drag in too many other thoughts.

2. THOUGHTS AND CONCEPTS

The obstacle which concepts create for animal thought is this. The thoughts we ascribe to animals in common parlance involve *concepts* with which the animal cannot be credited. That objection is explicit in Michael Dummett (1993, chs. 12–13). Dummett denies that animals possess genuine concepts, and by implication genuine thoughts, on the grounds that they lack the kind of general beliefs Davidson is alluding to. Davidson has recently sharpened the link between concepts and thoughts in a similar way. He insists, firstly, that concept-possession and the ability to have thoughts amount to one and the same thing, and, secondly, that both are confined to language-users (1997, 24–5; 1999, 7–8). In fact, the first claim provides the rationale for the second: attributing thoughts to animals on the basis of non-linguistic behavior is misguided, since these thoughts involve concepts which themselves cannot be attributed on such a basis.

This raises two problems. Firstly, can animals possess concepts at all, and, if so, what kind of concepts? Secondly, if they cannot have concepts of any kind, does that really preclude them from having thoughts or beliefs?

One will have to answer the second question in the affirmative if one accepts the idea that thoughts are mental occurrences or abstract entities which have concepts as their components, because that implies that one cannot have or grasp the thought without having or grasping its constituent concepts. However, Davidson rejects the idea that propositional attitudes are relations between a subject and an abstract or mental phenomenon, and regards them simply as modifications of a person (Davidson 1994, 232). In my view, he is right to do so. Although that-clauses are grammatically speaking noun-phrases and can function as accusatives, they no more refer to an object than noun-phrases like "everything" or "the past" (see Glock 1997a).

If this is correct, for *a* to believe that *p*, *a* need not stand in a relation to an object (a proposition) which would involve standing in a relation to components of that object (concepts). There is no inconsistency between this conclusion and Davidson's insistence that a creature cannot be credited with a belief unless it can be credited with the constituent concepts. But the former blocks the obvious argument for the latter, namely that concepts are the building blocks of thoughts. Davidson's approach to human belief is "holophrastic": we ascribe beliefs to linguistic creatures on the basis of their assenting to sentences as a whole (see, e.g., Davidson 1984, 4, 22, 220–5; 1997, 25). The possibility he ignores is that rejecting the building-block picture in the linguistic case invites an analogous move in the case of animals, a *holodoxastic* approach that starts out from the whole belief.

According to such an approach, what matters is precisely a kind of "modification": if a creature can be correct or mistaken as to how things are, it can have beliefs. Although the sentences we use in ascribing thoughts have components, our ascriptions are not based on a prior ascription of these components. Instead, they are based on the subject manifesting certain perceptual capacities, attitudes and emotions. In the non-linguistic case, these manifestations will obviously not include assent to sentences. But they will include forms of behavior, postures and facial expressions which higher animals share with human beings. When we say that Malcolm's dog believes that the cat went up that oak tree, we do not do so on the grounds that it picks out objects and classifies them in a way that corresponds to the singular and general terms we use in the attribution that is why, for philosophical purposes, it may be more accurate to rephrase (1) in the transparent manner of (1'). Rather, we simply note the dog's reaction to its environment. We regard these reactions as directed towards particular objects, creatures and events, because we assume that dogs have certain perceptual capacities and wants, assumptions which require rudimentary knowledge of the way dogs live (what they can recognize, what they tend to dislike, etc.).

Because of its reliance on behavioral reactions, the holodoxastic move is confined to simple beliefs, notably about perceptible features of the subject's environment. But it suffices to blunt the force of the line 'No thoughts without concepts!'. It may seem that a problem remains nonetheless. Granting thoughts to animals while denying them concepts suggests that there is an incongruity between ascribing thoughts to animals and ascribing thoughts to linguistic creatures. In the second case, our ascriptions impute to the believer a grasp of the concepts involved, whereas in the first they do not. This creates a pressure for holding that intentional verbs like "believes" are ambiguous, referring either to a holodoxastic, behavioral phenomenon or to a conceptual, linguistic one.

In this vein, Malcolm suggests that while the dog can "believe" that the cat went up the oak tree, only humans can "have the thought" that it went up the oak tree. Similarly, Dummett maintains that while humans can have thoughts consisting of concepts, animals have mere "protothoughts" consisting of spatial representations. But this type of distinction seems to count against ascribing one and the same belief to humans and animals. It suggests that "Both Sarah and the dog believe that p" is not so much a falsehood as a zeugma, like "Both the exam and the chair were hard". For "Sarah believes that p" comes out as "Sarah has the thought that p" while "The dog believes that p" comes out as "The dog has the protothought that p".

In my view, however, we can grant that there are important differences between the beliefs of conceptual and non-conceptual creatures, yet resist the pressure towards postulating distinct objects and hence distinct attitudes. A certain disparity between the terms used in a belief report and those that could be used by the subject is present even in the linguistic case, without constituting a fundamental incongruity. The terms which occur in the content-clause are in general dictated not so much by the creature whose belief we report, but by the concerns of speaker and audience. Thus, "Sarah thinks that the charlatan you introduced me to is about to give her a biscuit" can be in order, whether Sarah is an adult, a child that lacks the concept of a charlatan, or a dog (Rundle 1997, 83).

Consequently, it is far from obvious that attribution of beliefs requires attribution of concepts, especially if one follows Davidson in denying that to have a belief is to stand in a relation to an object. Still, the question whether animals can possess concepts remains relevant, for two reasons. When it comes to attributing beliefs to animals, some terms are more absurd than others. This suggests that animals can be credited with some concepts but not others. Furthermore, if some animals have conceptual capacities, the lingualist argument from concepts fails even if it is right to tie beliefs to concepts.

3. ANIMAL CONCEPTS

With respect to animal concepts, one finds the same spectrum of opinion we already encountered concerning animal thoughts. Davidson, together with Kant, Frege and Dummett, occupies one end. According to them, animals can perceive, but lack concepts of *any* kind. At the other end are cognitivists, who have no qualms about ascribing complex concepts to animals. An intermediate position is occupied, for example, by Anthony Kenny, who maintains that animals can possess some concepts, namely those that can be manifested in non-linguistic behavior (Kenny 1989, 36–7; DeGrazia 1996, 155–6).

Proponents of this position have to concede that the concepts animals have are often not the ones we use in ascribing thoughts to them. The discriminations which underlie animal behavior may not coincide either extensionally or intensionally with our verbal classifications. A dog might group cats together with hamsters or distinguish black cats from all others; and even if it groups all and only cats together, it might recognize them by smell rather than visually. But this by itself is no obstacle to ascribing to them concepts that *differ* from ours. For example, when Sue Savage-Rambaugh's chimpanzees distinguish foodstuffs and tools, the operative difference seems to be simply that between the edible and the inedible (Savage-Rambaugh 1986, 257). Accordingly, what kind of concepts we should ascribe to avoid anthropocentrism is a matter for ethological discoveries.⁸ We discover animal concepts by discovering the parameters governing their discriminatory behavior. Such considerations are likely to indicate that our ordinary ascriptions require qualification, but not that they involve the kind of convenient pretence Davidson diagnoses.

Whether this criticism holds water naturally depends on what one makes of concepts and concept-possession. One construal is that concepts are principles of discrimination, and that to possess a concept is to have the ability to recognize or discriminate different types of things (e.g., Price 1953, 355). On that account, animals certainly possess concepts: it is evident from their behavior – in the wild and in the laboratory – that they can distinguish between a host of different colors, tastes, sounds, shapes, stuffs, types of creatures, etc. Moreover, many of these capacities are learnt rather than innate. Davidson admits this, but nevertheless resists the conclusion that animals can have concepts (Davidson 1985, 480). He adduces several arguments to this effect.

The first is a *reductio ad absurdum*. "Unless we want to attribute concepts to butterflies and olive trees, we should not count mere ability to discriminate between red and green or moist and dry as having a concept, not even if such selective behavior is learned" (Davidson 1997, 25). Leaving aside butterflies for the moment, I agree with Davidson that it would be absurd to credit olive trees with concepts. But I do not accept that this absurdity follows from treating concepts as powers of discrimination. Olive trees do not discriminate between moist and dry soil, since discrimination is a prerogative of *sentient* creatures, that is, animals. We must distinguish between mere differential reaction to causal inputs, which is a universal feature of physical phenomena, and discrimination, which is tied to creatures with perceptual capacities.⁹

Davidson's second argument is that there is a fundamental difference between *classification* and *discrimination*: the former is required for concept-possession, but only the latter is available to non-linguistic creatures. "To have a concept is to classify objects or properties or events or situations", or, more accurately, to be able to do so. Powers of discrimination are mere "dispositions", and therefore, "as Wittgenstein emphasized, have no normative force". Such dispositions do not involve the ability to *recognize a mistake*, and hence no knowledge of the difference between correct and incorrect behavior (1997, 24–5; see 1985, 480).

Davidson is right to hold that there is a type of classification which differs from mere discrimination in its *normative* dimension. He is also

right to suggest that it is the absence of such classification which makes us reluctant to credit butterflies with concepts. Finally, he is right to maintain that the normativity required for such classification presupposes that the classifier can make a mistake which she is capable of recognizing as such. A Wittgensteinian distinction can help to show this.¹⁰ To be capable of classifying or misclassifying things, a creature *a* must not just have a disposition to behave *in accordance with a rule* – as butterflies do when they land only on red petals – but of *following a rule*. That is to say, the principle which distinguishes *F*s from non-*F*s must be part of *a*'s *reason* for differentiating between *F*s and non-*F*s, not just a law to which its discriminating behavior conforms.

If a can classify things into those which are (an) F and those which are not, it must be possible that a should be mistaken, namely in taking something as not being F which is in fact F, or in taking something as Fwhich is in fact not. But a can be accused of making a mistake in applying the rule which distinguishes Fs from non-Fs only if a is also capable in principle of recognizing that she has violated that rule. Only given that possibility can a be said to diverge from a rule which she was trying to follow, i.e., to have acted contrary to her own intentions. Otherwise, a is merely diverging from our expectations or from a statistical norm. As Davidson points out, a slippery road may be a danger or a nuisance, but it does not commit a mistake. Mutatis mutandis, a butterfly that fails to discriminate between red and green may reduce its biological fitness, but it does not violate a principle to which it has committed itself. There are of course types of mistakes that do not require this possibility, e.g., failures to perform in line with evolutionary design. But without an intention to perform in this way, such failures are not misapplications of a rule.¹¹

However, why should such normative behavior be the prerogative of linguistic creatures? This is where Davidson's third argument comes in. In line with his assimilation of mice to missiles, he contends that animals and children cannot be genuinely taught, but only causally manipulated. Because they are sentient, their behavior can be altered by means of inflicting pleasure or pain.

But the point remains: we improve the road, from our point of view, by spreading sand or salt; we improve the child, from our point of view, by causing pleasure or pain. In neither case does this process, by itself, teach road or child the distinction between correct and incorrect behavior. To correct behavior is not, in itself, to teach *that* the behavior is incorrect. Toilet training a child is like fixing a bathtub so it will not overflow; neither apparatus nor organism masters a concept in the process. (Davidson 1997, 25)

This argument rightly assumes that only intentional discriminations can be corrected in the relevant sense, because only *intentional* behavior can be accused of misapplying a principle of classification. It also intimates, again rightly, that such behavior must be voluntary in the sense that the agent could have done otherwise. Mechanical behavior – no matter whether unconditioned or conditioned – cannot be accused of failing to live up to a principle, roughly because ought implies can. This is why classification is not the exercise of a mere disposition to react differently to distinct external influences, even if, as with animals, these influences are stimuli perceived by a sentient creature. Rather, classification is the exercise of an *ability*. Unlike dispositions, abilities are not automatically exercised under specified conditions; the agent can intentionally exercise them or refrain from exercising them.¹²

Nevertheless, Davidson is arguably wrong to hold that non-linguistic creatures have only dispositions and lack abilities. The behavior of nonlinguistic creatures is not always explicable solely by reference to immediate biological imperatives. Both prelinguistic children and the great apes are capable of voluntary action, because they can refrain from a particular action, either by pursuing their goals in a different way or by forsaking them, at least temporarily.¹³ By the same token, in a particular situation they are capable of either heeding or disregarding a difference. Unlike bathtubs, some animals are capable of distinguishing objects of types Fand G in one situation, and of ignoring the difference in another. It would be wrong to ascribe such classification to butterflies. But it seems equally wrong to deny classification to chimpanzees capable of selecting or making tools in advance of attempting a task. For these creatures deliberately distinguish between different kinds of objects (e.g., leaves and blades of grass) in some situations, but may disregard the difference in others, or if they are not in the mood (Byrne 1995, 150, 187-9, 225, ch. 7). And here the question of whether a discrimination has been learnt is important, pace Davidson. An unconditioned reflex cannot be the exercise of an ability, but a learnt pattern of response can, because it is not necessarily automatic.

This response *may* confine non-linguistic concept possession (in the normative sense invoked by Davidson) to infants and the great apes. However, it does not make concept possession dependant on language possession, but on discriminatory behavior that is sufficiently complex and flexible. Once more, Davidson could not reply that the appearance of flexible behavior among animals is deceptive, without inviting the same challenge concerning humans.

He could, however, appeal to an argument intimated by Rundle (1997, ch. 4). Even if animals are capable of acting *voluntarily*, in the sense of doing otherwise, and of acting *intentionally*, in the sense of acting for a purpose, they are incapable of acting intentionally in the stronger sense of

acting for a reason. We explain the behavior of animals by reference to reasons, (e.g., "the dog runs to the oak tree because he wants to catch the cat"). But in doing so we indicate only what their purposes or goals are, not how they have reasoned, i.e., what their justification is for acting as they do. For that would presuppose that they are in principle capable of stating such reasons. If this is correct, we can rule out animal concepts by ruling out animal reasoning. Animals might discriminate for a purpose (e.g., to reap certain rewards), but they cannot reason. Even though their discriminations may be voluntary, they do not follow rules: they do not distinguish *F*'s from non-*F*'s for the reason that *F*'s possess certain distinctive features.

But is this line of argument correct? Can a creature only act for a reason if it is capable of communicating this reason? Take a chimpanzee that has learnt to use different tools in the pursuit of *dorylus* ants and *macrotermes* termites. It is plausible to maintain that its reason or justification for matching tool and prey is that they possess certain features. This impression is strengthened by the fact that chimpanzees display non-linguistic forms of behavior that go together with the correction of error among humans, such as hesitation, displeasure, discarding one type of tool in favor of another, etc. More generally, it is far from obvious that animals are incapable of reasoning. Chimpanzees seem to do just that in their construction and employment of tools in advance of feedback from the task itself.

Finally, consider the story of Chrysippus' hunting-dog (see Sorabji 1994). In chasing a prey of which it has lost the scent, this dog reaches a cross-roads; it sniffs down the first path, then sniffs down the second path, then it immediately follows the third *without* sniffing. In the case of dogs, perhaps such behavior could only be a rigid conditioned reflex. But I can see no reason for denying that this is an intelligible form of behavior for a non-linguistic creature capable of voluntary action. And if it is, what is wrong with the explanation that the behavior evinces a disjunctive inference ("p or q or r; neither p nor q; ergo r")? We might grant that there is a difficulty in describing such a creature as silently consulting a principle. But as Ryle has convincingly argued, even the intelligent performances of humans are rarely accompanied by conscious consultations of this kind.

However, a related problem has been pointed out to me by Anthony Kenny. Although humans need not actually verbalize their reasoning, they are capable of doing so. In the absence of this capacity, the question arises of what in an animal's behavior could correspond to the *ergo* of linguistic reasoning. This point is unanswerable with respect to creatures like dogs. But in the case of chimpanzees there *can* be an analogue to our *ergo*, however thin. In the context of encountering and pondering a problem, certain gestures and grimaces, followed by renewed activity, can be interpreted as

marking the point when the shilling dropped. Even if this is an anthropomorphic interpretation in the case of chimpanzees, we can easily imagine a non-linguistic hominoid whose facial expressions and gestures are so close to ours' as to make such a description inevitable. Furthermore, even without the *ergo*, as regards context (problem solving), demeanor (e.g., head scratching) and result (problem solution), the deliberations of chimpanzees are close enough to those of humans to qualify as instrumental reasoning.

In my view, therefore, there is no compelling case for claiming that animals cannot possess concepts. Moreover, even if there is, it does not suffice to deny them thoughts, because of the possibility of holodoxastic belief. Davidson is right to insist that "concept-formation is not a way station between mere dispositions ... and judgements" (1997, 25). Concepts and judgements remain on a par. A chimpanzee capable of classifying things into sticks and knifes, and hence of concepts like "stick", can also believe that the object it confronts is a knife, or wish that it were a stick. My point is rather that it has yet to be shown either that concept-formation and judgement require *linguistic* judgement or that holodoxastic belief cannot be a way station between mere dispositions and judgement involving concepts.

4. THE HOLISTIC NATURE OF THOUGHT

Davidson's last argument against animal concepts is that the concepts which feature in the beliefs we commonly ascribe to animals require certain "general beliefs" with which we cannot credit them (Davidson 1985, 475). This is part of a wider qualm, namely that attributing thoughts to animals is incompatible with "the intrinsically holistic character of the propositional attitudes", the alleged fact that "to have one is to have a full complement" (Davidson 1985, 473). Since at least some members of that complement are definitely beyond their pale, animals cannot even have the simple beliefs commonly ascribed to them.

We identify thoughts, distinguish them, describe them for what they are, only as they can be located within a dense network of related beliefs. If we really can intelligibly ascribe single beliefs to a dog, we must be able to imagine how we would decide whether the dog has many other beliefs of the kind necessary for making sense of the first. It seems to me that no matter where we start, we very soon come to beliefs such that we have no idea at all how to tell whether a dog has them, and yet such that, without them, our confident first attribution looks shaky. (Davidson 1985, 475)

According to Davidson, there are three types of beliefs "on which any particular thought depends": particular beliefs (e.g., that the cat seen run-

ning a moment ago is still in the neighborhood), general but empirical beliefs (e.g., that cats can scratch or climb trees), and logical beliefs. The first type does not cast *novel* doubts on animal thought. Having recognized his original error, Malcolm's dog might engage in searching behavior that indicates his belief that the cat is still in the neighborhood.

The other two types give rise to three new objections. The first is a conceptual holism designed to show that animals cannot possess the specific concepts which occur in our naive ascriptions. The two others are more abstract and trade exclusively on logical beliefs. One is that beliefs must display a degree of rationality which requires a large web of consistent thoughts. The other concerns the identity conditions of thought. The logical relations between thoughts are partly constitutive of their identity, because the content of a thought cannot be divorced from what it entails and what is entailed by it. The thought that p could not lack the logical connection with the thoughts it entails "without becoming a different thought" (Davidson 1985, 475; 1994, 232; 1999, 7–9). Accordingly, if p entails q, and if a believed that p without believing that q, a would be at least partly ignorant of the content of its own belief. Such ignorance seems incompatible not just with first-person authority about the content of thoughts, but with the assumption which has guided our whole discussion: believing that p is not simply a mental occurrence, but something with a specifiable content. To the extent to which a is ignorant of the content of his alleged thought, a's thought cannot be the same as that of b, who is cognizant of that content. Ergo, if b's belief is that p, a's belief cannot be that p.

The idea that thoughts are individuated through their content and hence through their logical connections is correct in principle. But the question is whether this idea holds for all types of thought, and without qualification. To tackle this question one must do what neither Davidson nor his opponents have done so far, namely spell out and assess various holistic principles informed by this idea. I shall argue that these principles are either too strong for the lingualist case, because they preclude plausible cases of human thought, or too weak because they allow for some forms of animal thought.

The strongest holistic principle lingualists could invoke runs as follows:

(A)
$$(aBp \& (p \Rightarrow q)) \Rightarrow aBq.$$

This principle is excessively restrictive. Human beings can believe, for example, the axioms of Euclidean geometry without believing all the theorems entailed by them. At this point, Davidson might claim that to "intelligibly ascribe" (Davidson 1985, 475) a thought, *a* need not actually

believe that q, but only be *capable* of believing (learning, understanding) that q. Symbolically:

(B)
$$(aBp \& (p \Rightarrow q)) \Rightarrow \Diamond aBq.$$

Even that principle can be challenged, however. Why shouldn't there be people who believe the Euclidean axioms without even being *capable of learning* all the theorems? If there are, Davidson's logical holism is too bloody-minded about the identity conditions of thoughts. It is far from obvious that grasping a thought is an all-or-nothing affair the way it suggests. Granted, in the case we are now envisaging there is a difference between what a believes and what b believes. But why should we have to refrain from using the same content-clause ("that p") as soon as there is some consequence of p that a but not b is capable of understanding? After all, many humans have a habit (nasty according to some, endearing according to others) of rejecting *some* of the logical consequences of their beliefs, even if these are pointed out to them.

However, Davidson need not subscribe to any *general* closure principle, not even a modally qualified one like (B). He states that "there is no fixed list of things someone with the concept of a tree must believe" (Davidson 1985, 477). This may simply mean that there is no fixed list of things entailed by thoughts about trees; but it may also mean that among these entailments there is no fixed list which *a* must be capable of appreciating, and hence that *a* need be capable only of appreciating *some* of the things entailed by *p*. Schematically, this would amount to something like this:

(C)
$$aBp \Rightarrow ((\exists q)(p \Rightarrow q) \& \Diamond aBq).$$

According to this principle, if a human being is incapable of even understanding *any* of the theorems entailed by Euclid's axioms, his beliefs in the axioms do not have the same content as the belief of a human being who is capable of understanding these theorems; and to that extent, the two have different beliefs.

At this juncture, an opponent of lingualism is left with two replies. The first is to reject (C). Thus it might be claimed that logical relations are neither the only nor the most basic feature by which we identify a belief. After all, we have no better way of describing the failure of illogical humans than this: they are unable to grasp the consequences of their beliefs. But that very formulation presupposes that we can distinguish between *having a belief* and *being able to grasp its consequences*. Simple perceptual beliefs are ascribed even to humans primarily on the basis of behavioral responses. When Mowgli flees from Shera Khan, we are not

worried about what consequences of "A tiger is chasing me" he is capable of appreciating.

But perhaps we should be worried if Mowgli were incapable of grasping *any* of these consequences. For this reason, it is best to accept (C), while maintaining that there are animals capable of appreciating *some* consequences of simple perceptual beliefs. For example, by consistently barking up the oak and completely ignoring the pine even when prompted by us to do otherwise, Malcolm's dog could display the belief that the cat is not on the pine tree. Less contentiously, *if* non-linguistic creatures are in principle capable of reasoning and if chimpanzees do in fact reason, as argued in Section 3, then such creatures are capable of appreciating certain consequences of things they have learned about their environment.

This point is connected with the holistic argument about rationality. Davidson maintains that having even a single thought is to have a "largely correct logic" (Davidson 1985, 475–6), i.e., a whole pattern of thoughts that cohere logically and do not display radical irrationality. This argument is compatible with animal thought. The great apes can be rational not just in the sense of behaving in accordance with evolutionary design or even in accordance with their own "personal" interest, but also in the sense of acting according to what they have observed or learnt with respect to a given task. What's more, like humans they can also, on occasion, be irrational in this sense and improve their performance as a result of trial and error or instruction.

At this point, the lingualist might continue his attack by maintaining that thought requires not just the capacities to act rationally and to have certain beliefs *entailed* by an original belief, but the capacity to have *beliefs in the entailments*. This argument is not in Davidson, nor is it plausible, since it would also rule out children and many adults. It is unsuccessful even if the holistic requirement is restricted both modally and in scope, as in

(D)
$$aBp \Rightarrow \exists q((p \Rightarrow q) \& \Diamond aB(p \Rightarrow q)).$$

On one understanding of (D), some animals qualify. They can learn that p entails q, in the sense of consistently reasoning from p to q in solving cognitive tasks. What they cannot display is an awareness of the difference between an *empirical* and a *logical* consequence. It makes no sense to wonder whether Chrysippus' dog acts on an inductive generalization ("Whenever p or q and not-p, it turns out that q") or on a logical inference ("p or q; not-p; ergo q"). But we ascribe disjunctive reasoning to human beings *irrespective* of whether they are capable of recognizing this difference; indeed, some eminent empiricists are committed to the idea that ultimately this difference is more apparent than real.

This leaves the argument from conceptual holism. That argument does not threaten the possibility of holodoxastic belief (Section 2). To assess its consequences for conceptual belief, one should distinguish between two types of general beliefs, namely conceptual and empirical (without denying that some of Davidson's examples are borderline cases, e.g., that trees are growing things that need soil and water).

Davidson's insists that beliefs presuppose certain general empirical beliefs on account of their constituent concepts. This is implausible for many of his examples (see Davidson 1985, 475; 1984, 200). It would seem that one can believe that the cat went up the oak tree without knowing that trees burn, or that one can believe that a cloud is passing before the sun without knowing that clouds are made of water vapor. Such a radical conceptual holism also creates a general problem, namely that any empirical discovery amounts to a conceptual change, with the possible consequence that scientific theories talk about different things as soon as some of their empirical claims are at odds (Fodor and LePore 1992, ch. 1).

Davidson seems on firmer ground when he invokes general beliefs which are clearly conceptual, e.g., that cats are animals or continuing physical objects that move in certain ways (Davidson 1999, 8-9). Animals cannot recognize the conceptual status of such beliefs, nor do they need to in order to have thoughts. But as Davidson himself recognizes, they can "generalize" in the sense of reacting similarly to similar stimuli (e.g., Davidson 1985, 480). By this token, they can also in principle distinguish not just between, e.g., mice and cats, but between animals, plants and inanimate objects. The notion of a continuing physical object is more problematic, since it is in many respects a result of philosophical reflection that exceeds the requirements of ordinary human thought (see Strawson 1992, ch. 2). But if it is spelled out in a pedestrian way, it is clear that chimpanzees can learn to distinguish, for example, between physical objects on the one hand, mirror reflections or TV images on the other. Finally, we must remember that a creature could have concepts without having our concepts.

This means that there is no holistic argument against animal concepts over and above the arguments discussed in Section 3. More generally, holism does not provide a compelling objection against the possibility of animal thought. This is no reason to abandon holism altogether. There are plausible holistic principles, notably (C), which exclude the possibility of a creature having just a single belief. In any event, the complexity required for conceptual belief is incompatible with a behavioral repertoire capable of exhibiting just a single belief. But these reflections do not establish that the web of which any belief must be part need extend as far as the web of sophisticated human thought. There may be larger and smaller webs. What kind of web is required may depend on the belief and the creature concerned. From the fact that an animal lacks our web of beliefs and our concepts, it does not follow that it has no beliefs and no concepts (see also Bekoff and Jamieson 1991, 19–20; Dupré 1996, 332; DeGrazia 1996, 154–8).

5. BELIEF AND THE CONCEPT OF BELIEF

By Davidson's own admission, the considerations mentioned so far provide no compelling argument for his thesis that beliefs require the capacity for language. The line of thought he himself favors proceeds in two steps (Davidson 1985, 478).

- (I) To have a belief, one must have the concept of belief;
- (II) To have the concept of belief one must have language.

Davidson admits that his argument can be challenged at several points. In my view, however, matters are worse: (I) is mistaken, and although (II) is correct it cannot be defended the way Davidson does.

Davidson's argument for (I) revolves around the following statement: "Someone cannot have a belief unless he understands the possibility of being mistaken, and this requires grasping the contrast between truth and error – true belief and false belief" (Davidson 1984, 170). His reasoning can be reconstructed as proceeding along the following steps:

- (i) A belief is something that "can be true or false" (Davidson 1985, 479);
- (ii) $aBp \Rightarrow a$ can be *mistaken* in believing that p;
- (iii) $aBp \Rightarrow a \text{ can recognize that he is mistaken in believing that } p$;
- (iv) $aBp \Rightarrow a$ has the concept of a mistake.

(iv) entails (I), since the concept of a mistake at issue is that of a mistaken belief. Moreover, (i) is incontrovertible. (ii) follows immediately: if a's belief that p can be false, then a can be mistaken in believing that p. Troubles start with (iii). Davidson's support of it revolves around the idea that one cannot have beliefs without also having "reflective thoughts" (Davidson 1985, 479), beliefs about *one's own* beliefs, which in turn presupposes the concept of a belief. Davidson is not claiming that all beliefs are self-conscious, i.e., that one can only believe that p if one also believes that one believes that p. But he maintains that one cannot have beliefs without having *some* beliefs about one's beliefs. The reason is that having a belief entails the possibility of surprise. If I believe that there is a coin in my pocket, it must be possible that something should happen that would change my mind. Moreover, according to Davidson, it is not enough that I should first believe that there is a coin in my pocket and then no longer have this belief after emptying my pockets.

Surprise requires that I be aware of a contrast between what I did believe and what I come to believe. Such awareness, however, is a belief about a belief: if I am surprised, then among other things I come to believe that my original belief was false. I do not need to insist that every case of surprise involves a belief that a prior belief was false (though I am inclined to think so). What I do want to claim is that one cannot have a general stock of beliefs of the sort necessary for having any beliefs at all without being subject to surprise that involve beliefs about the correctness of one's own beliefs. (Davidson 1985, 479)

In one respect, Davidson's focus on surprise is promising. The vast majority of our beliefs are implicit expectations of which we become aware only when they are disappointed. But it is important to realize that Davidson's employment of surprise is unusual. We do not ordinarily speak of surprise every time we realize that a prior belief was wrong. If I find that there is no coin in my pocket after all, I may simply shrug my shoulders, mindful of the fact that I am a notorious scatterbrain. In ordinary parlance, "surprise" is the name for a particular kind of reaction to things being otherwise than one expected or believed (or for the fact or event which produces that reaction).

This has an important consequence. Such reactions are displayed not just linguistically, but in forms of behavior and facial expressions which are not the prerogative of language-users. We would not hesitate to speak of a chimpanzee as being surprised by finding that what looked like a banana is merely a decoy, provided that its behavior or facial expressions show signs of disorientation or disappointment (see DeGrazia 1996, 148–9).

Davidson approaches matters from a different angle. He distinguishes between being *startled* and being *surprised*. Perhaps he has in mind the difference between being surprised by an object or event and being surprised *that* things are thus-and-so. In any event, he seems to conceive of being surprised independently of any specific behavioral manifestations, and, his caveat notwithstanding, as involving beliefs about beliefs by *definition*. Given this stipulation, the soundness of (iii) hinges straightforwardly on the question of whether a creature can only have beliefs if it is capable of also believing that a prior belief was false.

One should grant that a creature can believe that p only if it is also capable of believing something that is incompatible with that belief, not-

ably that not-p. But Davidson has no argument to rule out the possibility of a simply switching from a belief that p to a belief that q, without that switch involving a believing that its original belief was false. For example, Malcolm's dog first believes that the cat is in the oak tree, as witnessed by its barking up the oak, and then that it went up the pine tree, as witnessed by its barking up the pine.

Even the step from (iii) to (iv) is more problematic than might appear. We can distinguish between cases in which an animal simply acquires a new belief and cases in which it corrects a previously held belief. The latter are marked by behavioral reactions and facial expressions which show that the animal considers a previous course of action to be mistaken. For example, after barking up the oak tree for a while, Malcolm's dog shows signs of disappointment and frustration; it then turns round and looks for the cat somewhere else; finally, on spotting the cat, it starts barking up the pine tree with renewed vigor. It has not simply spotted the cat on the pine tree, but recognized that the cat went up the pine instead of the oak. However, that is not necessarily to recognize that its prior belief that it went up the oak tree was mistaken, even though the fact that the cat did not go up the oak tree does entail that that prior belief was false. The reason is that one can believe that p (in our case, that the cat did not go up the oak tree) without necessarily believing all the things that are entailed by that belief (see Section 4).

Accordingly, even if a is capable of recognizing a mistake, and, in that sense, of understanding the possibility of being mistaken, it remains to be shown why a needs to have the *concept* of a mistake, as Davidson has it. What a must be able to recognize is that an object x which it initially took to be F, is not F after all. However, there is as yet no need for a's recognition to display a grasp of the *general* concept of a mistake, a concept that covers not just a's own misapplication of the specific concept F, but also anybody else's misapplication of any other concept, *including* concepts that a lacks. For a chimpanzee to recognize that it is dealing with *dorylus* rather than *macrotermes*, it does not need to recognize that its own previous belief falls under the same concept – that of a mistake – which also applies to all other mistakes, e.g., Columbus' belief that he had reached India. Neither does it need to recognize that its previous classification falls under the same concept – that of misclassification – as that of someone who classifies whales as fish.

6. THE CONCEPT OF BELIEF AND LANGUAGE

If I am right, belief does not require the concept of belief. But does the concept of belief require language? Davidson insists that the concept of a belief is the concept of something which can be true or false, correct or incorrect. From this he rightly infers that to have the concept of belief is to have the concept of "objective truth", the idea that there is a difference between my believing that p and it being true or the case that p, or between "belief and truth". To grasp the concept of objective truth is also to grasp the "subjective-objective contrast" and the concept of an "objective reality" (Davidson 1985, 479–80; 1984, 169–70; 1997, 26–7).

Davidson goes on to claim that complex behavior, including the ability to learn or generalize about the environment, is no guarantee for grasping the contrast between belief and truth. What does suffice is communication. To communicate with someone else, I need not agree with her in all matters, but we must "share the same world", that is, entertain the same propositions with "the same subject-matter and the same standard of truth" (Davidson 1985, 480). But the concept of intersubjective truth and of an intersubjective world is the concept of an objective world about which different communicators can have beliefs.

Davidson's claim that communication suffices for the notion of truth is problematic, since he also suggests that the latter requires the notion of error. Linguistic communication is possible with young or autistic children that cannot ascribe errors to others and hence lack the concept of error (Wimmer and Perner 1983; Baron-Cohen et al. 1985). At the same time, Davidson is correct to hold that the concept of intersubjective truth is sufficient for the concept of belief: an intersubjective truth can be understood as one that all rational creatures have reason to believe. However, the crucial question is whether the concept of intersubjective truth, and with it the notion of communication, is *necessary* for the notion of objective truth, and hence for the concept of belief.

Davidson claims it is, because "the *only* way one could come to have the subjective-objective contrast is through having the concept of intersubjective truth" (Davidson 1985, 480). He admits that he does not have a compelling argument for confining the concept of objective truth to communicators. Instead he presents his opponent with a challenge to show how else "one could arrive at the concept of an objective truth". Davidson also invokes an analogy, namely that of "triangulation". I would have no way of determining the spatial distance between me and many objects without triangulation, that is, without changing my position with respect to them. Grasping the notion of objective truth depends on a different sort

of triangle, namely one involving two creatures. Although each of them interacts with an object, what provides them with "the concept of the way things are objectively is the base line formed between the creatures by language", i.e., the fact that they share a concept of truth.

In recent papers, Davidson uses triangulation no longer merely as an analogy, but as a genetic model for "the initial phase of ostensive learning" in both ontogenesis and phylogenesis. Two creatures a and b not only react similarly to similar stimuli, but also notice the fact that they react similarly. In this way they set up a triangle, the corners being a, b, "and the objects, events or situations to which they mutually respond". The notion of an error arises if the correlation of reactions to the third corner of the triangle breaks down. a notices that b no longer reacts to a situation in the previously shared way. It can therefore judge that b has erred. But in order to grasp the concept of truth, a needs to take a further step, namely "to communicate the contents – the propositional contents of the shared experience, and this requires language" (Davidson 1997, 27; 1999, 11–14).

Davidson is right to hold that triangulation makes the notion of an error intelligible. He is also right to hold that we pick up the notion of objective truth through communication: the distinction between believing that p and it being true that p is learnt through linguistic interaction. But this does not provide the kind of conceptual argument Davidson is after, an argument which shows that it is *impossible* to acquire or explain the concept of truth other than through communication.

The analogy of triangulation does not establish anything of the kind. Even in the case of measuring distances, triangulation is only one of many possible ways of achieving objectivity. Moreover, the analogy shows at best that to grasp the notion of objectivity, we need to understand the possibility of observing one and the same object from *different perspectives*. But it remains to be shown that such an understanding presupposes a recognition of error in others. At least *prima facie*, different perspectives can be conceived simply as perspectives that *one and the same* individual can occupy. To be able to occupy these different perspectives, and to form an objective picture of the world as a result, all a creature would seem to need is the ability to move, as well as perceptual capacities that are adjusted to such movement. Finally, even if the "triangular" recognition of error in others is essential, it remains mysterious why this amounts to a conception of truth only if that recognition can be communicated to the wayward individual.¹⁴

Perhaps there is an essential intersubjective element which my picture omits. For example, G. H. Mead may have been right to suggest that the idea of a different perspective can only be explained by reference to the idea of taking the role of the other. If so, something like triangulation, namely beliefs about the beliefs of b, might after all be required for a to have the notion of objective truth. Unfortunately, this does not show why a should have to *communicate* with b. Furthermore, the tactical deceptions practiced by chimpanzees provide grounds for holding that they are capable of having beliefs about the beliefs of others, and, more specifically, that they can recognize mistaken beliefs in others (Byrne 1995, chs. 8–9). However, these grounds need not be conclusive. Consider the statement:

(2) Chimpanzee *a* believes that chimpanzee *b* believes that *p*.

Perhaps (2) can be rephrased completely in terms of beliefs concerning what b does or is about to do, rather than what b believes. Admittedly, (2) may be in order without b doing anything just yet. But in the case of linguistic creatures we can distinguish

(2') *a* believes that *b* will Φ

from

(2*) *a* believes that *b* will Φ because *b* believes that *p*.

The challenge is to show how that distinction could be drawn in the nonlinguistic case. In my view, the challenge can be met. (2^*) rather than (2') is appropriate, for example, in cases in which *a* displays behavior anticipating *b*'s Φ ing only in situations in which *a* believes that it can deceive *b* into thinking that *p*. Such a description seems appropriate, e.g., in the well documented cases of chimpanzees using a "hide-and-peek" strategy to unmask the deception of a lower rank individual that deliberately withholds its attention from a source of food (see Byrne 1995, 124–40, 203–5).

Be that as it may, Davidson's triangulation argument fails to show that having the concept of truth requires being a linguistic communicator. There may, however, be another argument to this effect. One might insist that second-order beliefs as such do not guarantee possession of the concept of truth. One must also understand of *beliefs in general* what it is for them to be true and what it is for them to be false. This presupposes e.g., a grasp of the equivalence between "It is true that p" and "p" or "It is a fact that p". Such a grasp is confined to creatures that are capable in principle of manifesting such conceptual operations; and it is difficult to see how this could be done in non-linguistic behavior. This may furnish a defense of (II), the claim that the concept of belief requires language. But given the failure of (I), the claim that belief requires the concept of belief, we should reject Davidson's favored argument.

7. CONCLUSION

Where does all this leave the lingualist thesis that the capacity for thought requires the capacity for language? According to Davidson, intensionality, concepts and holism

point in the direction of language, but they do not amount to a demonstration that language is necessary to thought. Indeed, what these considerations suggest is only that there probably can't be much thought without language. (Davidson 1985, 477)

This verdict is puzzling. Davidson's radical holism according to which to have one thought is "to have a full complement" (Davidson 1985, 473) is incompatible with the conclusion of merely restricting the scope of animal thoughts in the direction of which it is supposed to point. By contrast, my modest holism according to which thoughts come in larger or smaller packages favors such a restriction, since packages that include beliefs manifestable only in linguistic behavior are the preserve of language-users.

Elsewhere (Davidson 1984, 163–4), Davidson expresses a separate reservation about the argument from intensionality, namely that it merely shows our attributions of thoughts to animals to be "seriously underdetermined". That gloss is at odds with his simultaneous observation that we "cannot make sense", e.g., of the question whether the dog believes that the president of the bank is at home. In my view, the observation is correct and the reservation problematic. Insofar as attributions of thought are seriously underdetermined, they are vacuous (see Glock 1997). But in the case of simple thoughts, non-verbal behavior suffices for distinguishing a creature believing one thing from it believing something else, or so I have argued.

If this is on the right track, the problem with the arguments concerning intensionality, concepts and holism is not that they are uncompelling, but that all they compel us to is confining animal thought to simple cases. On one occasion, Davidson himself seems to accept this conclusion. "The fewer acceptable transformations [of thought attributions] the less thought" (Davidson 1985a, 252). To that extent, our discussion reinforces the intermediate position. In fact, it lends support to a heretical idea. Pet lovers and zoologists attribute a greater variety of thoughts to animals not because they suffer from anthropomorphism, as philosophers are fond of intimating (Davidson 1985, 474, n.1; 1984, 164), but because they are better acquainted with their behavior and perceptual capacities.

At the same time, Davidson's reflections point to ways in which attributions of even simple thoughts to animals are not mere extrapolations from the human case. Animals do not just have thoughts of a simpler kind, their having these thoughts *amounts* to something simpler, because it is part of a smaller logical space. In the case of animals, there is at most an analogue of intensionality (Section 1). In so far as thought-ascriptions to animals are holodoxastic (Section 2), they are not only restricted to thoughts about perceptible features of the environment, they also lack conceptual connections which apply in the human case: we cannot infer from the fact that the dog thinks that x is F that the dog grasps the concept F. Furthermore, even if animals can have concepts (Section 3), these are not just confined to concepts of a (roughly speaking) perceptual kind. Animals are also incapable of satisfying one of the two criteria which we standardly use in attributing concepts to humans. They may be able to *apply* principles of classification, but not to explain them. In fact, the two restrictions are linked. A chimpanzee may discriminate between its keeper and other humans just as deliberately as it does between red and black ants. But we are more inclined to ascribe to it the concept of redness than the concept of a keeper, because there is so much more to explain with respect to the latter. Finally, Davidson's holism (Section 4) indicates that even those thoughts animals might be credited with lack the kind of context which characterizes sophisticated linguistic thought.

Accordingly, attributions of simple thoughts to animals are neither intensional, nor conceptual, nor holistic in the way thought-attributions to humans are. However, the best analogy is not the anthropomorphic explanation of missiles, but one Davidson has suggested in discussion. Attributing thoughts to animals is like using numerals for the purpose of labeling members of a football team. Although natural numbers stand in complex relations of order and numerical difference, these relations are ignored in this context. What matters here is not the numerical difference between two numbers, nor even which one is greater, but only that no two numbers should be used for the same player.

The analogy is illuminating. Thought attributions to animals employ a rich conceptual apparatus to an area in which many of the logical connections which constitute that apparatus do not apply. But it breaks down in one important respect. Attributing thoughts to animals is not simply an impoverished application of a rich technique. For that richer technique evolves around a central core of cases in which creatures believe, know or desire things on account of their wants and perceptual capacities. These biological basics of belief are shared by humans and animals. At the same time, when we move from this core area in the direction of conceptual thought, we also move *in the direction* of linguistic thought. The features which non-linguistic creatures must possess to be capable of conceptual thought – intentionality, complexity, flexibility – correspond to those features by which theorists from Descartes to Chomsky have distinguished language from more basic systems of communication. In this respect, at

least, our reflections tend to confirm rather than to negate the connection between thought and language.¹⁵

NOTES

¹ See, respectively, Rundle (1997, ch. 3) and Wittgenstein (1967, 174). Passages like these show that Wittgenstein adopted an intermediate position rather than the lingualism sometimes attributed to him. See also DeGrazia (1994).

² For a similar argument, directed against the idea that our closest relatives in the animal kingdom must have language, see Pinker (1994, ch. 11). Naturalistic proponents of animal thought may not hold explicitly that genetic similarity and evolutionary continuity entail psychological similarity. But they show little awareness of either the possibility of gaps between extant species or the irrelevance of genetics to our mental vocabulary. See, e.g., Jamieson (1998); Rollin (1989, 32–3); off Savage-Rambaugh and Lewin (1994, 156).

 3 For a defense of a third person perspective on animal thought, see Dupré (1996). For a critique of the explanation of animal behavior by reference to complex calculations, see Searle (1997).

⁴ This instrumentalist perspective on animal thought may ultimately not be all that remote from the "interpretivist" perspective Davidson adopts with respect to human thought. For him, the difference between human actions and mere bodily movements is conceptual rather than ontological: it is rooted in the different ways in which we *describe* these phenomena. However, he also suggests that mental descriptions are *appropriate* with respect to human behavior, but not with respect to animal behavior. In any event, Davidson's arguments against animal thought are unaffected by his interpretivism concerning human thought.

⁵ For a good summary, see Heil (1992, 187–97). Davidson's position has been criticized, for example, by Routley (1981) and DeGrazia, (1996, 146–50). None of these authors, however, discusses Davidson's recent argument concerning concepts or the rationales behind his holism.

⁶ DeGrazia (1996, 146) points out that Malcolm's dog clearly does not know or believe that the cat went up the oldest tree in sight. But in concluding that we can therefore make sense of the questions which Davidson disparages, he ignores the difference between external and internal negation. Davidson's qualms are based on a plausible idea: the dog is incapable of believing *either* that the cat went up the oldest tree in sight *or* that it went up one of the younger trees. Similarly, the dog is incapable of believing *either* that the president of the bank *is* at the door.

⁷ Indeed, in the case of simple thoughts this might even provide for a non-linguistic analogue of intensionality. Animals cannot know objects by different descriptions, but they might recognize them by different features, while failing to recognize that these are features of one and the same object. Malcolm's dog might react in one way to a man with heavy foot-steps being at the door, in another to his master being at the door, because he has not yet realized that the heavy stepper is his master.

 8 For an example of how such discoveries can be used to correct philosophical speculations about animal minds see Dennett (1991, 442–51).

⁹ Biologists speak, for example, of the immune-system as discriminating between different anti-genes. But discrimination in this sense is distinct both from perceptual discrimina-

tion by sentient creatures and from mere differential reaction (as in the case of Davidson's olive tree).

¹⁰ The distinction is explained in detail by Baker and Hacker (1985, 154–8).

¹¹ This point needs to be argued further against teleological approaches to semantics and intentionality, but this cannot be done here.

¹² For this distinction, see Kenny (1975). In ordinary parlance, dispositions include character traits which are half-way between dispositions in this technical sense and abilities: they are neither realized automatically nor simply subject to the will.

¹³ This will be obvious to the parents of any pre-linguistic two-year old. As regards the great apes, see Goodall (1986); Menzel (1974); Byrne (1995, chs. 8–9).

¹⁴ This distinction between recognizing error and grasping the concept of truth may in fact be incompatible with Davidson's claim that any recognition of error requires the concept of a mistake (see Section 5).

¹⁵ For advice and comments, I should like to thank David Bakhurst, Peter Hacker, John Hyman, Sir Anthony Kenny, Shaun Maxwell, Stuart Shanker and two anonymous referees for *Synthese*, as well as audiences at Bielefeld, Buffalo, Düsseldorf, Hamburg, Kingston, Neustadt, Norwich, Reading and Toronto. I am also very grateful for a research fellowship from the Alexander von Humboldt Foundation, and for the hospitality afforded me by the departments of philosophy at Queen's University (Ontario) and at Bielefeld University.

REFERENCES

Baker, G. P. and P. M. S. Hacker: 1985, *Rules, Grammar and Necessity*, Blackwell, Oxford. Baron-Cohen, S., A. M. Leslie, and U. Frith: 1985, 'Does the Autistic Child have a "Theory

- of Mind"?", *Cognition* **21**, 37–46.
- Bekoff, M. and D. Jamieson: 1991, 'Reflective Ethology, Applied Philosophy, and the Moral Status of Animals', *Perspectives in Ethology* **9**, 1–47.

Bennett, J.: 1976, Linguistic Behavior, Cambridge University Press, Cambridge.

Byrne, R.: 1995, The Thinking Ape, Oxford University Press, Oxford.

Davidson, D.: 1984, Inquiries into Truth and Interpretation, Oxford University Press, Oxford.

Davidson, D.: 1985, 'Rational Animals', in E. LePore and B. McLaughlin (eds), Actions and Events, Blackwell, Oxford.

Davidson, D.: 1985a, 'Replies to Essays', in B. Vermazen and M. Hintikka (eds), *Essays* on Davidson: Action and Events, Clarendon Press, Oxford.

Davidson, D.: 1992, 'The Second Person', in P. French, T. E. Uehling, and H. Wettstein (eds), *Midwest Studies in Philosophy* **XVII**, 255–267.

Davidson, D.: 1994, 'Davidson, Donald', in S. Guttenplan (ed.), A Companion to the Philosophy of Mind, Blackwell, Oxford.

Davidson, D.: 1997, 'Seeing Through Language', in J. Preston (ed.), *Thought and Language*, Cambridge University Press, Cambridge.

Davidson, D.: 1999, 'The Emergence of Thought', Erkenntnis 51, 7-17.

DeGrazia, D.: 1994, 'Wittgenstein and the Mental Life of Animals', *History of Philosophy Quarterly* **11**, 121–137.

DeGrazia, D.: 1996, Taking Animals Seriously, Cambridge University Press, Cambridge.

Dennett, D.: 1991, Consciousness Explained, Little Brown, Boston.

Dummett, M.: 1993, Origins of Analytical Philosophy, Duckworth, London.

- Dupré, J.: 1996, 'The Mental Lives of Nonhuman Animals', in M. Bekoff and D. Jamieson (eds), *Readings in Animal Psychology*, MIT Press, Cambridge, MA.
- Fodor, J.: 1975, The Language of Thought, Crowell, New York.
- Fodor, J. and E. LePore: 1992, Holism: a Shopper's Guide, Blackwell, Oxford.
- Glock, H. J.: 1997, 'Philosophy, Thought and Language', in J. Preston (ed.), *Thought and Language*, Cambridge University Press, Cambridge.
- Glock, H. J.: 1997a, 'Truth without People?', Philosophy 72, 85-104.
- Goodall, J.: 1986, *The Chimpanzees of Gombe: Patterns of Behavior*, Harvard University Press, Cambridge, MA.
- Heil, J.: 1992, The Nature of True Minds, Cambridge University Press, Cambridge.
- Jamieson, D.: 1998, 'Animal Language and Thought', in E. Craig (ed.), *The Routledge Encyclopedia of Philosophy*, Routledge, London.
- Jeffrey, R.: 1985, 'Animal Interpretation', in E. LePore and B. McLaughlin (eds), Actions and Events, Blackwell, Oxford.
- Kenny, A. J. P.: 1975, Will, Freedom and Power, Blackwell, Oxford.
- Kenny, A. J. P.: 1989, The Metaphysics of Mind, Oxford University Press, Oxford.
- McDowell, J.: 1994, Mind and World, Harvard University Press, Cambridge, MA.
- Malcolm, N.: 1972–1973, 'Thoughtless Brutes', Proceedings and Addresses of the American Philosophical Society 46.
- Menzel, E. W.: 1974, 'A Group of Chimpanzees in a 1-acre Field', in A. M. Schrier and F. Stollnizt (eds), *Behavior of Nonhuman Primates*, Academic Press, New York.
- Peacocke, C.: 1992, A Study of Concepts, MIT Press, Cambridge, MA.
- Pinker, S.: 1994, The Language Instinct, Penguin, Middlesex.
- Price, H. H.: 1953, Thinking and Experience, Hutchinson, London.
- Rollin, B. E.: 1989, The Unheeded Cry, Oxford University Press, Oxford.
- Routley, R.: 1981, 'Alleged Problems in Attributing Beliefs and Intentionality to Animals', *Inquiry* **24**, 385–417.
- Rundle, B.: 1997, Mind in Action, Oxford University Press, Oxford.
- Savage-Rambaugh, S.: 1986, *Ape Language: From Conditioned Response to Symbol*, Oxford University Press, Oxford.
- Savage-Rambaugh, S. and R. Lewin: 1994, Kanzi, Doubleday, London.
- Searle, J.: 1997, 'The Explanation of Cognition' in J. Preston (ed.), *Thought and Language*, Cambridge University Press, Cambridge.
- Sorabji, R.: 1994, Animal Minds and Human Morals, Routledge, London.
- Strawson, P. F.: 1992, Analysis and Metaphysics, Oxford University Press, Oxford.
- Wimmer, H. and J. Perner: 1983, 'Beliefs about Beliefs', Cognition 13, 103–128.
- Wittgenstein, L.: 1967, Philosophical Investigations, Blackwell, Oxford.

Department of Philosophy The University of Reading Reading RG6 6AA U.K. E-mail: h.j.glock@reading.ac.uk

64