

Book Review

Personhood, Ethics, and Animal Cognition: Situating Animals in Hare's Two-Level Utilitarianism, by Gary E. Varner. New York, NY: Oxford University Press, 2012. Pp. xv + 336. H/b £40.23.

The Philosophy of Animal Minds, edited by Robert W. Lurz. New York, NY: Cambridge University Press, 2009. Pp. 320. P/b £20.21.

It seems to be a widely held belief that we should not try to trap, kill, and eat any creature that can relate the story of its close call. While this turns out to be a good rule from the perspective of R. M. Hare's version of utilitarianism, other intuitive-level rules about the proper treatment of sentient beings require revision, or so Gary Varner argues in his recent book *Personhood, Ethics, and Animal Cognition*. After defending Hare's two-level utilitarianism in the first section, Varner turns to the question of the kinds of beings who worthy of kinds of concern, and in the final section he applies Hare's theory to issues of animal agriculture. While Varner answers questions about whether we can eat some animals (maybe so) or factory farm any (probably not), significant work is done in the second section to defend claims about the cognitive and affective properties of animals. Varner argues that probably all vertebrates are conscious and hence are worthy of moral concern, though since no animals are persons with a narrative sense of self, they are not moral agents. Key to this section is the introduction of a middle category—near-persons. Near-persons occupy a middle ground in the moral hierarchy between the merely sentient and persons. Chimpanzees, dolphins, elephants and scrub jays qualify as near-persons, as might rats, monkeys and parrots—and these are the animals that we probably ought not make a regular meal of.

1. Animals are conscious

Varner uses an argument from analogy to conclude that animals feel pain, and hence are conscious. Like humans, vertebrates and cephalopods (such as octopus, squid, and cuttlefish) (1) have nociceptors that are connected to the brain, (2) have a natural opioid-releasing system in the body, (3) are responsive to analgesics, and (4) demonstrate appropriate pain behaviour. Varner is aware of the limitations of analogical arguments, and he attempts to bolster his by adding a 'guiding theory' to the initial reference properties. Following

a suggestion of Colin Allen, Varner suggests that the ability to distinguish between the sensory type of pain (throbbing, stabbing, aching) and the intensity of pain (vaguely annoying, intense, unbearable) would be beneficial to the organism, and that there is evidence for such abilities among some mammals (monkeys and rats).

As part of his argument for animal consciousness, Varner endorses a higher order thought (HOT) theory of consciousness. He worries that first order representational theories of consciousness might lead to bloat, and Varner also suggests that his evolutionary account of the benefits of thinking differently about the affective and sensory components of pain relies on a HOT account. However, it is not clear why first order accounts (as well as nonrepresentational accounts of consciousness) are incompatible with the distinction between affective and sensory components of pain. Given the arguments made by Peter Carruthers ('Brute Experience', *The Journal of Philosophy*, 86 (1989), pp. 258–69) that HOT theories entail that animals are not conscious because they lack the requisite metacognitive abilities, adopting a HOT theory raises problems which are not addressed.

Varner also examines evidence for animal consciousness by examining types of learning. Because humans report conscious experience in some types of learning situations, such as trace conditioning (a type of classical conditioning in which a sound is presented a fraction of a second before a puff of air is aimed at the subject's eye), when an animal such as a rabbit learns as a human does, Varner concludes that the animal is conscious. Similar arguments are made for a number of different learning strategies, including multiple reversal trials, probability learning, and the formation of learning sets. Varner writes, 'It also seems plausible to say that each of these kinds of learning requires consciousness, in so far as each involves hypothesis formation and testing, and human subjects report that they do this consciously' (Varner 2012, p. 131). Here Varner is relying on human introspection on the method they use to solve problems. Given the human tendency toward confabulation, introspection about the means one uses to solve a problem may not be entirely reliable.

2. But animals do not tell stories about themselves

While animals may be conscious, they are not persons. A person is someone who can narrate her own life to herself, who can set long-term goals, and work to achieve them. Varner is deeply influenced by the work of Marya Schechtman, and he accepts that a person must be rational, self-conscious, autonomous in the sense of having second-order desires, and must be a moral agent. In addition, a person must have the following four concepts from which to construct a self-narrative: self, birth, death, and personality. (It is not clear whether one must *believe* in personality; if not, this account of personhood raises serious questions about the moral standing of

situationists!) These criteria lead Varner to accept the hypothesis that language is necessary for being a person. He considers artificial language research on great apes, dolphins, and parrots and concludes that there is no evidence of storytelling among those species. However, Varner does suggest that cetaceans and elephants may be telling stories that we do not yet understand, because they have complex vocalization systems that have not been decoded yet by scientists. Apes are excluded from this possibility, given that they lack complex vocalizations. This highlights a possibility not addressed in this discussion, namely that language evolved from gestures rather than from simple vocalizations (as advocated by, for example, Michael Corballis and Michael Arbib). It is premature to dismiss the notion that apes have preliminary narrative abilities without considering the rich literature on ape gestural communication.

Varner admits that he has a high standard for being a person, and that children may not acquire the cognitive abilities associated with narrative selves until adolescence. However, he thinks no worries emerge from this—since children will become persons, we have reasons for treating them as ‘persons in training’ (p. 180).

3. Though some animals do have a theory of mind

Near-persons do not construct self-narratives, but they do have one key element of narrative—the ability to engage in past and future thinking. The ability is relevant for utilitarians because consciously re-experiencing pleasurable experiences and fulfilling long-term plans results in more happiness, whereas unhappiness arises from consciously dreading unpleasant experiences and failing in one’s goals. Varner thinks that there is evidence that some species are able to engage in some kind of auto-noetic consciousness—the psychologist Endel Tulving’s term for the ability to consciously re-experience one’s own past, consciously preview one’s future, and to have a personal sense of the present self. Episodic memory—auto-noetic consciousness of the past—is contrasted with semantic memory, which only involves remembering some facts about the world. Varner’s review of the literature leads him to conclude that many species have episodic memory and a present sense of self.

For evidence of future thinking Varner turns to the theory of mind (ToM) literature. Theory of mind—or mindreading—is narrowly understood as the ability to attribute beliefs and desires to others in order to predict their behaviour, though Varner adopts a wider understanding by including attribution of perceptions, goals, and a feeling of sympathy. Varner also diverges from the normal way of discussing mindreading by presuming it to be conscious. Often theory of mind is taken to be an implicit theory that we unconsciously use, like the rules of grammar that shape our use of language but which we do not have direct introspective access to.

Varner's review of the mindreading literature leads him to conclude that monkeys and apes have the ability to attribute perceptual states to others, a conclusion that is shared by a number of scientists. However, his conclusion that elephants, dolphins, and scrub jays also mindread is based on anecdotes, and on studies with very small sample sizes. In this section of the book Varner seems to prefer clever animals to killjoy explanations. For example, Varner discusses Nathan Emery and Nicky Clayton's study on scrub jays that found that when jays who were former pilferers hid food in the presence of another jay, they would later move the food when no one was watching. Jays who had not had the experience of stealing food did not tend to move food that they hid in the presence of a competitor. While the scientists think the evidence is suggestive that the scrub jays engage in a kind of experience projection — a simulation version of mindreading — Varner is more convinced, writing 'it is unclear how else to explain this striking result than by saying that the jays were using ToM' (p. 214). However, there are always alternative explanations that can be given for such behaviour, in humans and in nonhumans alike. The scrub jays who moved their food could have learned about behaviour without having learned about mental states, making an association between the presence of a competitor and the loss of food. The cognitive achievement would come from remembering one's past pilfering, forming the association, and then flipping the roles of self and competitor. However, shifting roles need not involve thinking about any of the things included in Varner's definition of ToM.

While Varner concludes that at least great apes, dolphins, elephants and corvids are near-persons and deserve special moral significance, the practical consequence of this status is not discussed. In the sequel *Sustaining Animals: Envisioning Humane, Sustainable Communities* (forthcoming from Oxford University Press), Varner promises to defend the claim that near-persons can be used in some biomedical research, and that wildlife policy should treat near-persons as replaceable, because the consequences of giving them a right to life would be terrible. But what about chimpanzee actors, dolphin swimming programs, or elephant laborers? Varner asks us to stay tuned for answers to these sorts of questions.

4. Contemporary debates about animal minds

The fourteen philosophers whose essays make up the collection *The Philosophy of Animal Minds* share Varner's interest in the cognitive capacity of nonhuman animals, and the book offers a valuable resource for anyone wanting to delve deeper into the question of animal minds.

While Varner spends much time defending the claim that animals are conscious, that issue is largely taken for granted by the authors in this volume. The exception is Rocco J. Gennaro, who attempts to rehabilitate HOT theories to make them applicable to animals without metacognition proper. By appealing

to the same data on episodic memory that Varner discusses, Gennaro argues that those species who show evidence of episodic memory must have at least a minimal self-concept of something that endures through time. Such I-concepts can be used to form a kind of higher-order thought, Gennaro argues, that suffices for consciousness on a HOT theory. It is not clear whether Varner can adopt Gennaro's solution to the HOT problem of animal consciousness, given his rejection of animal persons or selves. Gennaro describes the I-concept that animals have as an understanding of one's self as an enduring, thinking thing, along the lines of Varner's narrative sense of self. David DeGrazia's essay also defends self-consciousness in animals, suggesting that some species have a proto-understanding of agency along with complex social understanding of self and other in various social roles.

Despite these suggestions that some species have a more robust sense of consciousness than Varner wants to admit, neither Gennaro nor DeGrazia goes so far as to claim that animals have language, which Varner thinks is required for a narrative sense of self. In his article 'What do animals think?' Dale Jamieson agrees that animals are not 'relentless story-tellers' (p. 33) but thinks little hinges on that fact. He takes an interpretationist approach and challenges the traditional view of content as something hidden within the body ready to be discovered. Fido, like the human, has a coherence in action and belief and can revise his behaviour as he is confronted with new circumstances, and that is all an interpretationist need be concerned with.

Several authors in the collection argue that there is evidence that animals have beliefs. It may be that belief, rather than language, is what is necessary for building a self-narrative. Eric Savidel argues that animals have beliefs and desires, and argues that chimpanzees demonstrate insight and the ability to find new ways to achieve their goals. Supporting the idea that chimpanzees have beliefs and desires is Peter Carruthers's chapter, in which he argues that even honeybees and wasps have concepts that make up the beliefs and desires that guide their thinking, and that insects concepts can meet Gareth Evans' generality constraint. Similar arguments are given in the chapter by Michael Tetzlaff and George Rey who argue that honeybee navigation is evidence of a honeybee language of thought. A different sort of argument in favour of animal belief comes from the chapter authored by Andrew McAninch, Grant Goodrich, and Colin Allen. They argue that animals have truth evaluable thoughts since natural communication signals of animals are compositional, have a determinate reference, a declarative force, and arguably have a normative element in so far as subjects are sensitive to proper conditions for displaying a signal (such as a dog giving a play bow before a playful interaction, but not before a serious bite).

While the above authors are happy to say that animal mental representations take propositional form, others in the volume suggest that animal thinking may take different forms. Michael Rescorla argues that animals may be able to solve complex logical tasks using Bayesian reasoning rather

than deductive inference over propositions, thus positioning animals in a kind of intermediate position in a hierarchy of thinkers. Elizabeth Camp also challenges the idea that seemingly rational behaviour must be the result of propositional thought; taking as her target Robert Seyfarth and Dorothy Cheney's argument that baboons keep track of their social relations via a language of thought, Camp argues that alternative representational systems such as hierarchically structured trees could do the job just as well. Sympathy for non-conceptual content is also found in José Bermúdez's paper, and a detailed argument is found in Joëlle Proust's essay, though worries are raised in the chapter by Andrew McAninch, Grant Goodrich, and Colin Allen. These chapters point to the varieties of cognitive tools that animals (and humans) could use for telling stories about themselves.

A number of papers are also focused on the issue of animal mindreading. José Bermúdez's essay focuses on the topic, and offers a helpful conceptual clarification of the various cognitive capacities that are often unhelpfully lumped together as mindreading. Bermúdez argues that only language users can engage in propositional attitude mindreading, because the representational vehicle for a propositional attitude displays the structure of the representation, and only an external natural language can do so. However, there is evidence for what he calls perceptual mindreading among nonhuman animals.

Bermúdez also brings up a methodological worry with the mindreading research that we saw in Varner's text, something he calls the double analogy. We see animals appear to solve social co-ordination problems that are analogous to those solved by humans, we know that humans solve these problems by mindreading, and so we conclude that the animals who solve these problems are also mindreaders. For such an argument to go through, we have to be right that the social situations are analogous, and that the solutions to the problems are analogous. What humans often forget is that we are able to function in a complex society without much thought about the minds of others—we may be wrong that we usually use mindreading to solve our social co-ordination problems.

How to determine whether animals are engaged in mindreading is covered in the last two essays. Elliott Sober and Simon Fitzpatrick each examine what it means to look at—and prefer—lower-level explanations of animal behaviour. Morgan's Cannon is an oft-stated policy for animal cognition researchers, warning against seeing a behaviour as the outcome of a higher mechanism when it could be interpreted as coming from a lower one. However, as Sober points out, when Morgan's Cannon is used in conjunction with standard hypothesis testing methods, it is at best useless and at worst it entails contradictions. Sober advocates switching to a model evaluation methodology for animal cognition, and using a criterion such as the Akaike Information Criterion to score competing models by determining how well they fit the data and which is most quantitatively parsimonious. In his chapter,

Fitzpatrick examines the claims that mindreading explanations are simpler than behaviour-reading explanations, and offers the valuable suggestion that simplicity arguments are really a kind of poverty of the stimulus argument. By using a deflationary account of simplicity, we can understand mindreading as a simpler explanation because the wider the range of situations in which subjects demonstrate sophisticated behaviour, the more difficult it is to explain how subjects acquired the associations purely behaviourally. The theoretical and methodological issues raised by both essays highlight how difficult it is to draw simple conclusions from the current body of research on animal mindreading.

While most of the interest in animal minds has been on the cognitive, narrowly understood, the chapter by McAninch et al., and Robert C. Roberts's chapter both draw out the importance of animal emotions. Roberts takes emotions to be a type of perception that are intrinsically motivating, such that one need not have a thought in order to act. It is in this chapter that we see a direct challenge to Varner's claim that no animal has a narrative sense of self. Roberts points to the argument of Dorothy Cheney and Robert Seyfarth that baboons have a narrative-like understanding of the social relations in their group, given that they recognize who is vocalizing and the type of vocalization. They take this to be evidence that baboons know who does what to whom, which is a kind of narrative. Roberts accepts that the baboon's ability to collect so much information about others may be something like a narrative, and that they respond to such information with emotional responses and actions, but given the inability to construct and present their thoughts in a lengthy sequential series of events, the baboon ability falls far short of the human skills for storytelling.

These volumes are excellent examples from the burgeoning field of the philosophy of animal minds. They should be essential reading for those working to develop a greater understanding of animals, mind, and ethics.

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